Washington State Ferries

# Washington State Department of Transportation Ferries Division Final Long-Range Plan

June 30, 2009

Washington State Department of Transportation

## About Washington State Ferries

Formed in 1951, WSF is the largest ferry transit system in the U.S.

WSF serves about 23 million passenger and vehicle trips per year;

Operates 10 ferry routes and runs nearly 500 sailings per day;

Provides service to eight Washington State counties and the Province of British Columbia;

Operates and maintains 20 terminals from Point Defiance to Sidney, B.C.; and

Provides priority loading for freight, bicycles, vanpools, and carpools.

# Washington State Department of Transportation Ferries Division

## Final Long-Range Plan: 2009-2030

**Final**
**Long-Range Plan**

**Washington State Department of Transportation**
Ferries Division

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Washington State Department of Transportation

# EXECUTIVE SUMMARY

The Washington State Department of Transportation Ferries Division (WSF) is the largest ferry system in the nation. Nearly 23 million customers annually rely on WSF's 22 vessels and 20 ferry terminals for safe, reliable transportation across Puget Sound. WSF serves two vital transportation functions: as a marine highway and as a transit service provider. WSF is an essential part of the highway network of Western Washington. It serves as the only public transportation link to the mainland for Vashon Island and the San Juan Islands, and it is the second largest transit system in Washington State.

WSF is releasing this Final Long-Range Final Plan (Plan) at an historic point in Washington's marine transportation. The culmination of new legislative direction, new leadership, and new information about ferry system customers provides a unique opportunity to set a positive direction for the ferry system. While challenges remain, particularly the identification of a stable source of capital funding, this plan sets forth a vision for the future of the ferry system that will enable it to maintain its current routes and service levels, improve its operation, and make essential vessel and terminal investments.

## 1.1 Purpose

The goal of this Plan is to provide information about the needs of ferry customers, establish new operational and pricing strategies to meet those needs, and identify vessel and terminal operations and capital requirements. The Plan horizon covers 22 years, 2009-2030 (fiscal years 2010-2031), to meet federal planning requirements and to be consistent with regional efforts. The first 16 years of this Plan correspond to the legislature's 16-year financial planning period. This Plan is based on: 2007 legislative direction; a draft plan developed and presented for public review and comment in December 2008; a revised plan in January 2009 that incorporated the public comments, and an extensive review by the Governor's Office and the Legislature leading up to and during the 2009 session.

While the December 2008 and January 2009 draft and revised plans presented two scenarios for the future of the ferry system, this Final Long-Range Plan presents a single package of service improvements and investments.

## 1.2 The Final Plan

The Final Plan presents a vision for the future of the WSF system. Consistent with legislative direction, it maintains current levels of service with limited improvements (as new vessels are acquired to replace retiring vessels) and the State's role as principal owner and operator of the marine transportation system. Exhibit ES-1 presents the key elements of the plan. This plan presents a realistic service and capital investment strategy that seeks to balance service goals and long-term funding requirements.

**Exhibit ES-1**
**Summary of Plan Elements by Route**

| Route | Service Plan | Major Terminal Projects |
|---|---|---|
| **Seattle - Bainbridge** | No Change | Starting in 2011: Seattle terminal rebuild |
| **Seattle - Bremerton** | 2014: Vessel upsize *(fall, winter, spring only)*<br>2029: Vessel upsize *(summer only)* | |
| **Edmonds - Kingston** | No Change | 2029: Edmonds terminal multimodal improvements |
| **Fauntleroy - Vashon - Southworth** | 2014: Vessel upsize<br>2027: Vessel upsize | No major terminal projects proposed |
| **Point Defiance - Tahlequah** | 2012: Vessel upsize | No major terminal projects proposed |
| **Mukilteo - Clinton** | 2014: Vessel upsize<br>2027: Vessel upsize | 2017: Proposed Mukilteo terminal relocation |
| **Port Townsend - Keystone** | 2010: Vessel upsize<br>2011: Second vessel added *(peak season only)* | No major terminal projects proposed |
| **Anacortes - San Juan Islands** | 2014: Vessel upsize | 2011: Proposed Anacortes terminal replacement |
| **Anacortes - Sidney** | 2014: Vessel upsize *(summer only)* | |
| **San Juan Islands Interisland** | 2009: Vessel downsize *(winter only)* | No major terminal projects proposed |

## 1.3 Changing Our Business

Steps have been taken to reduce WSF's costs without jeopardizing safe, reliable, and efficient service. Administrative staff reductions, fuel conservation measures, and reduced expenses throughout the system have resulted in cost savings. These reductions are part of an ongoing cost containment process designed for continuous improvement in the cost effectiveness of ferry services.

WSF must also adopt operational and pricing strategies to maximize the use of its existing assets and provide the most cost effective service, while responding and adapting to the changing characteristics of its customer base.

Ridership is expected to grow by 37% between 2006 and 2030 – 13% growth would return WSF to the historical high level of ridership it had in 1999, with the additional forecasted growth bringing ridership levels above what the system has previously seen. Vehicle capacity during peak periods is WSF's greatest constraint and the origin of the

pressure for additional services and larger facilities. There is little capacity to support vehicle growth in peak periods, especially in the summer, when a recreational traffic surge causes even greater capacity challenges. In addition to these peak period capacity constraints, WSF is also challenged by under-utilization of its vehicle capacity during non-commute periods and the off-season.

Adopting operational and pricing strategies will allow WSF to provide the best service at the lowest possible cost, minimize fare increases, and fill under-used non-peak capacity. The Plan is built on the following key strategies that are designed to either spread vehicle demand to non-peak periods and/or increase walk-on use:

- Vehicle Reservation System. The most important operational strategy included in the Final Plan is the deployment of a vehicle reservation system. A well-designed reservation system would allow WSF to operate with the smallest possible terminal facilities while maintaining a high level-of-service. The system would be tailored to specific route-level demand and market conditions. The 2009 legislature authorized funding to further study the potential implementation of a vehicle reservation system, with a report due to the legislature for consideration during the 2010 session
- Transit Enhancements. WSF would have the ability to accommodate significant growth in ridership with existing facilities if more customers elected to travel as walk-ons. The single biggest impediment to walking on is the lack of sufficient transit supportive facilities and services. To address this issue, WSF requested funding for a number of transit enhancements at terminals, but the 2009 legislature deferred capital investments in transit supportive facilities outside of the 16-year plan financial period (or until it is clear that local transit service is available and that walk-on ridership is increasing).
- Pricing Strategies. The Plan makes two significant pricing strategy proposals. One is focused on demand management by not charging an extra fee for reservations to encourage customer use of the system. The second is targeted at mitigating fuel price risk and proposes implementing a fuel surcharge mechanism that will automatically adjust fares up and down for fluctuations in fuel prices. The 2009 legislature directed WSF to report on how a fuel surcharge would be implemented before it is adopted as a pricing strategy.
- Marketing. The 2009 legislature provided funding for a new marketing program for WSF to increase non-peak ridership. The legislature required that WSF present a marketing plan to the

legislature in the 2010 session that must be approved before moving forward on any marketing efforts.

## 1.4 Fleet Procurement Plan

Vessel procurements are a key element of the capital program necessary to ensure stable and reliable service. WSF's fleet is one of the oldest of any major ferry system, with four vessels recently retired on an emergency basis and eight additional vessels to be retired by 2030. As a result of the emergency vessel retirement, service on the Port Townsend-Keystone route has been provided by a leased vessel since 2008 and has been reduced from its normal two boat shoulder and summer season service to one boat service.

This Plan calls for 10 new vessels by 2030, two for the Port Townsend- Keystone route and eight to replace older vessels as they come due for retirement. In addition the Plan anticipates a major refurbishment of the Hyak (144-car vessel) to extend its life until 2032. Exhibit ES-2 below shows the vessel procurement plan in detail.

**Exhibit ES-2**
**Vessel Procurement Plan**

| Year | Vessel | Notes |
|---|---|---|
| 2010 | Island Home #1 | Replace a Steel Electric (Port Townsend) |
| 2011 | Island Home #2 | Replace a Steel Electric (Port Townsend) |
| 2011 | Hyak reinvestment | Invest in the Hyak to extend life 20 years |
| 2012 | Island Home #3 | Replace the Rhododendron (go to Point Defiance) |
| *Procurement # 1 (144's)* | | |
| 2014 | 144-car vessel #1 | Replace the Evergreen State |
| 2014 | 144-car vessel #2 | Restore standby/reserve capacity; 87-car vessel moved to standby |
| *Procurement # 2 (144's)* | | |
| 2027 | 144-car vessel #3 | Replace the Tillikum |
| 2028 | 144-car vessel #4 | Replace the Klahowya |
| 2028 | 144-car vessel #5 | Replace the Elwha |
| 2029 | 144-car vessel #6 | Replace the Kaleetan |
| 2029 | 144-car vessel #7 | Replace the Yakima |

## 1.5 Costs and Funding Needs

**Exhibit ES-3**
**Funding Implications of the Final Long Range Plan**
**(YOE$ in millions)**

| | LRP (22-Yr) | 16-Year |
|---|---|---|
| **CAPITAL** | | |
| *2009-11 Cash Carry-Forward* | ***$2*** | ***$2*** |
| Terminals | $1,096 | $784 |
| Vessels | $3,255 | $1,268 |
| Miscellaneous Uses | $336 | $230 |
| Existing Debt Service | $212 | $212 |
| **Total capital needs** | **$4,899** | **$2,494** |
| Dedicated capital funds | $711 | $575 |
| Administrative Transfers | $450 | $450 |
| Local Funds & Deposit Earnings | $15 | $15 |
| Federal Funds | $340 | $252 |
| Bond Proceeds | $245 | $245 |
| **Net Funding Capital Program** | **($3,136)** | **($954)** |
| **OPERATING** | | |
| *2009-11 Cash Carry-Forward* | ***(4)*** | ***(4)*** |
| Operating revenues | $5,078 | $3,301 |
| Operating expenses | $6,399 | $4,255 |
| **Net operating income/(subsidy)** | **($1,325)** | **($958)** |
| **Average farebox recovery rate** | **78%** | **76%** |
| Dedicated operating taxes | $782 | $542 |
| Administrative Transfers | $57 | $54 |
| **Estimated Subsidy Available** | **$840** | **$595** |
| **Net operating surplus/(deficit)** | **($486)** | **($363)** |
| **Total Funding Needs** | **($3,621)** | **($1,317)** |
| Fuel Surcharge Revenues | $297 | $229 |
| **Total Funding Needs *(w/ Fuel Surcharge)*** | **($3,325)** | **($1,088)** |

**Note**: Operating revenues, dedicated tax revenues (capital & operating), and fuel costs are based on June 2009 Transportation Economic & Revenue Forecast. Legislative Plan was adopted using March forecast.
**Note**: The 16-Year vessel capital expenditures include $13.6 million of additional costs attributable to new vessel design for five new 144-car vessels.
**Note:** Fuel Surcharge would be implemented only if Legislature approves the fuel surcharge plan
**Note:** Parenthetical values represent program shortfalls; positive values represent program surpluses

Capital Costs. Exhibit ES-3 above shows the estimated costs and funding needs associated with the Long Range Plan. The Plan's capital program is estimated to total $4.9 billion (in year of expenditure dollars) through 2030.

- Vessels - $3.3 billion: Two-thirds of the capital costs are for investments in WSF's fleet, including $1.9 billion for 10 new vessels, $1.3 billion to preserve vessels, and $84 million for vessel improvements to meet evolving regulatory and environmental requirements.

- Terminals - $1.1 billion: 22% of the total capital costs are for investments in terminals, including $985 million to preserve terminals and $111 million for improvements to terminals.
- Other - $548 million: The remaining 12% of the capital program is for debt service on bonds previously issued to finance WSF's capital expenditures ($212 million) and emergency repair allowances/management and support ($ 336 million).

Capital Revenues. The Plan projects available capital revenues of $1.8 billion from dedicated gas tax revenues ($711 million), discretionary transfers from the motor vehicle fund made by the legislature ($411 million), federal funds ($340 million), bond proceeds ($245 million), and miscellaneous funds ($15 million). The gap in capital funding is $3.1 billion or 63% of the anticipated capital requirement. Revenues are based on June 2009 forecasts.

Operations Costs. The Plan projects operations costs of $5.1 billion through 2030. Seventy-two percent of operations costs are for vessel operations, 17% for terminal operations and 11% for management and support. Fuel costs are based on June 2009 forecasts.

Farebox and Other Operations Revenues. WSF receives the majority of its operations funding from fares, which are projected to recover 78% of all operations costs through 2030 assuming annual fare increases of 2.5% and a 37% increase in ridership. Fuel surcharges, if approved by the legislature, are anticipated to generate an additional $297 million, which would bring the total farebox recovery rate to 82%. Operating revenues are based on June 2009 forecasts.

The WSF operations program receives a dedicated portion of the fuel tax, which is expected to generate $782 million through 2030 or 12% of operations costs. The operating program assumes that WSF will receive $46.4 million in support from other transportation funds over the next two biennia (per 2009 Legislative session).

The gap in operations funding, assuming approval of the fuel surcharge, is $189 million or 3% of the anticipated operations funding required.

## 1.6 Public Involvement in Plan Development

In early January, WSF conducted a total of ten public hearings to present the Draft Long-Range Plan. The Draft Plan was developed with extensive public input at 26 public meetings and workshops in ferry-served communities in 2008. The January public hearings were

well attended with over 1,300 individuals that signed in and nearly 400 who chose to testify.

In addition to the public testimony at the official public hearings, WSF collected feedback through emails, letters, and news accounts. In total, WSF received more than 800 comments on the Draft Long-Range Plan between December 19, 2008 and January 26, 2009. All public comment along with a revised plan was submitted to the Legislature on January 31, 2009.

### Public Hearing Comments

The comments at the public hearings on the Draft Long Range Plan touched on a broad range of subjects, and the following key themes emerged:

- WSF should be treated as part of the state highway system
- Economic impacts of service changes should be considered
- The Draft Plan had not adequately addressed ridership growth
- The Draft Plan raised concerns about a vehicle reservation system
- More information was needed on what WSF is already doing to reduce costs
- WSF should consider building vessels out of state if it would save money
- Scenario B (the reduced service scenario) included an unfunded state mandate for local government to provide passenger-only service

## 1.7 Customers

ESHB 2358 directed the Washington State Transportation Commission to conduct a comprehensive survey of ferry customers to help inform level-of-service, operational, pricing, planning, and investment decisions. The legislation requires the survey to be updated every two years. The initial survey, conducted in 2008, included on-board surveys of 13,000 customers, focus groups, and a general market phone survey of 1,200 Puget Sound residents. It identified several important findings that have helped shape this Plan.

Importance of ferry service. The survey found that residents throughout Puget Sound use the ferries and think they are an important service.

- The general market survey (telephone survey of Puget Sound residents) found that 91% of all residents in the region have ridden WSF at some point in the past.
- 95% of Puget Sound residents responded that ferries are very important (70%) or somewhat important (25%). Respondents included East Sound (95%), West Sound (98%), and Island (100%) residents (General Market Survey).

Our ridership base is changing. Today, we have fewer commuters and more discretionary trips as a percentage of total ridership. Approximately one-third of WSF customers travel for the purposes of work or school (i.e. make non-discretionary commute trips), although during peak periods, over half of the system's riders are commuters. This reduction in commute trips has also been observed in recent WSF Origin-Destination Surveys (conducted in 1993, 1999, and 2006), which have shown a gradual decrease in the peak period commute.

Our riders travel less frequently and have more flexibility than was expected. The average vehicle customer makes 16 one-way trips per month. For about half of the customer base, frequency of use has not changed over time. Thirty-three percent of the customers surveyed said they have been riding ferries

### Challenges Ahead

**Aging Asset Base.** WSF is facing a significant recapitalization effort in the next 20 years. WSF's fleet is among the oldest of any major ferry operator. Furthermore, many of the terminal facilities were built in the 1940's and 1950's and have had few improvements beyond basic maintenance and preservation since they were built.

**Long Lead Times for Capital Investments.** A long-range capital plan is necessary because decisions about ferry service have long-term implications. There are significant lead times required to build vessels or improve terminals, so WSF must anticipate the future need for such projects today.

**Vehicle Capacity Limitations.** Vehicle capacity during peak periods is WSF's greatest constraint and the origin of the pressure for additional services and larger facilities. There is little capacity to support vehicle growth in these time periods, especially in the summer, when a recreational traffic surge causes even greater capacity challenges.

**Growth, Ridership Demand, and Service Needs.** While forecasts indicate ridership will increase 37% over the 22-year planning period, ridership is down 13% since its peak in 1999. Population growth is expected in many of the communities served by WSF, but it is not clear how this will translate into increased demand for ferry services.

more frequently (15% said they have been riding significantly more). With respect to flexibility, 8% of peak period vehicle travelers said they could shift to off-peak times, indicating that strategies geared toward time shift (like a vehicle reservation system) could be effective in reducing congestion during the peak.

**Fares are only one factor affecting use of ferries.** In 1999, WSF lost a significant source of funding when the Motor Vehicle Excise Tax (MVET) was repealed. One of the impacts of the lost funding has been a significant increase in fares over a relatively short period of time. Since 2000, fares have increased between 37% and 122%. While the survey confirmed WSF's fare sensitivity estimates (a 10% fare increase would result in a 4% drop in riders), the general telephone survey (not just current customers) found fares to be a small factor in why some persons are using WSF less. Also, a majority of customers in the on-board surveys believe that ferry services reflect a good value and are pleased with the services they are receiving.

## 1.8 Long-Term Funding

The foremost challenge facing WSF is the anticipated lack of capital funding, with existing resources anticipated to provide only 37% of the needed capital funding. This will require careful consideration of WSF's capital expenditures and continuous efforts to reduce capital costs by delivering projects in the most cost-effective manner. However, costs savings alone will not close the gap in WSF's capital funding. A stable source of capital funding, to replace the MVET funding lost in 1999, is needed.

During the 2007 Legislative session, the Washington State Transportation Commission (WSTC) was directed to conduct a study to identify and evaluate long-term funding alternatives for WSF. The WSTC delivered its report on March 2, 2009. The Governor and the Legislature have not yet acted on these recommendations. The legislative Joint Transportation Committee is conducting a comprehensive analysis of mid-term and long-term funding mechanisms as part of its 2009 work plan, which includes a review of all state transportation funding needs, including those identified for WSF.

# BACKGROUND AND CONTEXT

## 1. INTRODUCTION

The Long-Range Plan (Plan) is intended to guide WSDOT Ferries Division (WSF) future service and investment decisions through fiscal year (FY) 2031. Developed with extensive input from the public as well as stakeholder groups, the Plan outlines a service plan and corresponding funding plan that will allow WSF to provide sustainable ferry service in the Puget Sound area. This is the Final Plan, and has incorporated feedback from the public review and comment on the December 19, 2008 Draft Plan as well as legislative direction given on the January 31, 2009 Revised Draft Plan (see sidebar).

This Final Plan is a long-term vision for ferries, and displays for communities and the Legislature goals and strategies that seek to balance achievable service goals and funding requirements. The Plan comes in two pieces:

- The document you are reading is a Final Long-Range Plan that presents key findings, recommended strategies, anticipated services, investments, and corresponding funding needs.
- Technical Appendices present additional detailed backup for the Final Plan, and supporting information.

The WSF Long-Range Plan responds to specific legislative direction, and will become a part of the Washington State Transportation Plan (WTP). The WTP is required by state and federal law and forms the basis for setting the state transportation system's investment priorities.

This Final Long-Range Plan is organized into the following major sections:

1. Background and Context
2. Stakeholder and Public Involvement
3. Our Customers: Ridership and Demand
4. Customer Service: Level of Service Standards
5. Operations: Adaptive Management Strategies
6. Service Plan and Investment Needs
7. Long-Range Plan Implementation

### Is this the Final Plan?

This is the Final Long-Range Plan. An initial Draft Plan was released for public comment on December 19, 2008. The Revised Draft Plan was released on January 31, 2009, and included changes based on public feedback on the initial Draft.

This Final Plan was developed after the 2009 legislative session, and incorporates the policy direction on the significant choices presented in the Revised Draft Plan.

Information regarding the legislative process as well as additional summary materials can be found online at http://www.wsdot.wa.gov/ferries/planning/ESHB2358.htm or by calling 206-515-3411.

## 1.1 WSDOT Ferries Division (Washington State Ferries/WSF)

Since its creation in 1951, WSF has become the largest ferry system in the nation. Nearly 23 million people currently ride on WSF annually. WSF operates 22 vessels and 20 ferry terminals throughout Puget Sound, from Point Defiance in the south to Sidney, B.C. in the north (see Exhibit 1). Commuters, employers, students, commercial shippers, and tourists all count on WSF for safe, reliable transportation across the Puget Sound.

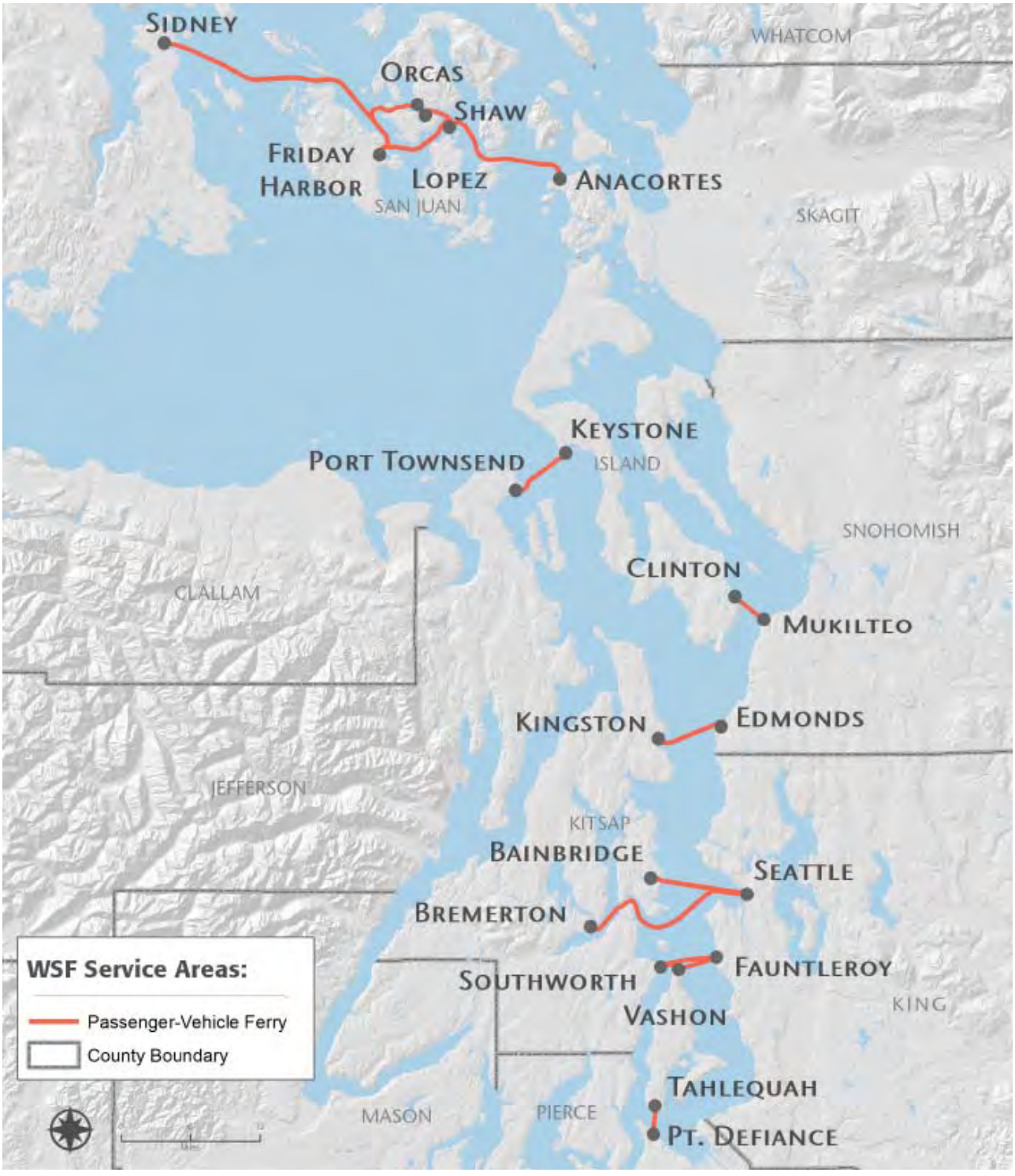
As part of the Washington State Department of Transportation (WSDOT), WSF serves two primary transportation functions.

Marine highway. WSF is an essential part of the highway network in Western Washington. Its 200 miles of marine highway provide links between urban areas on the east side of Puget Sound, growing communities on the Kitsap Peninsula, and more rural destinations on the Olympic Peninsula and the San Juan Islands. For communities on Vashon Island and the San Juan Islands, WSF is the only link to the mainland for personal and commercial vehicles.

That commercial vehicle connection is essential; Vashon and San Juan Island communities depend on ferries as the only means to transport goods—including basic supplies and local products—to and from the wider market. WSF makes special efforts to support commercial traffic.

Transit service provider. Ferries are also high-capacity people movers. WSF is the second largest transit system in Washington State, behind King County Metro. Ferry terminals connect passengers to many modes of transportation besides personal driving, including pedestrian, bicycle, vanpool, bus, trolley, and commuter rail.

Exhibit 1
Ferry System Service Area and Routes



### The Washington State Ferries Financing Study

The 2006 Legislature requested the Joint Transportation Committee (JTC) to study the ferry system's finances in order to facilitate policy discussions and decision-making.

The resulting study included 23 recommendations, many of which were incorporated into ESHB 2358.


A full copy of the report is available online at: http://www1.leg.wa.gov/documents/LTC/jtc/Ferries/Ferry%20Finance%20Study%20Final%20Report%20January%202007.pdf

## 1.2 Purpose of the Long-Range Plan

WSF is releasing the Long-Range Plan at an historic point in Washington's marine transportation. The culmination of new legislative direction, new leadership, and new information about ferry system customers provides a unique opportunity to set a positive direction for the ferry system.

The goal of this Long-Range Plan is to provide information about the long-term needs of ferry customers, possible service and capital programs, and an analysis of future funding needs, so a long-term solution can be developed that addresses WSF's financial sustainability.

To meet this goal, the Plan responds to the legislative direction and identifies service adjustments and demand management strategies that allow WSF to respond to growth in demand while ensuring that the State's assets are utilized to their fullest extent.

In the 2007 legislative session, the Legislature passed Engrossed Substitute House Bill (ESHB) 2358 and its biennial transportation budget, which contained specific policy and operational directives related to how WSF is currently providing service and how it should be planning to meet the needs of ferry communities in the future.

A number of the specific tasks called out in ESHB 2358 required WSF to take a fresh look at how ferry services might be delivered in order to support current and future customers, while recognizing the State's significant financial constraints.

Given the economic conditions prior to and during the 2009 legislative session, and the scale of the funding needs that the State was facing in the highway program, in addition to the continuing ferry needs, it was necessary to consider the implications of a future where state funding could not realistically keep up with the needs of the ferry system.

As a result of these challenges, the Revised Draft Plan put forward two different visions of a future for WSF for consideration. These scenarios represented the realistic bookends of a range of service and capital investments that sought to balance service goals and long-term funding requirements.

1. Scenario A. This option assumed that current levels of service remained constant with modest improvements, operational strategies were implemented over time, and several new vessels came online. This plan scenario described WSF's view of the

most that could have reasonably been expected, given the financial constraints on State transportation programs.

2. Scenario B. This option recognized that the State may not be able to provide sufficient new revenues to meet the evolving needs of all ferry customers and communities, and looked at a reduced marine highway system. Scenario B assumed WSF would continue some key connections, and that local governments would be engaged in a dialogue about mitigating negative impacts of reduced WSF. Scenario B also contained a budget shortfall.

These scenarios described a range of possible futures for the State ferry system. They provided the 2009 State Legislature with a framework for decision-making about service and capital investments, and long-term funding needs.

This Final Plan is based on legislative direction from the 2009 session, and includes recommendations and strategies that are similar to those included in Scenario A with some modification. This Final Plan attempts to address the critical challenges facing WSF, including those described below:

Long-term Funding. Much has changed since the last Long-Range Plan for WSF was adopted in 1999; most profoundly the voter approval of I-695, which substantially reduced dedicated funding for the ferry system. For the last ten years, the Legislature has filled the funding gap created by the I-695 budget cuts by allocating transportation funds to WSF that would have otherwise supported the landside highway system. Given the unfunded needs in the landside highway capital program, this is unsustainable. Therefore, the ferry system lacks sufficient revenue to sustain its current level of service.

Role of Fares in Long-term Funding. One of the impacts of the lost funding has been a significant increase in fares over a relatively short period of time. Since 2000, fares have increased between 37% and 122%. WSF's operation is 65 percent supported by fares (2008 fiscal year), compared to approximately 60 percent farebox recovery in fiscal year 2001.

Aging Asset Base. WSF's fleet is among the oldest of any major ferry operator, with four vessels retired in 2007. Eight more vessels are to be retired over this 22-year planning horizon. In addition, many of the current terminal facilities were built in the 1940's and 1950's and have had few improvements beyond basic maintenance and preservation. WSF is facing a significant recapitalization effort in the next 20 years related to aging vessels and facilities.

Long Lead Times for Capital Investments. A long-range capital plan is necessary because decisions about ferry service have

long-term implications. There are significant lead times required to build new vessels or improve terminals, so WSF must anticipate the future need for such improvements today. Once built, WSF capital assets are long lasting, with vessels having an anticipated lifespan of 60 years.

Growth, Ridership Demand, and Service Needs. Although WSF serves nearly 23 million riders annually, ridership is down over 13% since its peak in 1999. While there is population growth expected in many of the communities served by WSF, it is not clear how this will translate into increased demand for ferry service. Ridership has declined from 2000 to 2006 throughout the system, despite population growth in counties serviced by WSF ranging from 4% growth in Kitsap County to 14% in Island County during the same period of time. By 2030, total demand is projected to increase by 37% over 2006 ridership, which was the last full year of regular service before the disruptions caused by the retirements of the Steel-Electric Class vessels. Over this same period, vehicle demand is expected to increase by 30% overall.

## 2. POLICY FRAMEWORK

Organizationally, WSF is a Division of WSDOT, which is a cabinet agency reporting to the Governor. The Governor is ultimately responsible for setting the policy and operational goals for the organization and holding WSF accountable for meeting these goals. In addition to the Governor's office, ferry service and investment decisions are guided by the following:

- The Washington State Department of Transportation integrates ferry service with other parts of the highway system and has many other transportation responsibilities in the Puget Sound region and around the State.
- The State Legislature passes laws about ferry service, sets the biennial budget for ferry operations and maintenance, and appropriates funds for WSF's capital needs.
- The Washington State Transportation Commission (WSTC) provides a public forum for transportation policy development. It reviews and evaluates how the entire transportation system works across the State, and issues the State's 20-year Transportation Plan. As the State Tolling Authority, the WSTC sets tolls for state highways and bridges, and fares for WSF. Its seven members are citizens appointed by the Governor.

## 2.1 Washington Transportation Plan

The WSF Long-Range Plan will become a part of the Washington Transportation Plan (WTP), a blueprint for transportation programs and investments in Washington. State and federal law require that the WTP be updated regularly. The current WTP was adopted by the Transportation Commission in 2006, and covers the period 2007-2030. The WSF portion of the plan has not been updated since 1999.

The WTP addresses every mode of the State's transportation system. WSF's Long-Range Plan is guided by the same goals that federal and state law prescribe for the WTP, including safety, congestion relief, asset preservation, system efficiency, environmental protection, and consistency with land use plans.

### ESHB 2358 Requirements

For a complete list of legislative requirements included in ESHB 2358, the biennial transportation budgets, and other recent legislation, please see Appendix A.

## 2.2 ESHB 2358 The "Ferry Bill"

Passed by the 2007 Legislature, Engrossed Substitute House Bill (ESHB) 2358, the "Ferry Bill," fundamentally changed the policy direction guiding long-range planning efforts for the ferry system. The Legislature found that the State did not have good information about ferry customers, and directed WSF to pursue adaptive management practices in its operating and capital programs. Adaptive management is a process for continually improving management policies and practices by learning from the outcomes of operational programs and adapting them to improve customer service. The Legislature directed WSF to pursue adaptive management practices in order to keep costs as low as possible while continuously improving the quality and timeliness of service.

ESHB 2358 and associated budget provisions spelled out a list of tasks and a timeline that were designed to begin to address the questions raised in the 2006 Ferry Financing Study (see sidebar, page 6), and to develop an information base that could support the ultimate question of how to address the long-term funding needs of WSF. Specifically, ESHB 2358 and transportation budget provisos are designed to:

- Provide new and improved information. Examples of improved information requirements include a customer survey; updated ridership forecasting; a review of WSF's Life Cycle Cost Model (LCCM), which is used to determine capital preservation requirements; JTC Ferry Policy Working Group reviews of WSF's capital and operating costs; and pre-design study requirements for terminal improvement and preservation projects.
- Develop strategies to minimize costs or increase revenues. WSF was directed to consider operational strategies

and pricing policy changes; undertake a study of potential terminal co-developments with private sector partners; and to evaluate the cost-effectiveness of one-way toll collection.

With respect to pricing policy, the Legislature provided specific direction to evaluate options for using pricing as part of an adaptive management approach to help regulate demand while maintaining an awareness of the impact of fares on communities and users. ESHB 2358 requires that "the department shall annually review fares and pricing policies applicable to the operation of [WSF]…the department shall develop fare and pricing policy proposals that must:

- Recognize that each travel shed is unique, and might not have the same farebox recovery rate and the same pricing policies;
- Use data from the current customer survey conducted by the WSTC;
- Be developed with input from affected ferry users by public meetings and hearings and by review with affected ferry advisory committees, in addition to the market survey;
- Generate the amount of revenue required by the biennial transportation budget;
- Consider the impacts on users, capacity, and local communities; and
- Keep the fare structure as simple as possible.

While developing fare and pricing policy proposals, WSF must consider the following:

- Options for using pricing to reduce vehicle peak demand; and
- Options for using pricing to increase off-peak ridership.

The other significant change in pricing policy direction is that the language in the new legislation places a greater emphasis on the desirable outcomes of changes in fare rules. This change provides substantial flexibility to WSTC and WSF to focus on pricing options that might support "adaptive management practices in its operating and capital programs so as to keep the costs of the Washington State ferries system as low as possible while continuously improving the quality and timeliness of service." (ESHB 2358)

## Other Related Studies

ESHB 2358 identifies specific topics for study and requires new levels of cooperation and collaboration among the Legislature (through the Joint Transporatation Committe), WSTC, and WSF. Through ESHB 2358 and the State's 2007 Transportation Budget, the Legislature has

identified a number of additional studies to be undertaken, all of which have informed this plan:

- Customer Survey. ESHB 2358 required WSTC to conduct a study of ferry customers that includes information on recreational, walk-on, vehicle, and freight customers and their reactions to possible operational strategies and pricing policies; allows opportunity for Ferry Advisory Committee[1] input; and is updated every two years.
- Long-term Funding.The 2007 Transportation Budget included a proviso requiring WSTC to conduct a long-term funding alternatives study that would make recommendations for how to address the gap between dedicated ferry revenues and operating and capital needs (section 206(2)). This study was published in February 2009 and includes recommendations around increased state taxes to fund the capital program and increased fares to fund the operating program.
- Vessel Study. The 2007 Transportation Budget requires the JTC to make recommendations regarding the most efficient timing and sizing of future vessel acquisitions beyond those currently authorized by the Legislature.

The above-mentioned ESHB 2358 studies supported policy makers during the 2009 legislative session, and informed the legislative guidance that has been conveyed for this Final Plan.

In addition to these ESHB 2358 efforts, another planning study that was underway concurrently with this effort, the Puget Sound Regional Council's (PSRC) Passenger-only Ferry Study, will have implications on the potential future for WSF.

- PSRC Passenger-only Ferry Study. In 2006, the PSRC Policy Board determined that there was a need for regional coordination around the issue of the long-term role for passenger-only ferry services in the Central Puget Sound region. The State Legislature had recently directed WSF to abandon its passenger-only program and discontinue passenger-only service on the Vashon-Seattle route. According to the PSRC, "the study will provide the technical basis to strengthen Destination 2030 policies, programs, projects, and criteria by improving:

[1] RCW 47.60.310 established Ferry Advisory Committees to be appointed by county legislative authorities in counties serviced by WSF, except for Vashon Island where a community council appoints the members.

- Coordination of state, regional, and local ferry system investments
- Integration of ferry operations with transit, roadway, and non-motorized improvements
- Guidance for ferry-oriented development and land use near ferry terminals
- Planning to address local land use and transportation impacts in ferry terminal communities
- The technical capabilities in the area of ferry system demand forecasting, and travel demand modeling and analysis, that will aid in prioritization of projects and programs."

The study was completed in early 2009, with additional work expected to integrate the study results into the regional transportation plan update (Destination 2040).

## 2.3 What factors did WSF consider in developing this Plan?

In developing these Final Plan recommendations, WSF also considered other factors and guidelines for the future of the ferry system. Not all of this guidance took the form of law or mandate, and it frequently reflected multiple, often conflicting, priorities that WSF must endeavor to balance as it plans to meet demand in the future. Guidelines for ferry service include the following:

WSF should charge prices that are reasonable. The WSTC sets policies that establish WSF's fare structure. In addition to fiscal and environmental considerations and the directions provided in ESHB 2358, the WSTC may, but is not required to, consider the "desirability of reasonable rates for persons using the ferry system to commute daily to work and (for) other frequent users who live in ferry-dependent communities."

WSF should act responsibly with regard to the natural environment. WSF has been an active partner in efforts to protect the natural environment, recently as host of a pilot study of alternative fuels, and on an everyday basis in its efforts to encourage transit use and vehicle sharing. This is in keeping with the Legislature and the WSTC's charge to "conserve nonrenewable natural resources including land and energy (RCW 47.01.071)."

In developing the Long-Range Plan, WSF assessed any capital project or service changes under consideration to ensure there are no "fatal flaws" from an environmental perspective. Environmental impacts of specific capital facility projects are evaluated during the

project's design development stage when WSF conducts a detailed environmental review as part of the State Environmental Protection Act (SEPA) or National Environmental Protection Act (NEPA).

WSF should plan with an awareness of financial constraints**.** The ferry system operates in a financially constrained environment. WSF lost a significant share of its dedicated capital and operating funding in 2000 and must share resources with the landside highway program to balance its budget.

WSF should respect the land use and growth management plans of local governments, while being mindful of its primary mission and its role as a state agency**.** WSF serves local communities that have a strong interest in planning for and managing their own growth and development. State law is clear on the need for WSF to cooperate with local planning processes. To this end, WSF makes long-range demand projections based on the regional growth forecasts that result from a cooperative process among local jurisdictions.

WSF's role in growth management is a responsive one. Local and regional planning organizations make policy decisions to shape growth; the resulting pattern of future trips is a consideration in ferry service planning. This balance of interests is reflected in state law: "Although [WSDOT] shall consult with local governments when setting level of service standards, the department retains authority to make final decisions… [The] department shall consider the necessary balance between providing for the free inter-jurisdictional movement of people and goods and the needs of local communities using these facilities" (RCW 47.06.140).

WSF should plan facility improvements and service to facilitate connections with other modes of transportation**.** State law refers to the WTP as "a statewide multimodal transportation plan" (RCW 47.06) and specifies that each modal plan should emphasize "the improvement and integration of all transportation modes to create a seamless intermodal transportation system for people and goods" (RCW 47.06.040).

WSF should consult with the public as it develops ferry plans or policy changes**.** State law (RCW 47.60.330) requires that ferry users be consulted before major service or fare changes through public hearings, surveys, and standing Ferry Advisory Committees. WSF also consults with ferry terminal neighbors and other interested parties before changes are implemented.

# 3. FINANCIAL SUSTAINABILITY

When voters approved I-695 in November 1999 and the Legislature codified the MVET tax reductions during the 2000 legislative session, WSF lost approximately 20% of its operating support and 75% of its dedicated capital funds.

In immediate response, WSF enacted a series of staff and service cuts that when combined with spending operating reserves allowed the system to survive through June 30, 2001. During the 2000 session, the Legislature provided a $20 million transfer from the General Fund that allowed for fewer service cuts than originally proposed.

To address the long-term funding needs of the ferry system, the Legislature and Governor undertook two major efforts prior to the enactment of ESHB 2358. In 2000, the Legislature established a Joint Legislative Task Force on Ferries (JTFF). The Task Force was charged with addressing the following key issues:

- Establishing appropriate levels of operating cost recovery (farebox recovery target)
- Exploring opportunities for cost and service reductions
- Evaluating the feasibility of privatization and public-private partnerships
- Assessing short-term and long-term capital funding needs of the system

The Legislative Task Force report was approved by the Task Force members on January 15, 2001 and it contained nine major recommendations, which focused primarily on opportunities to reduce costs and improve the financial performance of the operating program. The most widely discussed recommendation was for WSF to increase the farebox recovery rate from approximately 60% to 80% over six years. While this recommendation was a key factor in fare policy decisions in 2001-2004, it was never codified in statute.

At the same time as the JTFF effort, the Governor's Blue Ribbon Commission on Transportation (BRCT), which was tasked to review the entire structure of the State's transportation system, released their recommendations. The recommendations included a confirmation of the JTFF recommendations, plus a long-term goal of reaching 90% farebox recovery. As with the JTFF farebox recovery recommendation, the goal was not codified in statute.

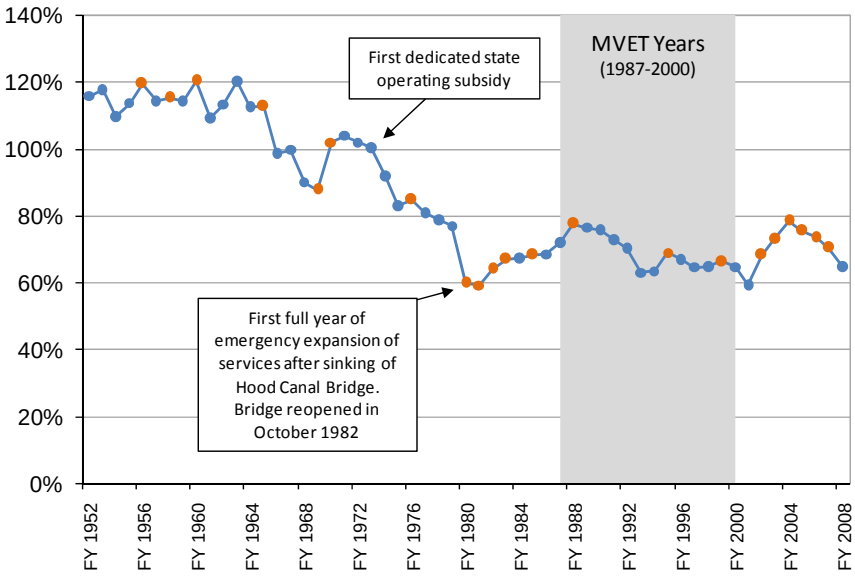
Neither the JTFF nor BRCT recommendations specifically addressed how to replace the lost MVET funding. With respect to funding, both efforts largely focused on using the fare policy to begin to stabilize the operating funding situation but suggested that the Legislature needed to develop a long-term funding solution for WSF.

## 3.1 Historical Context

While the farebox recovery recommendations from both the JTFF and the BRCT were controversial in ferry-served communities, it is worth putting these recovery targets into a historical perspective.

In the years prior to the loss of MVET funding, the Transportation Commission had been working from a general operating principle that fares should be adjusted to maintain a minimum 60% farebox recovery target (i.e. operating revenues must recover 60% of operating costs, with the balance coming from state tax sources). As presented in Exhibit 2, however, the distribution of responsibility for funding operations between the users and taxpayers was not always a 60/40 proposition.

**Exhibit 2**
**Farebox Recovery Rates over WSF History**

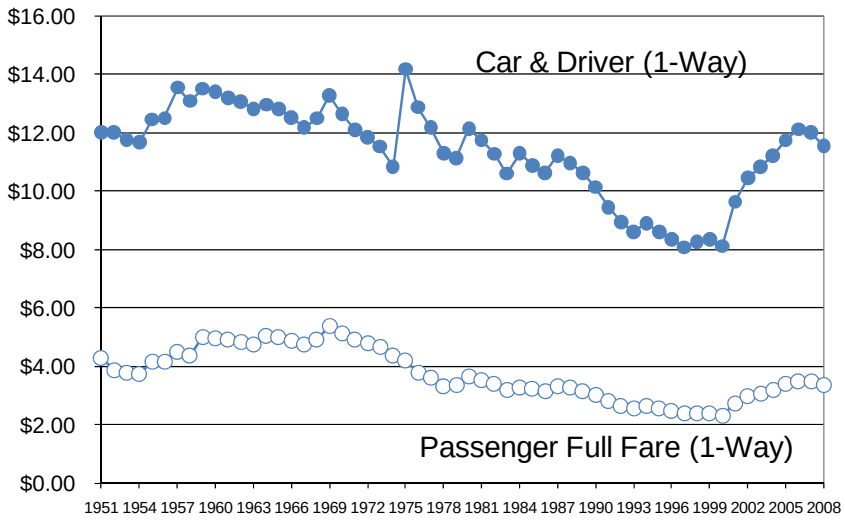



The portion of the cost of operations funded from fare revenues has shifted from more than 100%, to the 60% level during the MVET years (1987-2000). The transition from over 100% to 60% cost recovery represented a gradual but steady decline that benefited ferry users.

To improve the farebox recovery rates, it was necessary to implement substantial increases in customer fares. In fact, since the loss of MVET, fares have increased between 37% and 122%, varying by route. These large fare increases did push the recovery rate close to 80% in fiscal year 2004, but since then, cost increases (primarily rapid increases in fuel prices) and relatively modest fare increases have pushed the recovery rate back down closer to 70%.

Another useful historical comparison is to see how these significant recent fare increases have changed the price of ferry services in relation to previous years. Exhibit 3 shows that the fare increases have brought the cost of ferry services back up to a level that is more in-line with historical levels. In fact, prior to the loss of MVET, fare prices were at their lowest levels in history, when adjusted for inflation.

**Exhibit 3**
**Historical Fares Adjusted for Inflation ($2008)**




## 3.2 Funding for WSF Post MVET Repeal

Since the loss of MVET funding in the middle of the 1999-2001 Biennium, the Legislature has been subsidizing the funding gap with transfers from general transportation resources, primarily the Motor Vehicle Account and the Multimodal Account. The funds in these accounts are subject to appropriation every two years and are allocated based on funding priorities among all of WSDOT and other transportation agencies. WSF shares these limited resources with the landside highway system.

Over the course of the last nine years, WSF has received a total of $300 million in general transportation funding to backfill operations. These transfers have been necessary despite the large increases in fare revenues during this period. In fact, the cumulative impact of the fare increases is estimated to have raised approximately $130 million during this same period.

As discussed earlier, the magnitude of the necessary transfers of general highway funding to WSF has been significantly influenced by the higher cost of fuel during this period.

On the capital side, the transfers from available transportation discretionary funds have varied from biennium to biennium. In total, more than $350 million has been appropriated from these general transportation funds to replace lost MVET funds. During this period, WSF has been the recipient of some project-specific funding from both the Nickel Gas Tax Package and the Transportation Partnership funding package ($0.09 gas tax increase).

## 3.3 What is WSF Doing to Keep Costs Down?

Given the funding challenges facing WSF, steps have been taken to reduce costs as much as possible without jeopardizing safe, reliable and efficient service. The focus on managing costs has included three significant efforts: (1) cost containment strategies designed to reduce operating and capital costs immediately; (2) updating the Life Cycle Cost Models to ensure that preservation funding is optimized; and (3) reviewing and revising terminal design standards to ensure future terminal improvements are appropriately sized.

### Cost Containment

WSF has carefully reviewed its operating practices and staffing levels. Savings have been achieved by leaving non-essential vacancies open, reducing technology upgrades, decreasing consultant costs, cutting administrative staff, and making across the board cuts in every department. All spending has stopped for goods and services that are not essential to the business. WSF has reduced fuel consumption by investing in boat modifications,with expected savings of 843,000 gallons of fuel in the 2007-2009 biennium. Maintenance that can prudently be deferred has been eliminated from the budget.

Some examples of recent cost saving measures include the following:

- Staff reductions: $1.5 million (25 budgeted positions)
- Fuel conservation: $3.7 million

### Life Cycle Cost Model

Maintenance assumptions used in this analysis have been developed using the following Life Cycle Cost Model (LCCM) guidance in recent legislation:

**ESHB 2358**

WSF must maintain a Life Cycle Cost Model that (section 10):

- Is used in developing preservation funding requests.
- Uses available industry standards or department-adopted standards when standard life cycles are not available.
- Is updated when inspections are made to reflect asset condition.
- Does not include systems that aren't replaced on a standard life cycle or that are not yet built.
- Is updated at least every three years.

**SSB 6932**

The Life Cycle Cost Model will (section 4):

- Be used in estimating future terminal and vessel needs.
- Be the basis for developing the budget request for terminal and vessel preservation funding.

**2007 Transportation Budget**

- WSF to update LCCM no later than August 1, 2007 (section 225 (8)(c)).
- JTC to review updated LCCM (section 205 (1)(b)(ii)).
- JLARC to ensure LCCM complies with requirements in bill (section 108 (2)).

- Reductions in other operating costs: $2.2 million
- Reduction in consultant costs: $25 million

Cost containment is an ongoing process, and WSF will continue to look for ways to maximize the service delivered with the money it has. In part this will be achieved by looking throughout the year for ways to reduce spending. Future plans for reducing costs include:

- A much more detailed budget process in future budget cycles. In the 2009-11 biennium we have targeted a 12% reduction in fuel consumption
- Exploring methods of hedging WSF exposure to fuel prices
- Development of an injury reduction plan, pursuant to direction from the 2009 Legislature
- Updating the life cycle cost model for the fleet
- Ensuring capital staffing levels are consistent with delivery of the capital program

## Updated Life Cycle Cost Model

As directed by the ESHB 2358, WSF continues its efforts to update its Vessel Preservation Life Cycle Cost Model (LCCM). Work completed to date includes a review and update of the vital systems' cost factors and replacement intervals. Currently, a review of the existing inspection process is being done to support the requirement that all assets in the LCCM be inspected and the LCCM updated to reflect actual asset condition every three years. The outcome of this review is to provide recommendations:

- Improving methods of condition assessments by using best industry practices
- Concerning methodology and resources needed to compile inspection data for analysis and conversion into useful management information
- Making economic analyses such as Lowest Life Cost Analysis that support vessel preservation investment decisions

The goal of these efforts is to ensure that vessel preservation funding is invested wisely for the best return in terms of vessel material condition, by replacing systems only when their condition requires it. When funding is limited, the highest priority needs of vital systems are preserved within their life cycles, and the high cost, non-vital systems such as passenger deck renovations and topside painting, are deferred.

The terminal Life Cycle Cost Model underwent an extensive update in 2007, which focused on bringing all of the condition ratings up to date

and reassessing when assets would need to be replaced. This effort resulted in a reduction of $106 million over the legislative 16-year financial plan.

## Terminal Design Standards

Terminal design standards were reviewed and updated to ensure that terminal facility planning is consistent with the direction in ESHB 2358 and that facilities were being appropriately sized. These revised standards were used in the development of conceptual-level terminal improvement needs identified in this plan.

Terminal design standards are based on the following assumptions:

- Operational strategies will be implemented where appropriate
- Improvements in the efficiencies of loading and off-loading will be made where possible
- Major alternatives will be evaluated using a business case evaluation

Terminal design standards are divided into the following elements:

Vehicle Holding Sizing. The holding space required within the paid area is based on the largest vessel capacity of the route. There needs to be enough holding space in the paid area for one sailing worth of vehicles plus standby vehicles. HOV/preferential loading vehicles have separate holding spaces based on the utilization at each terminal.

Terminal Program**.** Each terminal has specific spaces that are required in order to safely and efficiently operate a ferry terminal. These spaces have been identified in terms of function, size and location.

Terminal Building Sizing**.** The terminal building is divided into two separate functions, the public waiting area and the staff areas. The public waiting area is sized based on the type of route (commuter, summer travel & tourist, mix). The difference in these types of routes is how long a customer is waiting; commuters typically arrive very close to the scheduled departure times vs. tourists who may arrive several hours before the scheduled departure time. More space is needed to accommodate customers that are waiting longer. The staff areas are determined using the State Department of General Administration's standards for type of employees and space they require.

Customer Information**.** Information Technology System (ITS) equipment will be installed at critical travel decision points regarding vehicle reservations/capacity information and proposed alternative

### Asset Management System

While the preservation costs have been estimated using the life cycle cost approach as per legislative direction, WSF is moving to implement a more robust asset management system to improve its ability to effectively manage its preservation programs.

A budget proviso in the 2007-09 budget required WSF to "research an asset management system to improve Washington state ferries' management of capital assets and the department's ability to estimate future preservation needs."

The report was presented to the legislature during the 2008 session. WSF is now requesting funding to design and implement the system.

routes. The current WSDOT standards for highway information technology will be used.

Business case. The business case process is an objective, repeatable, quantitative approach to alternatives analysis. It is intended to determine the lowest life cycle cost solution for a given problem. Alternatives are identified and evaluated in terms of costs associated with each alternative. Costs include capital and operating as well as risks and benefits to the customer. See Appendix B for a more detailed discussion of terminal design standards.

### How has the financial outlook influenced the development of the Final Plan?

The current and future financial challenges have had a profound impact on the approach to this planning effort. It forced WSF to take a completely fresh look at both what it is doing and how it is doing it. This Plan proposes some significant changes in how WSF does business and how customers will interact with the system in the future, while maintaining its commitments to providing the best possible service throughout the system, given funding constraints.

The public feedback on the Draft Plan was that service and vessels should have higher priority than improvements to terminals, and that has been reflected in the revised terminal budgets, where a number of projects initially included in Scenario A have been eliminated.

# 4. PLANNING PROCESS

## 4.1 Technical and Policy Review Teams

The process for developing this Plan was designed to meet the participation requirements included in ESHB 2358, and to ensure that the best available internal and external technical resources were brought to bear on the analytical needs of the project. Toward this end, the plan development effort included four distinct groups:

- Technical Work Teams. Technical work teams were organized around subject matter expertise, including: travel demand forecasting, terminal design standards, operating strategies, pricing strategies, and finance. These teams were comprised primarily of WSF staff and augmented with consultant support where appropriate. Given the importance of the demand forecasting effort, an expert review panel was also integrated into that work element.
- JTC Staff Group. ESHB 2358 called for a high degree of review and participation among the key participants in the study efforts. To ensure effective communication and collaboration, the JTC Staff Group was formed and met bi-weekly beginning in the summer of 2007. The Staff Group was comprised of representatives from the Governor's Office, House and Senate Transportation Committees, the JTC, WSDOT, WSF, the Office of Financial Management, and the WSTC.
- Transportation Commission Ferries Subcommittee. There was a particular need for coordination between WSF and the Transportation Commission, given the Transportation Commission's role in fare setting and the shared responsibility to make pricing and operational strategy recommendations to the Legislature. As a result, a three-member Subcommittee of the State Transportation Commission met monthly with the WSF project leadership team on policy and technical issues.
- JTC Ferry Policy Group. ESHB 2358 created a policy oversight committee comprised of members of the Senate and House Transportation Committees and the Governor's Office. This group met on a bi-monthly basis for progress briefings and to provide feedback on the work products as they were developed.

**2008 Public Meetings:**

Mar. 24, Bainbridge
Mar. 25, Kingston
Mar. 26, Southworth
Mar. 27, Coupeville
Mar. 31, Bremerton
Apr. 1, Anacortes
Apr. 2, Friday Harbor
Apr. 3, Vashon
Jun. 17, Whidbey Island
Jun. 18, Port Townsend
Jun.19, Anacortes
Jun. 23, Bainbridge
Jun. 24, Kingston
Jun. 25, Vashon
Jun. 26, San Juan Islands
Jun. 30, Bremerton
Jul. 1, Southworth
Sept. 24, Bremerton
Sept. 25, Edmonds
Oct. 2, Bainbridge
Oct. 6, San Juan Islands
Oct. 7, Keystone
Oct. 13, Vashon
Oct. 14, Mukilteo
Oct. 15, Anacortes
Oct. 16, Southworth

**2009 Draft Plan Public Hearings**

Jan 5, Port Townsend
Jan 6, Whidbey Island
Jan 7, Vashon Island
Jan 8, Bremerton
Jan 12, Southworth
Jan 13, Bainbridge
Jan 14, Kingston
Jan 15, San Juan Islands
Jan 15, Anacortes
Jan 21, Fauntleroy

The work of these groups and the participation of stakeholders was critical to the development of this Long-Range Plan, and WSF appreciates the time and effort of everyone involved. For a complete list of participants, please see Appendix C.

## 4.2 Public Outreach and Stakeholder Involvement

As part of the long-range planning process, WSF consulted with ferry customers, planning organizations, agency stakeholders, and the general public. The following groups and resources provided input into the planning process, and encouraged stakeholders and the public to submit ideas and stay current on the planning process.

- Local Agency Review Team**.** The Local Agency Review Team is a consultative body comprised of individuals from agencies and organizations with a vested local interest in the ferry system, and convened for the purpose of advising WSF on technical and policy issues associated with the development of a Long-Range Plan. The Local Agency Review Team's role included keeping WSF's agency partners informed about technical and policy work, and helping WSF understand the local community and agency needs.
- Public Ferry Advisory Committees**.** WSF met with the chairs of the Ferry Advisory Committees quarterly to provide an update on the development of the Long-Range Plan, solicit feedback, and consult on public meetings in ferry-served communities.
- Public Meetings and Workshops**.** Twenty-six public meetings were held in ferry-served communities in 2008. These meetings, held in the spring, summer, and fall, were to solicit input from the public as WSF was developing the foundational concepts for the Long-Range Plan. Ten additional public hearings were conducted in January 2009 to gather input on the Draft Plan. See the sidebar for a comprehensive list of public meetings.
- Briefings to Community Groups, Local Leadership, and Regional Planning Organizations**.** WSF staff attended over 60 meetings regarding the Long-Range Plan, not including the public meetings and workshops mentioned above. These meetings were requested by community groups, city and county councils, and regional planning organizations.
- Web Page**.** WSF maintained a web page connecting the public to the latest information on the Plan. Users could download materials and public comment summaries from all of the public

meetings, including a video feed of the presentation used during the fall. The web page made it easy to submit public comments and get in touch with WSF staff. It also connected the public to related web pages, including the WSTC and JTC sites.
The webpage address is:
www.wsdot.wa.gov/ferries/planning/ESHB2358

- Email List Serve. WSF maintained an email list serve of those who expressed specific interest in learning more about the long-range planning efforts. This included a quarterly e-mail from the Assistant Secretary for Ferries regarding progress on the Plan, and a weekly update from him that addressed current ferry issues, including updates on the long-range planning process.

# 5. DRAFT PLAN OUTREACH

The Draft Long-Range Plan (Draft Plan) was released for public review and comment on Friday, December 19, 2008 that was to close on Wednesday, January 21, 2009. Given the overwhelming response to the Draft Plan, the public comment period was extended through Monday, January 26, 2009 to ensure that all interested parties had an opportunity to participate. This section summarizes the following:

- Outreach approach, process, and public hearings
- Major themes heard during public comment period
- Changes to Revised Plan Scenarios (A and B)

## 5.1 Public Involvement

The Draft Long-Range Plan was developed with extensive public input at 26 public meetings and workshops in ferry-served communities between March 2008 and October 2008. The focus of the meetings was on the requirements of ESHB 2358 and the building blocks of the Plan, including ridership demand, level-of-service standards, pricing and operational strategies and baseline funding challenges.

WSF conducted a total of ten public hearings between January 5 – 21, 2009, to present the Draft Plan and to listen to public testimony. The public hearings were well attended, with over 1,300 individuals that signed in, and nearly 400 that chose to testify. Please see Appendix D for a verbatim transcript of each hearing.

In addition to the public testimony at the official public hearings, WSF collected feedback through emails, letters, and news accounts. In total, WSF received more than 800 comments on the 2008 Draft Long-Range Plan between December 19, 2008 and January 26,

2009. Please see Appendix E for copies of the emails and letters submitted by affected jurisdictions and other stakeholders.

## 5.2 Key Themes

As indicated above, WSF reviewed hundreds of comments and listened to public testimony from the ten public hearings. The comments touched on a range of subjects. The comments heard most frequently at each of the ten hearings and in reading through the written submissions were grouped into themes. The following key themes emerged:

- WSF should be treated as part of the state highway system
- Economic impacts should be considered
- The Draft Plan had not adequately addressed ridership growth
- The Draft Plan raised concerns about a vehicle reservations system
- More information was needed on what WSF is doing to reduce costs
- WSF should consider building vessels out of state if it saves money
- Scenario B included an unfunded state mandate for locals to provide passenger-only service

WSF considered all of the themes surfaced during public outreach and where appropriate has revised the Plan to reflect public input.

### WSF Should Be Treated as Part of the State Highway System

A major theme that was heard at all of the public hearings was that the ferry system is a part of the state highway system and, as such, should be a fully-funded state responsibility. Among the comments heard during the public hearings was that the State was funding other "mega projects," such as the Viaduct or SR 520, but not ferries.

A variation on this theme addressed fares: that ferry customers are already paying twice – once in the form of state gas taxes and a second time when they pay their fare – and that this is not equitable since most of the rest of the highway users do not pay tolls. As a result, the State should fund ferries without looking to local taxes or additional fares to address the funding challenges.

Discussion. WSF is a division of the Washington State Department of Transportation (WSDOT). Under state law, all ferry routes are designated as extensions of State Highway Routes and WSF is

funded in part through gas tax collections which are constitutionally-restricted to highway purposes.

The State cannot fully fund the "mega projects" mentioned above from current state resources. All of these projects are partially funded by non-state resources.

WSF is an expensive part of the highway system. The operating costs are much higher, since the State must provide labor and fuel to operate the vessels and terminals. The capital costs are also higher, mostly due to the large, ongoing preservation capital needs of the system. For example, over the next 20 years WSF needs to replace approximately half of its fleet.

Since the 1970s, ferry tolls have been used exclusively to defray a portion of the operating costs of the ferry system. Fare revenue does not fund the capital needs of the system. However, there were two instances in recent years where some of the gas tax revenues from the operating account where transferred, including immediately after the MVET repeal when $67 million of the operating reserve was transferred from operations to capital.

### Economic Impacts of the Plan Should Be Considered

There were many comments that touched on the idea that the proposed service reductions in Scenario B (and to a lesser extent the lack of service improvements in Scenario A) would have had negative economic impacts on ferry-served communities. For some, the focus was on the economic impacts that ferry communities have already experienced as a result of higher fares. For others, the goal was to better understand and present the case for why ferries are a vital contributor to the economic well-being of the Puget Sound region and the State. Perhaps the greatest concern raised was related to the potential damaging effects of a reduction in accessibility for ferry communities and businesses, such as home and property values, particularly in communities with few or no other options.

A number of comments suggested that the Plan should have addressed this issue directly and that decisions about the future of the ferry system cannot be made without a thorough understanding of the economic impacts of the potential changes in service and investments.

Discussion. We understand the concerns outlined above. An economic impact analysis was outside the scope of the legislative direction contained in ESHB 2358. However, economic issues were considered as part of the evaluation of pricing and operational strategies, though not in detail and only as part of the broader evaluation of customer and community impacts.

This is particularly difficult because avoiding the impacts of a service cut would require dedicating more tax revenue to ferries, since there is not enough dedicated funding to maintain current service levels. If these funds were to come from existing resources, then the impacts would need to account for the negative impacts of not spending that money on other state projects. This issue was given consideration by the State Legislature, whose recommendations helped form the Final Long-Range Plan.

### Growth Was Not Accommodated In the Plan

Some comments suggested that, even in Scenario A, the Long-Range Plan did not propose a solution that addressed the growth expected in the next 22 years. There was anxiety expressed in many of the communities about the ferry system's inability to meet future, potential growth without having a more robust expansion of capacity.

Discussion. While the current plan does propose fewer capacity improvements than previous plans, the smaller capacity improvements are combined with a significant shift in how WSF is going to do business.

Growth will be accommodated through small capacity improvements and adaptive management strategies. The approach to addressing future growth in Scenario A included a combination of a modest capacity increase over time (related to replacing old vessels with newer and larger vessels), and a focus on operational strategies designed to better fit the demand with available capacity.

A key strategy in this regard is the proposed vehicle reservation system. The primary objective of the reservation system is to better utilize existing assets, which will allow WSF to meet growing demands without growing capacity in a proportionate way.

This approach to meeting growth is not unique to WSF. Throughout the transportation system, there has been a significant shift away from building capacity to a policy of managing demand. In both the United States and throughout the world, there is a greater focus on managing transportation demand either through improved transit or other high capacity systems (HOV lanes) or through congestion pricing (or increasing parking costs or reducing parking availability) to reduce demand during peak periods.

### Concern About a Vehicle Reservation System

While there was support for a vehicle reservation system from some, there were also concerns expressed from others. Many of the concerns were related to how such a system might actually operate and how it would require customers to plan their trips in advance. There were some who thought that a vehicle reservation system

would make terminal congestion worse and not better. Others felt that a vehicle reservation system was a costly extravagance when basic ferry services were under threat due to funding challenges. Others commented that reservations were not required on the landside highway system, such as crossing SR 520.

Discussion. The proposed vehicle reservation system is the primary demand management tool proposed in the Plan. A vehicle reservation system will have a significant impact on WSF's ability to better align demand with available supply of auto capacity on ferries. WSF has gained valuable experience with vehicle reservations on two of its existing routes. WSF also looks to learn from other domestic and international ferry systems, most of which have reservations systems in place. In addition, the cost of implementing a reservation system is much lower than the investment needed to provide additional holding capacity where vehicles queue outside of terminals.

There has been additional information added to the vehicle reservation section of the Plan to address the specific operational concerns raised during the public comment period.

For more information on this topic, please refer to page 61.

### More Information Was Needed About What WSF Is Already Doing To Reduce Costs

Given that much of the focus of the Draft Long-Range Plan was on the long-term funding needs of the system, it was not surprising that there were many comments and questions about how WSF was spending the money it already has. In particular, there was concern that the focus was too much on needing new revenues and not enough on cutting costs.

Discussion. In response, we included a more detailed discussion of cost containment, and cost management has been added to the adaptive management chapter to better explain what WSF is doing in this important area.

For more information on this topic, please refer to page 15.

### Consider Building Vessels Out of State If It Saves Money

Another theme expressed at several meetings was the suggestion for the State to consider building vessels outside of Washington to help alleviate some of the funding challenges facing the ferry system. In some cases, there were specific references to the recent bids for new WSF vessels that came in over the state estimate. Many also commented on the need to include ferries in the federal stimulus package.

Discussion. The Plan did not address this issue as it is a state policy issue. The issue is a complicated one that involves both cost and benefit implications for the State.

Federal maritime law requires that WSF use U.S. flagged vessels for service between United States ports, which means these vessels would still need to be built in the United States. There is an option to use a foreign flagged vessel on direct service to Sidney from Anacortes. The 2009 legislature directed WSF to pursue purchasing a foreign flagged vessel for that route.

### Passenger-Only in Scenario B was an Unfunded State Mandate

Customers and local elected officials in several communities affected by the potential service reductions described in Scenario B were concerned that identifying the potential for locally-funded passenger-only services to mitigate the impacts amounted to an unfunded state mandate.

Discussion. Under Scenario B, there was a description of how, in the event that services needed to be reduced as a result of a smaller available fleet, there were potential passenger-only routes that might be poised to provide services that could mitigate some of the impacts of these reductions. Scenario B was not premised on the availability of these services, but clearly customers would be better served if these services were available. Under that Scenario, WSF would have engaged local governments in a dialogue about how the reduced WSF service could have best been mitigated.

## 5.3 Summary of Changes to Draft Plan

The Revised Draft Long-Range Plan was modified based on the feedback from the public outreach in two distinct ways. The first type of changes were revisions to the Plan text to improve understanding of key plan elements by adding additional details, and to clarify areas where there might have been confusion. Some of these were mentioned earlier in the discussion of general themes from the outreach effort.

The other category of changes that were made included several revisions to the Plan Scenarios designed to address some of the concerns and comments heard.

Exhibit 4 summarizes the specific changes that were made to the Plan Scenarios between the Draft and Revised Draft versions of the Plan, in response to public feedback. A summary description is included below.

## Exhibit 4
## Changes to Draft Plan Options

| Changes to Scenario A since Draft Plan | Changes to Scenario B since Draft Plan |
|---|---|
| Operating Program | Operating Program |
| Break-up Fauntleroy triangle by adding the Hiyu: | Reinstate the Bremerton night service that would have been cut ('11-'13) |
| Run 2-boats Fauntleroy-Vashon | Add reservation operating costs ($500K/yr) |
| Run 1-boat Vashon-Southworth | |
| Run 1-boat Fauntleroy-Southworth | Capital Program |
| Add reservation operating costs ($500K/yr) | Eliminated several terminal projects, including: |
| | Point Defiance Tollbooth improvements |
| Capital Program | Point Defiance increased holding |
| Remove dock widening at Fauntleroy | Port Townsend relocate tollbooths |
| Eliminate exit lane straightening at Port Townsend | New exit lane to Tahlequah |
| Add a replacement vessel to procurement plan to replace Hiyu (2027) | Clinton walkway connection to park & ride |
| Add a new tie-up slip at Southworth to support service expansion | Minor reduction to Bainbridge transit improvements |

### Modifications to Scenario A to address Public Input

WSF concurred that the draft Scenario A did not adequately address the growth and operational issues associated with the Fauntleroy-Vashon-Southworth route. The revised proposal added a fourth, small vessel to the route, operating as a shuttle between Vashon and Southworth. This allowed the other three vessels on the route to operate in direct service between Fauntleroy and Vashon and between Fauntleroy and Southworth, better utilizing the capacity on those vessels and increasing overall efficiency on the route. It also increased capacity for Southworth, which is one of the areas slated for high growth.

Based on comments heard at the Fauntleroy public hearing and comments received by the City of Seattle, the concept of expanding the Fauntleroy dock (as proposed in the Draft Scenario A) was not viewed as feasible. As a result, the project was removed from the Revised Draft Plan, and WSF will investigate all possible roadway and right-of-way options, if expanded vehicle holding is needed.

### Modifications to Scenario B

Night/evening service on weekdays for the Seattle/Bremerton route was reinstated. The importance of evening and night service for major military employers such as Puget Sound Naval Shipyard and swing/night shift workers in Seattle led to the restoration of service in those time periods.

# OUR CUSTOMERS: RIDERSHIP AND DEMAND

The foundation of the Long-Range Plan is to develop a thorough understanding of WSF customers, both today and in the future. As a result, the ridership and demand analyses included two key elements:

- Current ridership characteristics**.** A successful Long-Range Plan must take into account the needs of its customers and, given financial and operational constraints, tailor its services accordingly.
- Expected future demand**.** As this is a Plan that establishes a vision for ferry services in 2030, it is necessary to base this vision on a realistic forecast of future demand.

The need for better information about current and future ridership is heightened by the legislative requirements to identify, evaluate, and recommend adaptive management practices that will increase the utilization of existing assets, implement demand management strategies, and minimize system costs.

## 6. CURRENT RIDERSHIP

One of the findings of the JTC's Ferry Finance Study was that WSF needed a better understanding of its customers. As a result, the Study recommended (and ESHB 2358 subsequently required) a comprehensive customer survey be conducted and the results integrated into the Long-Range Plan.

The Legislature assigned responsibility for the market survey to the WSTC. The WSTC's effort, completed in November 2008, took more than a year to complete and included the following research elements:

- Qualitative research**.** Focus groups representing riders on all routes were conducted in November and December 2007.
- On-board surveys**.** Two rounds of on-board surveys were conducted – the first in March 2008 and the second in July/August 2008. In total, 13,000 riders completed surveys.
- General market and infrequent rider survey**.** A telephone survey with more than 1,200 Puget Sound residents contacted randomly to discuss their ferry utilization.
- Freight customer survey**.** A qualitative research effort that engaged decision makers at various regional freight companies.

- In depth on-line surveys**.** A subset of the on-board survey respondents was contacted for a follow-up detailed survey to test reactions and potential sensitivities to potential operational and pricing strategies.

WSF staff was involved throughout the survey effort and had opportunities to review and comment on the survey design, collection, and analysis to ensure that there was close coordination between this and the planning work.

The survey will be updated every two years. Future surveys will focus on customer reactions to WSF changing operational and pricing policies, providing the customer input that is the keystone of adaptive management.

## 6.1 What Did We Learn from Recent Survey Efforts?

The WSTC survey was unusual in its depth and breadth as it sought to establish a comprehensive understanding of the characteristics of today's ridership base and provide input for the evaluation of alternative operational and pricing strategies being considered in the development of the Plan. The survey provided extensive and detailed data that supported not only this effort, but will inform ongoing management and operational decisions over the next several years. The key findings of the survey are summarized for the following areas of investigation:

Importance of ferry service**.** The survey found that residents throughout Puget Sound use the ferries and think they are an important service.

- The General Market Survey (telephone survey of Puget Sound residents) found that 91% of all residents in the region have ridden WSF at some point in the past
- 95% of Puget Sound residents responded that ferries are very important (70%) or somewhat important (25%). Respondents include East Sound (95%), West Sound (98%), and Island (100%) residents (General Market Survey)

Characteristics of ferry riders**.** The survey collected information about the demographics and travel patterns of riders. The analysis considered the characteristics of overall ridership, defining riders as regular, infrequent/recreational, and freight customers. The characteristics were also defined at a route-level analysis.

The following are some of the key findings which show, among other things, the significant differences that exist between customers on WSF routes:

- Regular ferry customers are somewhat older and more affluent than state residents overall or average residents in ferry communities (west side of Puget Sound).
- The majority of regular ferry customers are employed (76%), while approximately 16% were retired, which is a smaller share than the overall share of retirees in ferry communities (25%). The rest are children or non-workers.
- Generally, recreational and infrequent riders are older and more affluent than regular riders and the characteristics of this customer group did not vary much according to the season.
- More than half (52%) of all infrequent riders identified in the telephone survey ride less than once per year.
- Among the infrequent riders surveyed as part of the on-board survey, the most frequently cited level of use was less than seven one-way rides per month.
- On average, WSF riders take 17 one-way trips per month, with 28% taking 25 or more one-way trips per month.
- The routes with large proportions of higher-frequency customers included Seattle-Bainbridge, Seattle-Bremerton, routes serving Vashon Island, and Fauntleroy-Southworth. Not surprisingly, these routes also have the highest shares of commuters.
- 30% of riders say the primary purpose of their trip is commuting to work or school. The actual number of customers who say they are commuters remains largely the same between summer and winter, though the share is smaller in the summer.
- The other 70% consists of non-commute trips including: recreational (25%); personal/shopping (19%); social (16%); and other (10%).
- The routes with the highest proportion of recreational trips were Port Townsend-Keystone, Anacortes-San Juan Islands, and the International routes.
- 40% of all riders always drive onto the ferry as a driver or passenger in a car.
- 11% of all riders always either walk or bike on the ferry. An additional 17% bike or walk on more often than they drive on.
- Frequency of walk-on use varies widely by route, with key factors in walk-on rates identified as trip purpose, the ability to use transit on either side, or their need for a vehicle at their destination.
- Routes with the highest shares of regular walk-ons were Seattle-Bremerton and Seattle-Bainbridge.

- Routes with the highest share of regular drive-on customers included Edmonds-Kingston, Mukilteo-Clinton, Port Townsend-Keystone and Anacortes-San Juan Islands.

Attitudes toward possible operational strategies**.** During the evaluation of operating strategies (discussed in subsequent sections), WSF had the opportunity to work with the survey team to assess attitudes about some of the strategies under consideration. In particular, the survey provided important information about possible vehicle reservations and transit enhancements.

- On the question of vehicle reservations, riders generally agreed that:
  - The system should be dynamic, offer real-time information about availability, and be open on a first come, first served basis.
  - There should be policies that penalize no-shows or those arriving late for a sailing.
  - WSF should offer special options to frequent users, such as allowing multiple bookings at once.
- On the other hand, there were much more mixed views as to whether the system should:
  - Focus on tourism routes only.
  - Limit the number of spaces available for vehicle reservations.
  - Charge a premium or extra fee for a reservation.
  - Provide priority bookings for frequent users.
- For transit enhancements, there was wide support for improving the walk-on experience and other possible strategies to encourage greater walk-on utilization of the system.

Ability and/or willingness to change travel behavior**.** Given the need for WSF to consider opportunities to shift and manage its demand, perhaps the most important new information was related to customers' ability and/or willingness to change their travel behavior. The following are some of the key findings from this area of focus.

- Overall, 60% of riders said that they typically have the flexibility to take an earlier or later sailing. Of these riders, approximately 9% of riders and 8% of vehicle drivers traveling in the peak said they could shift out of the peak. An 8% shift in vehicle trips would have a significant impact on peak congestion and average wait times.
- Approximately 38% of riders said that they have no flexibility to shift their travel.

- There was little variation in responses to the flexibility questions among the various routes in the system.
- The factors that affect vehicle drivers' ability to shift mode of travel to walk-on included: availability of transit on either side of the ferry trip, and the total time of the trip.

Attitudes about fares**.** Given recent large fare increases and the continuing funding challenges facing WSF, it was important to develop a better understanding of customer attitudes regarding fares. The following are some of the key fare-related findings from the survey:

- More than half (56%) of riders believe that they are getting a good value for the fare they are paying, with 30% neutral and 14% saying that ferries are a poor value.
- Change in ferry use is driven more by changes in life circumstances than by fare increases. Despite the fact that fares have risen steeply between 2000 and 2006, a relatively small percentage of people in the General Market Survey cited price as reason for reducing their ridership.
- While most riders do not like fare increases, most recognize that periodic fare increases are necessary.
- Generally, customers were more willing to consider increases to the passenger fare than to the vehicle fare. This may be a function of the fact that vehicle fares are already much higher than passenger fares.
- Vehicle drivers on the high recreational routes are the least sensitive to an overall vehicle fare increase.
- Among the commuter-oriented routes, Fauntleroy-Vashon riders reported more price sensitivity than other routes.
- The overall price sensitivity analysis suggested that non-discretionary trips were less price-sensitive than discretionary trips. The analysis suggested that fare increases of 45% for non-essential trips and 70% for essential trips would be revenue maximizing.
- Customers were generally much more supportive of pricing strategies designed as incentives for travel changes (discounts for walk-ons or small vehicles) and generally negative towards strategies designed as disincentives (such as congestion pricing approaches).

**Attitudes toward quality of service.** The final area of investigation focused on perceived value and quality of ferry services. The survey found that:

- The majority (68%) of ferry riders were satisfied with the services and 20% were dissatisfied. This represents a decrease from a WSF customer satisfaction survey in 2002 when 74% said they were satisfied with ferry services.
- On a route level, the least satisfied customers were on the Vashon Island routes, while the most satisfied customers were on routes serving Seattle-Bainbridge, Edmonds-Kingston, Mukilteo-Clinton, Anacortes-Sidney, and Anacortes-San Juan Islands.

## How Have Findings Been Incorporated in Planning Efforts?

The adaptive management strategies proposed in the sections that follow recognize that many customers are flexible in the times they travel. Frequent user programs will be considered in conjunction with other strategies to help with any potentially negative impacts to commuters. Following are the major findings that influenced the planning efforts.

**Our customer base is changing.** Approximately one-third of WSF's customers travel for the purposes of work or school (i.e. make non-discretionary commute trips). This trend has also been observed in recent WSF Origin-Destination Surveys (conducted in 1993, 1999, and 2006), which have shown a gradual decrease in peak period commute trips. While the share of riders that are commuters is falling, it is important to keep in mind that each commuter represents many individual trips over the course of a year. Any change that might reduce or increase the number of commuters could have a disproportionate impact on total number of trips.

**Our customers are generally traveling less frequently and have some flexibility.** A meaningful share (8%) of peak period vehicle travelers said they could shift to off-peak times, indicating that strategies geared toward time shift (like a vehicle reservation system) could be effective in reducing congestion during the peak.

**There are opportunities to increase walk-on shares on commuter-oriented routes.** Two of the routes with the highest shares of commuters (Edmonds-Kingston and Mukilteo-Clinton) also are among the routes with the highest shares of drive-on trips. This suggests an opportunity may exist to improve the mode shift on one of the more congested routes by attracting some of these regular users to walk-on, thus freeing up vehicle space to meet growth

needs. To accomplish this however, will likely require some incentives and/or addressing the reasons why these customers want to drive on most of the time.

**Fares are not the only factor affecting use of ferries.** While higher fares have had an impact on ferry ridership in recent years, the General Market Survey found fares to be a small factor in why some customers are using the ferry less. Many respondents cited lifestyle changes, like changes in employment or location of residence, as the primary reason for riding ferries less. Also, a majority of customers believe that ferry services reflect a good value and are pleased with the services they are receiving.

# 7. DEMAND FORECASTS

The demand forecasting assumptions used in the 2006 Draft Plan have been updated for this planning effort. The updates have accomplished two key objectives: (1) based on survey information and an increased understanding of the types of riders using the system, ridership forecasts have been refined, particularly with respect to recreational ridership; and (2) the two different modeling efforts (the revenue model and the planning model) have been reconciled.

For a complete discussion of the methodology used to forecast ridership, see Appendix F.

## 7.1 Updated Process for Demand Forecasting

One area of concern raised in the JTC's Ferry Finance Study was related to the method used to develop the ridership forecast, and there were two significant issues that needed to be addressed in this effort: (1) the disparity of the results from the different ferry forecast tools; and (2) the rate of ridership growth projected by the planning model, which seemed high given recent trends.

WSF maintains two different demand forecasting tools, one for budget development purposes (revenue model) and one for long-term planning (planning model). The revenue model was developed to focus on near-term ridership and fare revenue expectations, and is used to support the budget process. In recent years the short-term model has been adjusted to extend budget forecasts from 6 years to 16 years. This model estimates annual ridership and revenue based on WSF's historic relationship between ridership and a number of trends in regional and state economic conditions. These forecasts are adjusted quarterly.

**With base level of service annual demand for ridership is projected to increase:**

- 1999—26.8 million
- 2006—23.8 million
- 2030—32.3 million

**Vehicle demand is also projected to increase:**

- 1999—11.4 million
- 2006—10.9 million
- 2030—14.1 million

The planning model is designed to evaluate the potential peak period ridership for two future planning years – 2020 and 2030. This model structure allows WSF to synchronize with other regional and state transportation planning models and capture the effects of expected changes in both the total level and distribution of population and employment in ferry-served counties. The focus is on the expected ridership growth during the average afternoon peak travel period, as this is a key factor in evaluating system and service sizing issues. Demand in the peak is then applied to annual ridership estimates for the planning years and then further extended to fill in the intervening years.

In 2006, the longer-term forecasts from the revenue model produced results that were significantly lower than the forecasts produced by the planning model. This discrepancy led to concern that the 2006 Draft Plan was based on an unrealistically high level of ridership growth, leading to a service and investment program that was much higher than might ultimately be needed. As a result, ESHB 2358 required WSF to review both models and to either develop a reconciliation process to ensure that the results were much more consistent, or to change to a single forecasting tool.

Given the importance of demand forecasts in long-range planning and the issues identified in the Ferry Financing Study, WSF established a Technical Advisory Team of subject matter experts, comprised of representatives from WSDOT, the JTC, and the PSRC. This team worked in close collaboration with the Ferries Forecasting Team of WSF experts to review the current methods, propose refinements, conduct the reconciliation of the revenue and planning models, and develop baseline forecasts. The forecasts used in the development of this Plan are based on the outcome of this effort.

## 7.2 How much ridership is expected?

Ridership is expected to grow by 37% between 2006 and 2030 – 13% growth would return WSF to the historical high level of ridership it had in 1999, with the additional forecasted growth bringing ridership levels above what the system has previously seen. Since ridership levels have declined sharply since 2000, it is important to also consider the growth expectations in relation to the previous peak ridership level. Comparing 2030 ridership expectations with the previous peak level of ridership in 1999, the overall increase in ridership over the previous peak level is approximately 20%.

There are two principal elements accounting for growth in ridership demand under this model. The first is external factors, such as demographic growth, with many added residents commuting across Puget Sound for employment opportunities. The second is internal

WSF policy factors such as choices about fare prices and service levels, which can impact the level of customer demand.

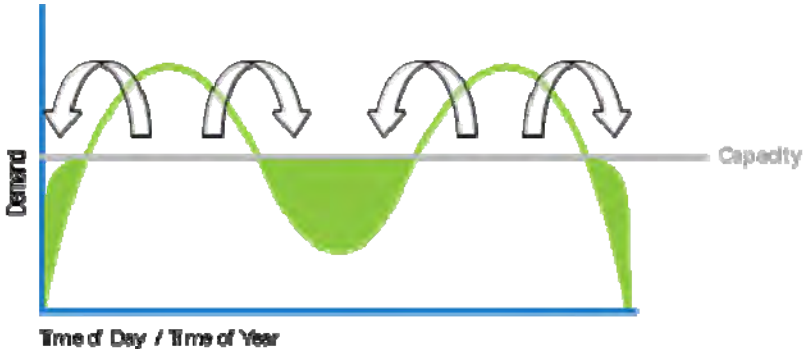
## Accommodating Ridership Growth

It is important that WSF be able to achieve the level of ridership expected from the demand forecasts. This is critical both from a revenue and system utilization perspective, to ensure that the State's investments in the system are serving as many people as possible.

ESHB 2358 requires WSF to both accommodate ridership growth and to "level peak period demand." The variable to manage these two directives is the time of the day when customers attempt to use the system. In other words, the projected ridership growth is relatively easy to accommodate if it occurs primarily on off-peak sailings.

Exhibit 5 provides an example of the ferry system's demand patterns. Vehicle demand is currently greater than available capacity during certain times of day or in peak seasons. The ferry system's challenge is to accommodate demand growth while shifting riders into time periods that have excess capacity. This is one of the key objectives of the adaptive management strategies discussed in the sections that follow.

**Exhibit 5**
**Shifting Peak Demand to Off Peak Capacity**




Space on WSF vehicle decks during commute periods remains the main constraint faced by WSF and is a key factor in reviewing pricing and operational strategies to level this peak demand.

In contrast, there are off-peak periods where demand is substantially less. As a result, WSF cannot focus planning efforts solely on the peak commute period. It must first attempt to spread excess peak period demand into off-peak periods, especially since the survey suggests that a meaningful portion of vehicle riders have discretion with respect to when they can travel.

## Ridership Projection by Travel Mode

Two travel mode choice trends cut across all ridership groups. The first is the proportion of walk-on passengers, and the vehicle capacity constraints on many of WSF's routes. Systemwide (and assuming no changes in service levels or implementation of adaptive management strategies), the proportion of walk-on passengers is expected to remain relatively constant between 2006 and 2030, though there is more variation at the route level. Given vehicle capacity constraints, it will be important to focus on pricing and operational strategies that encourage mode shift and affect the relative proportion of vehicle and walk-on passengers.

The second trend is a slight increase in the average occupancy of vehicles using WSF. Growth among in-vehicle passengers is greater than vehicle growth on all routes. This trend reflects capacity constraints that will make carpools, vanpools, and other high-occupancy vehicles more attractive over time.

## Annual Ridership Projections

As shown in Exhibit 6, WSF projects that its rider base will increase from almost 24 million riders in FY 2006 to 32.3 million in FY 2030, with total vehicle trips increasing from 10.8 million in FY 2006 to 14.1 million in FY 2030. Ridership numbers in Exhibit 6 are based on 2030 projections for the daily 4-hour peak period, which have been annualized using the current relationship between daily 4-hour peak projections and total annual ridership. Please see Appendix G for more details on ridership analysis and annualization factors.

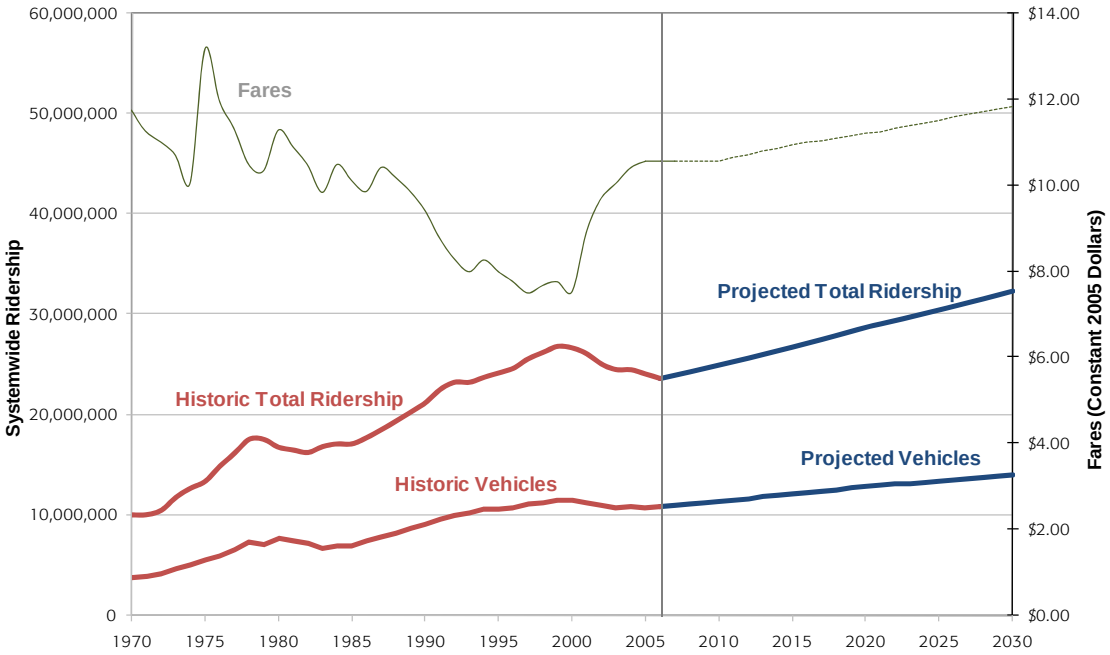
Exhibit 6
Annual Baseline Ridership Forecasts by Route

| | Vehicles | | | Passengers | | | Total Riders | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2030 | % Change | 2006 | 2030 | % Change | 2006 | 2030 | % Change |
| **Pt. Defiance-Tahlequah** | 399,000 | 449,000 | 12% | 289,000 | 285,000 | -1% | 689,000 | 734,000 | 7% |
| **Southworth-Vashon** | 121,000 | 237,000 | 95% | 151,000 | 163,000 | 8% | 273,000 | 400,000 | 47% |
| **Fauntleroy-Vashon** | 1,163,000 | 1,427,000 | 23% | 893,000 | 918,000 | 3% | 2,057,000 | 2,344,000 | 14% |
| **Fauntleroy-Southworth** | 558,000 | 788,000 | 41% | 422,000 | 838,000 | 99% | 979,000 | 1,626,000 | 66% |
| **Seattle-Bremerton** | 710,000 | 849,000 | 19% | 1,628,000 | 1,819,000 | 12% | 2,338,000 | 2,667,000 | 14% |
| **Seattle-Bainbridge Island** | 2,120,000 | 2,910,000 | 37% | 4,297,000 | 5,749,000 | 34% | 6,417,000 | 8,659,000 | 35% |
| **Edmonds-Kingston** | 2,263,000 | 2,770,000 | 22% | 1,994,000 | 2,948,000 | 48% | 4,257,000 | 5,719,000 | 34% |
| **Mukilteo-Clinton** | 2,227,000 | 2,764,000 | 24% | 1,840,000 | 3,175,000 | 73% | 4,067,000 | 5,939,000 | 46% |
| **Pt. Townsend-Keystone** | 370,000 | 649,000 | 76% | 403,000 | 863,000 | 114% | 773,000 | 1,512,000 | 96% |
| **Anacortes-San Juans** | 754,000 | 1,003,000 | 33% | 883,000 | 1,325,000 | 50% | 1,637,000 | 2,328,000 | 42% |
| **San Juans Inter-Island*** | 98,000 | 155,000 | 57% | - | - | | 98,000 | 155,000 | 57% |
| **Sidney, B.C. (International)** | 37,000 | 56,000 | 52% | 73,000 | 140,000 | 91% | 110,000 | 196,000 | 78% |
| **TOTAL** | **10,821,000** | **14,055,000** | 30% | **12,873,000** | **18,223,000** | 42% | **23,694,000** | **32,278,000** | 36% |

Note: Because there is no charge for passengers on San Juan Islands Inter-Island routes, passenger ridership figures are not included.

To put these ridership projections into a historical context, Exhibit 7 shows actual ridership from 1970 to 2005 and projected ridership from 2006 to 2030. This chart demonstrates that the overall trend for ridership growth has been steady, but there have been periods of slow growth or decline mixed in with other periods of rapid growth.

**Exhibit 7**
**Historical and Projected Systemwide Ridership: Base Level of Service**




From a system planning perspective it is important to note that at this rate of growth it will take until the middle of the next decade (approximately 2015) for ridership to return to its previous peak level of 26.8 million (FY 1999). This allows WSF some time to implement operational and pricing strategies before overall ridership levels reach the previous peak levels.

## What are planning and terminal implications?

WSF's ability to accommodate the forecast growth levels is significantly affected by the available vessel capacity during the "normal peak periods" and the capacity of terminal facilities to process traffic during these periods. While demand for ferry services can vary widely by time-of-day, day-of-week, and season, for planning purposes it is useful to look at the "typical" peak conditions.

The implications of ferry demand growth on service and terminal planning is summarized in Exhibit 8, which presents the growth in traffic during peak periods. The table shows volumes moving through the departure and arrival terminals for the afternoon commute period

on the principal commuter routes and focuses on vehicles and walk-ons since these modes of access will have terminal implications. The number of in-vehicle passengers is not included in the table.

## Exhibit 8
## Principal Commuter Routes, Westbound, PM Ridership

| | Vehicles | | | | Walk-Ons | | | |
|---|---|---|---|---|---|---|---|---|
| | 4-Hr Peak | | Peak Hr | | 4-Hr Peak | | Peak Hr | |
| | 2006 | 2030 | 2006 | 2030 | 2006 | 2030 | 2006 | 2030 |
| **Departure Terminals** | | | | | | | | |
| **Pt. Defiance** | 216 | 259 | 75 | 89 | 77 | 101 | 26 | 36 |
| **Vashon** | 45 | 98 | 13 | 37 | 14 | 24 | 7 | 8 |
| **Fauntleroy** | 899 | 1222 | 282 | 387 | 484 | 586 | 157 | 185 |
| *To Vashon* | *536* | *630* | | | *272* | *166* | | |
| *To Southworth* | *363* | *592* | | | *212* | *420* | | |
| **Colman Dock** | 1,603 | 2,102 | 600 | 785 | 3,739 | 4,742 | 1399 | 1771 |
| *To Bainbridge* | *1,108* | *1,535* | | | *2,567* | *3,476* | | |
| *To Bremerton* | *495* | *567* | | | *1,172* | *1,266* | | |
| **Edmonds** | 1,002 | 1,378 | 353 | 492 | 378 | 671 | 134 | 237 |
| **Mukilteo** | 974 | 1,155 | 281 | 340 | 487 | 908 | 138 | 264 |
| **Arrival Terminals** | | | | | | | | |
| **Tahlequah** | 216 | 259 | 75 | 89 | 77 | 101 | 26 | 36 |
| **Vashon** | 581 | 728 | 196 | 240 | 286 | 190 | 99 | 63 |
| **Southworth** | 363 | 592 | 113 | 186 | 212 | 420 | 71 | 134 |
| **Bremerton** | 495 | 567 | 198 | 228 | 1172 | 1266 | 463 | 502 |
| **Bainbridge** | 1,108 | 1,535 | 433 | 604 | 2,567 | 3,476 | 1010 | 1368 |
| **Kingston** | 1,002 | 1,378 | 353 | 492 | 378 | 671 | 134 | 237 |
| **Clinton** | 974 | 1,155 | 281 | 340 | 487 | 908 | 138 | 264 |

The following are the significant demand forecast implications for service and terminal planning:

1. Vehicle trips through these principal commuter corridors are projected to increase by nearly 1,500 by 2030, or approximately 31% during the 4-hour period.
2. Walk-on trips on these routes are projected to increase by approximately 1,900, or approximately 36%.
3. Walk-on trips on the Edmonds-Kingston, Mukilteo-Clinton and Fauntleroy-Southworth routes are projected to increase substantially.
4. Approximately 34% of the new vehicle trips (about 500) during the peak period are expected to be on routes operating out of Colman Dock. These new trips are projected to be distributed with 86% destined for Bainbridge Island and 14% to Bremerton.
5. With the substantial walk-on growth at Bainbridge, the peak hour demand is estimated to be almost 1,400 walk-ons by 2030.

## 7.3 Implications of Demand Forecasts

It is important that WSF be able to achieve and accommodate the level of ridership expected from the demand forecasts. This is critical both from a revenue perspective and also from a system utilization perspective to ensure that the State's investments in the system are serving as many people as possible. Also as a public transportation provider, WSF's primary mission is to cost effectively meet the needs of its customers and ferry communities.

This section describes how changing demographics in ferry-served communities are expected to affect demand for ferry service. Population and employment are projected to increase by 2030, and those increases are projected to lead an accompanying growth in ridership.

WSF relies on the PSRC, encompassing King, Snohomish, Pierce, and Kitsap Counties' projections of population, employment, and traffic levels for the area covering the majority of its routes. The PSRC forecasts population growth and growth in non-farm employment through 2030 for the four counties in the Central Puget Sound region.

The jobs-housing balance (ratio of local population and employment) in ferry-served counties will either improve or remain relatively stable, though Kitsap County's balance is projected to marginally decrease over time—population growth is expected to somewhat outpace its employment growth. This is an important indicator of future ferry demand as it suggests that Kitsap County will likely continue to be a "bedroom community," with a significant portion of new residents expected to commute across Puget Sound to King County, which is expected to be home to more than 60% of new jobs.

For counties outside of the PSRC region, WSF relies on population projections from the Washington State Office of Financial Management (OFM), which does projections to 2025. As with the PSRC projections, OFM forecasts substantial population growth in the coming years. In these counties, demand for WSF services is primarily related to demographic changes.

In San Juan County, all routes are affected by growth in population. In Island County, Mukilteo-Clinton is most affected by population growth, because a significant portion of its ridership is commuter-based. Port Townsend-Keystone, on the other hand, is a more tourism-oriented route. Therefore, population growth in Jefferson County is more likely to affect congestion on the Edmonds-Kingston route than the Port Townsend-Keystone route.

## Other Demand Forecasting Considerations

The demand forecasts analyzed in this section are largely based upon population and employment projections for the region. There are a number of detailed demographic and economic factors that can affect ferry ridership, and it is impossible to predict these accurately. Some of these factors include:

- Population – changes in ferry-dependent communities by age, income level, education level, size of household, etc.
- Employment – changes in the availability of jobs on both sides of the Sound, industries in which jobs are gained and lost, and level of experience required for those jobs.
- Prices – changes in the price of fuel or housing.

The ferry system is making strides in understanding its customers better and refining ridership forecasts. Recreational ridership was one of the areas explored in more detail for this effort. The ridership projections used in this planning effort assume that recreational ridership will increase at the same rate as other ridership (i.e. based on population and employment trends), but using tourism spending, for example, as a proxy for recreational ridership could lead to higher growth in recreational ridership and therefore higher growth overall.

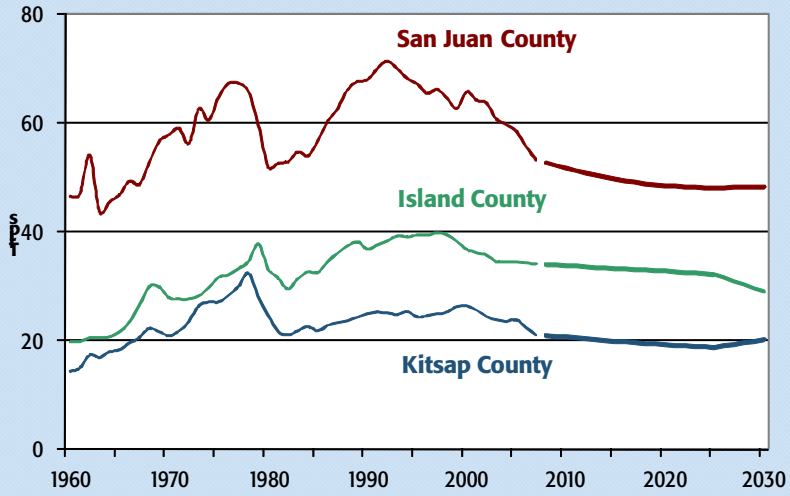
Ridership projections, by their nature, are imperfect. More detailed information will help, and the bi-annual survey updates will provide this information. The ridership numbers are intended for long-term planning purposes with the full understanding that this Plan will be updated every five years. Due to the long timelines required with large capital investments, this Plan is intended to set a course for the system, but there will be ample opportunity to refine or change that course based on new information and changing circumstances.

## How Does Ridership Growth Compare with Population Growth?

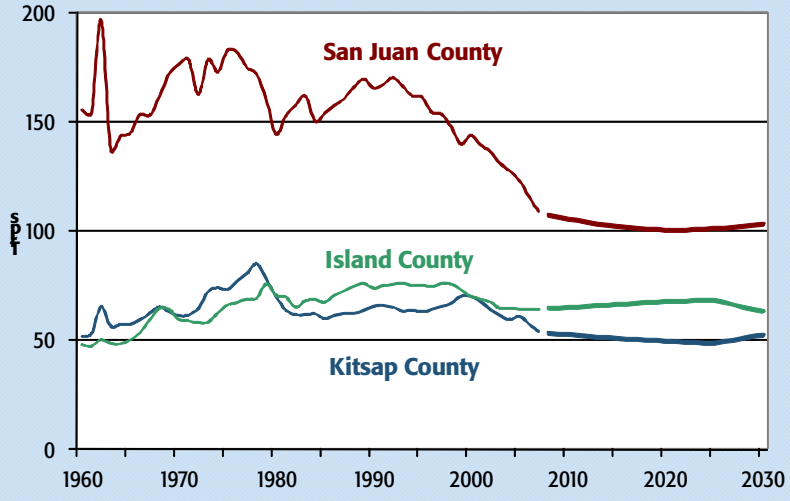
The graphs below compare population in the ferry-dependent communities with actual and projected ridership by looking at trips per capita. In most cases, per person ridership levels are expected to be consistent with, or lower than, historical experience.

This suggests that ridership growth is not keeping up with the increase in population in ferry-dependent counties. This is consistent with the finding from the survey that suggests that fewer WSF customers are regular commuters and it may predict other demographic trends which could influence how ferry demand might track with the future changes in population.

**Vehicle Trips per Capita, Residents of Ferry-Dependent Counties**




**Total Trips per Capita, Residents of Ferry-Dependent Counties**



# CUSTOMER SERVICE: LEVEL OF SERVICE STANDARDS

This section describes the current level of service (LOS) standards and explains why the vehicle LOS needs to be re-established (both in terms of the measure used and the actual standards). It details a new vehicle LOS measure that is substantially different from the current measure in that it no longer focuses on the 4-hour peak period.

The revised LOS measure proposed in this Plan is a daily percent of sailings at vehicle capacity. This measure focuses on asset utilization and will help inform strategic investment decisions. This is an important change as it moves ferry system planning away from thinking primarily about peaks and more about how to best fit the service to the overall demand and filling up the space outside the peaks.

LOS standards are an important indicator of the service customers are receiving as well as how utilized the system is. Given these considerations, this section proposes preliminary standards at the route-level for August, May, and January. It also outlines the process for reviewing and refining these proposed standards with affected local and regional planning agencies (cities, counties, RTPO's, etc.) before final adoption by WSDOT.

## 8. CURRENT STANDARDS

### 8.1 Current Standards

In 1994, the Washington State Transportation Commission adopted LOS standards for WSF. These congestion standards were developed as part of a larger effort among local governments and modal transportation agencies to respond to requirements of Washington's Growth Management Act, with the understanding that plans for future growth would be closely tied to maintaining LOS standards.

To quantify LOS, WSF chose to measure congestion delay, expressed as the number of vessels that sail before a vehicle can board. WSF measured the average delay over the course of the busiest time of day (3 PM to 7 PM) on an average weekday and deemed this measurement "boat-wait."

For vehicles, the boat-wait standards were set to 1-boat-wait for most routes. On those routes, WSF would meet its LOS standard if the

### What are the LOS current standards?

**Non-motorized and High Occupancy Vehicles (HOV)**

- Accommodate all pedestrians, bicyclists and registered HOVs on each sailing – 0-boat-wait

**Freight and Goods Movement**

- Westbound weekday traffic on Seattle-Bremerton and Edmonds-Kingston between 5 AM and 2 PM – 0-boat-wait
- Eastbound weekday traffic on Seattle-Bremerton and Edmonds-Kingston between 9 AM to 3 PM – 0-boat-wait
- San Juan Island 0-boat-wait for pre-registered commercial vehicles

**General Traffic**

All Routes (ex. San Juan Islands)

Avg. Boat-wait, Westbound Weekday PM Peak, 3–7 PM

- Port Townsend-Keystone – 1-boat-wait
- Mukilteo-Clinton – 2-boat-wait
- Edmonds-Kingston – 1-boat-wait
- Seattle-Bainbridge – 2-boat-wait
- Seattle-Bremerton – 1-boat-wait
- Fauntleroy-Vashon-Southworth – 1-boat-wait
- Point Defiance-Tahlequah – 1-boat-wait

average vehicle arriving for sailings between 3 PM and 7 PM saw no more than one vessel sail before it was able to board. Seattle-Bainbridge was given a 2-boat-wait standard in order to equalize its overall average trip time with Seattle-Bremerton. Mukilteo-Clinton also was given a 2-boat-wait standard because of its exceptionally short headways.

For passengers, the boat-wait standards were set to 0-boat-wait for all routes, meaning no walk-on passengers during the afternoon peak period should ever be denied entry to their first available sailing due to capacity constraints.

The service and travel patterns in the San Juan Islands do not lend themselves to the same definition of peak congestion. These routes do not serve a commuter market and, because of route length, headways are naturally longer, making a 4-hour analysis impractical and boat-wait measurement not applicable. As a result, daily and seasonal capacities are tracked for the San Juan Island routes and service growth is designed to keep up with traffic growth.

## 8.2 Need to Re-establish Vehicle LOS Standards

There are a few key reasons why LOS standards need to be re-established:

- Vehicle boat-wait depends on headway (the time between sailings), but adding another vessel to a route means a reduced headway. For example, doubling the number of boats operating on a route would cut the headway in half. It would also change the meaning of boat-wait on that route since waiting for the next sailing would involve only half the time, making the same service standard harder to achieve. An unchanged number of boat-waits would belie the fact that the customer experience had dramatically improved; a 30-minute wait is preferable to a 60-minute wait, even if the boat-wait is the same in both cases. Therefore, boat-wait is not a consistent measure of the customer experience, nor can it be compared across routes.
- Boat-wait as currently defined is only a peak period measure. For routes that have large fluctuations in travel patterns, a boat-wait measure might imply that the route is highly congested and additional service may be required even if vessels are substantially empty during other times of the day.
- A boat-wait measure is not a meaningful indicator of level of service provided to the ferry customer when combined with other strategies included in this plan, like a vehicle reservation system.

In addition to these issues, ESHB 2358 has called for the ferry system to re-establish level of service standards. The following section discusses the proposed measures and standards in detail.

# 9. CHANGING THE VEHICLE LOS MEASURE

## 9.1 Changing the Vehicle LOS Measure

Any revised measure should capture the customer experience and describe how well WSF is utilizing its assets. A key factor in proposing a new LOS measure is to incorporate the concept of demand management and the introduction of operational and pricing strategies explicitly into the level-of-service discussion. This could inform both when additional strategies might be needed (to improve the customer experience or seek to improve asset utilization) and when additional service might be needed (only if existing assets are being used efficiently).

### Recommended New Measure

Percent of total sailings filled to capacity in May, August, and January is the suggested measure to be used when re-establishing LOS. A version of this measure is currently being used in the San Juan Islands (though it uses total monthly sailings for March and August), and it has the following advantages:

- Greater systemwide consistency. San Juan Islands and other routes will use the same measures.
- Simplification. Standards are focusing only on vehicle LOS, as this is where capacity is most limited.
- Works with a vehicle reservation system. As discussed later in this report, a vehicle reservation system is a key operational strategy evaluated in the Long-Range Plan. A reservation system would render minutes of wait or volume to capacity ratios useless because there is no good way to measure the virtual queue that underlies these measures. A percent of sailings full measure is still relevant and may indicate times when people would like to get vehicle reservations and are not able to.
- Description of customer experience. Whether or not a customer can board his/her desired sailing is captured by this measure and is one indicator of that customer's experience.
- Identifies asset utilization. Because this measure is not solely focused on the peak, it is a better indicator of asset utilization than a standard based on wait times during the peak periods.

- Identifies peak congestion. A percent of sailings full measure will be able to identify routes where peak sailings are full, even if the rest of the day's sailings are significantly under-utilized.

## 9.2 A Framework for Setting LOS Standards

Previous planning efforts assumed that LOS standards defined when service needed to be added. While LOS standards should be a factor in service addition decisions, they can only be one factor given funding constraints and other options available to the ferry system (like the implementation of pricing and operational strategies).

**Exhibit 9**
**Future Service Addition Decisions**

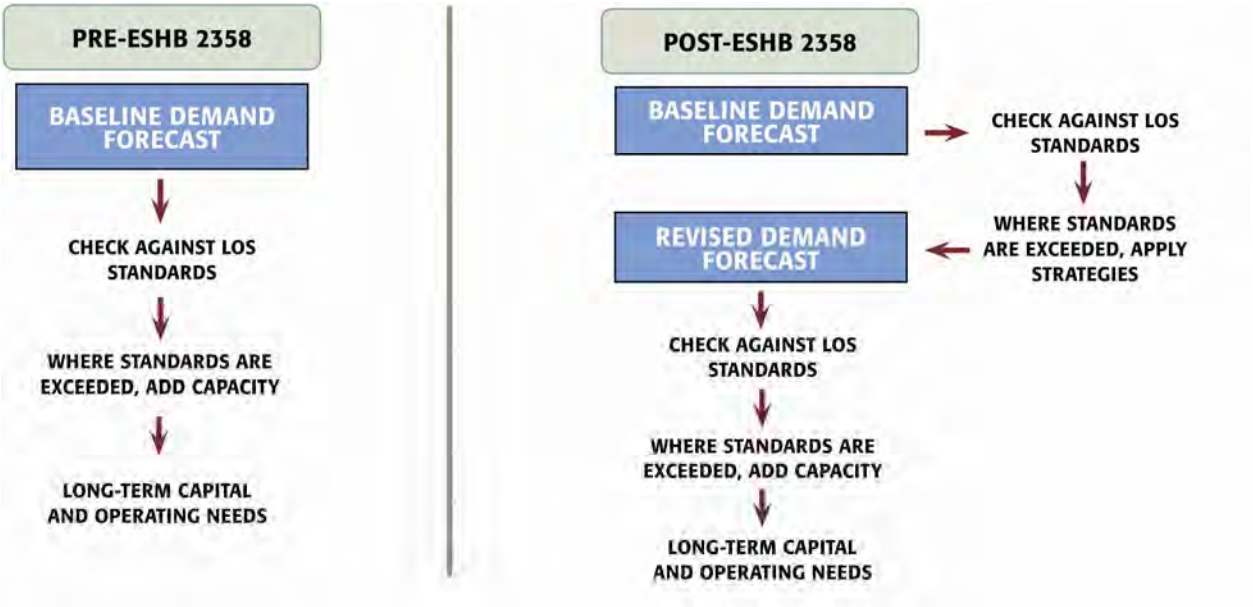


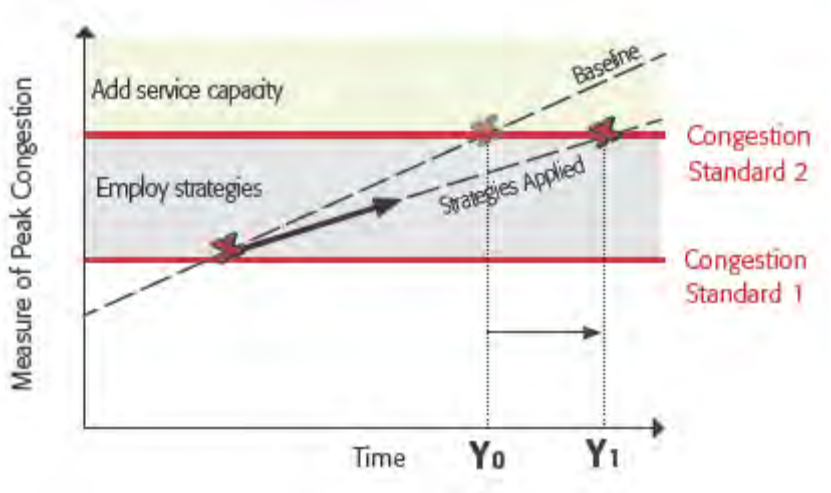

Exhibit 9 illustrates how WSF's existing LOS standards have been used in previous planning efforts and proposes a different way to incorporate LOS standards into planning efforts that is more consistent with the intent of recent legislation.

Under this paradigm, two standards are needed, one to indicate when additional pricing and operational strategies might be needed, and one to indicate when additional service might be needed. The first standard should not be viewed as a minimum criterion to be achieved before adaptive management strategies are deployed (i.e. strategies that have systemwide benefits should be considered no matter what a route's performance against its LOS standard is). Rather, it should be an indicator of when WSF might consider more targeted, route-specific strategies to alleviate congestion and spread demand to sailings where capacity exists.

Similarly, the second standard should not automatically be a trigger for additional investment. It should be used as an indicator that identifies when existing assets are being used most effectively and WSF might begin considering additional investment.

Exhibit 10 shows how the notion of two standards might be advantageous to the ferry system. By identifying the need for targeted adaptive management strategies on a route, WSF has the opportunity to gradually employ such strategies, minimizing potentially negative impacts to customers while forestalling the need for additional investment.

**Exhibit 10**
**Congestion Standards**




## How Should the Standards be Set for Each Route

The following examples illustrate what a percent of sailings full measure means with respect to congestion and asset utilization and how the measure might change in response to changing conditions on or between routes.

### *Commuter Routes: Seattle-Bremerton*

Seattle-Bremerton is primarily a commuter route that experiences substantially more traffic during daily commute times. On an average weekday, there are 14 westbound departures, 4 of which (29%) fall in the 3:00-7:00PM afternoon peak window.

Exhibit 11 shows actual volume-to-capacity ratios – the percentage of vehicle space (capacity) on a vessel that is taken up by paying vehicles (volume) – for Seattle-Bremerton in May 2006. During the weekday afternoon peak, over 80% of the vehicle deck space is filled, as opposed to other times during the day when less than 40% of the vehicle deck space is filled, on average.

## Exhibit 11
## Seattle-Bremerton Daily Volume-to-Capacity Ratios

| Seattle - Bremerton Westbound<br>May 2006 Actual Volume to Capacity Ratios | SAT | SUN | MON | TUES | WED | THURS | FRI | Average |
|---|---|---|---|---|---|---|---|---|
| Morning (Until 10:59 AM) | 0.41 | 0.28 | 0.36 | 0.34 | 0.36 | 0.39 | 0.61 | **0.39** |
| Midday (11:00 - 2:59 PM) | 0.57 | 0.58 | 0.37 | 0.40 | 0.39 | 0.48 | 0.53 | **0.47** |
| Afternoon Peak (3:00 PM - 6:59 PM) | 0.57 | 0.52 | 0.83 | 0.84 | 0.81 | 0.81 | 0.89 | **0.75** |
| Evening (7:00 PM and After) | 0.26 | 0.31 | 0.13 | 0.20 | 0.20 | 0.41 | 0.35 | **0.26** |
| **Average** | **0.43** | **0.40** | **0.43** | **0.45** | **0.45** | **0.55** | **0.60** | **0.47** |

Exhibit 12, in comparison, shows the percent of sailings with vehicle decks that were filled to capacity. On average, one boat of the four westbound peak departures fills to capacity. During the week, 7% of westbound sailings fill to capacity.

Unlike volume-to-capacity (v/c), percent of sailings full provides some insight into the customer experience. The average weekly v/c of 0.47 would suggest that there is no congestion issue at all, whereas 7% of sailings filled indicates that while there generally is not a congestion issue, a small portion of vehicles cannot board their preferred sailing.

In total, the pattern shown in Exhibit 12 suggests that there is still room on Bremerton vessels to accommodate more vehicles. With respect to maximizing asset utilization, these exhibits suggest that while WSF may be able to shift some demand to off-peak time periods, it is unlikely that the Seattle-Bremerton route will ever be able to achieve 100% of sailings filled given the nature of the route and the low vehicle volumes on off-peak sailings.

The Bremerton example is unique in that excess vehicle capacity is expected to be filled in part by customers who can shift from Bainbridge or Kingston, especially if a vehicle reservation system is in place to facilitate this shift. The proposed LOS measure of percent of sailings full will indicate to what extent this substitution is occurring.

## Exhibit 12
## Seattle-Bremerton Actual Daily Percent of Sailings Filled

| Seattle - Bremerton Westbound<br>May 2006 Actual Percent of Sailings Filled | SAT | SUN | MON | TUES | WED | THURS | FRI | Average |
|---|---|---|---|---|---|---|---|---|
| Morning (Until 10:59 AM) | - | - | - | - | - | - | 25% | **4%** |
| Midday (11:00 - 2:59 PM) | - | - | - | - | - | - | - | **0%** |
| Afternoon Peak (3:00 PM - 6:59 PM) | - | - | 25% | 25% | 25% | - | 75% | **21%** |
| Evening (7:00 PM and After) | - | - | - | - | - | - | - | **0%** |
| **Average** | **0%** | **0%** | **7%** | **7%** | **7%** | **0%** | **29%** | **7%** |

### *Recreational Routes: Port Townsend-Keystone*

Port Townsend-Keystone has a ridership pattern that is much different than that of Seattle-Bremerton. The larger volume of recreational riders on this route leads to a trip distribution that is less concentrated in the peak and more evenly spread throughout the day.

Exhibit 13 shows daily v/c ratios for Port Townsend-Keystone. With a couple of exceptions, weekday ridership is evenly spread, and more congestion exists on the weekends.

## Exhibit 13
## Port Townsend-Keystone Daily Volume-to-Capacity Ratios

| Port Townsend - Keystone Westbound<br>May 2006 Actual Volume to Capacity Ratios | SAT | SUN | MON | TUES | WED | THURS | FRI | Average |
|---|---|---|---|---|---|---|---|---|
| Morning (Until 10:59 AM) | 0.68 | 0.52 | 0.90 | 0.83 | 0.65 | 0.73 | 0.68 | **0.71** |
| Midday (11:00 - 2:59 PM) | 0.97 | 1.01 | 0.43 | 0.34 | 0.42 | 0.43 | 0.61 | **0.60** |
| Afternoon Peak (3:00 PM - 6:59 PM) | 1.08 | 0.79 | 0.48 | 0.43 | 0.47 | 0.47 | 0.57 | **0.61** |
| Evening (7:00 PM and After) | 0.53 | 0.45 | 0.36 | 0.39 | 0.48 | 0.28 | 0.49 | **0.43** |
| **Average** | **0.87** | **0.81** | **0.54** | **0.48** | **0.50** | **0.51** | **0.60** | **0.59** |

For comparison purposes, Exhibit 14 shows percent of sailings filled. While the average of 14% is relatively low, the pattern below shows significant congestion on the weekends, with 100% of sailings overloaded during certain time periods.

Together, these exhibits show a pattern that indicates Port Townsend-Keystone should be able to achieve a higher percent of sailings full than Seattle-Bremerton, particularly with implementation of a vehicle reservation system. Because ridership is more spread out during the day, as ridership grows all sailings can achieve greater utilization, not just those in and around the peak.

## Exhibit 14
## Port Townsend-Keystone Actual Daily Percent of Sailings Filled

| Port Townsend - Keystone Westbound<br>May 2006 Actual Percent of Sailings Filled | SAT | SUN | MON | TUES | WED | THURS | FRI | Average |
|---|---|---|---|---|---|---|---|---|
| Morning (Until 10:59 AM) | - | - | 33% | 33% | - | - | - | **10%** |
| Midday (11:00 - 2:59 PM) | 67% | 100% | - | - | - | - | - | **24%** |
| Afternoon Peak (3:00 PM - 6:59 PM) | 100% | 33% | - | - | - | - | - | **19%** |
| Evening (7:00 PM and After) | - | - | - | - | - | - | - | **0%** |
| **Average** | **50%** | **50%** | **7%** | **7%** | **0%** | **0%** | **0%** | **14%** |

To further illustrate the difference between patterns on commuter and recreational routes, take the example of a typical Friday in May. Both Port Townsend-Keystone and Seattle-Bremerton have a daily v/c of 0.6 on Friday (i.e. on average, 60% of the vehicle deck space is filled). Because ridership is more spread out during the day on Port

Townsend-Keystone, 0% of the sailings are filled to capacity. By contrast, 29% of Bremerton's sailings are filled to capacity.

### *Choosing LOS Standards by Route*

To determine where LOS standards might be appropriately set, an analysis was undertaken using 2006 actual ridership data adjusted to reflect the 2030 demand forecasts. The following table shows projected percent of sailings full (of vehicles) by route, assuming no additional services are added, no strategies are employed, and prices are not raised above inflationary levels.

**Exhibit 15**
**Estimated Percent Sailings Full by Route**

| Route | 2006 Westbound Weekly Averages | | | 2030 Expected Westbound Weekly Averages | | |
|---|---|---|---|---|---|---|
| | January | May | August | January | May | August |
| Pt. Defiance - Tahlequah | 0% | 0% | 1% | 1% | 0% | 1% |
| Pt. Townsend - Keystone | 12% | 14% | 37% | 89% | 84% | 97% |
| Mukilteo - Clinton | 22% | 32% | 39% | 30% | 51% | 62% |
| Fauntleroy - Vashon | 15% | 19% | 10% | 50% | 41% | 54% |
| Fauntleroy - Southworth | 29% | 24% | 24% | 46% | 45% | 47% |
| Seattle - Bremerton | 4% | 7% | 12% | 8% | 15% | 21% |
| Edmonds - Kingston | 6% | 22% | 32% | 34% | 58% | 82% |
| Seattle - Bainbridge | 15% | 29% | 36% | 39% | 61% | 67% |
| Anacortes - San Juan Islands | 10% | 31% | 36% | 24% | 48% | 45% |
| Anacortes - Sidney | N/A | 0% | 7% | N/A | 0% | 100% |

With respect to asset utilization, the analysis of ridership patterns on commuter and recreational routes would indicate that recreational routes might expect to be able to achieve a higher percent of sailings filled due to customer flexibility in travel times. The projections for Seattle-Bremerton and Port Townsend-Keystone shown in Exhibit 15 above illustrate this notion.

With respect to the customer experience, once a large portion of sailings are filled it indicates congestion and overloaded sailings, especially if the portion of sailings filled represents more than just the typical peak.

## Proposed Standards by Route

The proposed LOS Standards will ultimately need to reflect the strategies and investments prescribed in the Plan. Based on the 2030 LOS expectations detailed above (which assume today's baseline service levels and sailing schedules), the following proposed standards are being put forth for further review and comment.

### Exhibit 16
### Proposed LOS Standards by Route

| Route | Level 1 Standards (Consider Targeted Strategies to Spread Demand and Improve Customer Experience) | | | Level 2 Standards (Assets are Being Used Efficiently, Consider Additional Investment) | | |
|---|---|---|---|---|---|---|
| | January | May | August | January | May | August |
| Pt. Defiance - Tahlequah | 25% | 25% | 30% | 50% | 50% | 60% |
| Pt. Townsend - Keystone | 25% | 30% | 35% | 75% | 75% | 85% |
| Mukilteo - Clinton | 25% | 25% | 30% | 65% | 65% | 75% |
| Fauntleroy - Vashon | 25% | 25% | 30% | 50% | 50% | 60% |
| Fauntleroy - Southworth | 25% | 25% | 30% | 50% | 50% | 60% |
| Seattle - Bremerton | 25% | 25% | 30% | 50% | 50% | 60% |
| Edmonds - Kingston | 25% | 25% | 30% | 65% | 65% | 75% |
| Seattle - Bainbridge | 25% | 25% | 30% | 65% | 65% | 75% |
| Anacortes - San Juan Islands | 25% | 30% | 35% | 65% | 75% | 85% |
| Anacortes - Sidney | N/A | 50% | 50% | N/A | 100% | 100% |

Exhibit 16 above proposes two levels of LOS standards by route and season. In general, standards are higher in the summer months to reflect additional recreational ridership on all routes. Standards are higher on recreational routes to reflect an increased feasibility of spreading ridership to under-utilized sailings.

The following specific considerations have also been incorporated:

### *Level 1 Standards*

- The 25% standard reflects a situation in which all peak sailings are filled to capacity, but other sailings are not, indicating opportunities to spread demand through adaptive management strategies
- Anacortes-San Juan Islands and Port Townsend-Keystone have standards that increase to 30% in May and 35% in August to reflect greater seasonality in recreational ridership
- All other routes have a 30% standard in August to reflect some increased seasonal ridership
- Anacortes-Sidney currently has only two departures per day, suggesting a 50% level 1 standard

### *Level 2 Standards*

- Routes with very pronounced peak trends have standards at 50% in January and May, reflecting a situation in which all peak sailings are filled and demand has been spread to fill half of the sailings in time blocks surrounding the peak (essentially doubling the length of the peak period)
- Although the actual and projected performance against the proposed standard for Bremerton is much lower than other routes, Bremerton has proposed standards consistent with other commuter routes under the assumption that a vehicle reservation system will help to shift excess demand from Bainbridge and Kingston to Bremerton
- Routes with very pronounced peak trends have standards at 60% in August to reflect additional seasonal ridership
- Routes that have a mix of peak and commuter traffic have standards at 65% in January and May (75% in August) to reflect an increased ability to spread demand throughout the day (due to more time flexibility amongst customers)
- Port Townsend-Keystone has January and May standards at 75% (85% in August) to maximize utilization amongst a customer base that has the greatest time flexibility
- Anacortes-San Juan Islands standards reflect seasonality among recreational riders but have been adjusted downwards from Port Townsend-Keystone due to a unique sailing schedule that accommodates several destinations (i.e. a 50% standard could indicate that sailings to Orcas are 100% full while sailings to Friday Harbor have additional capacity, for example)

While these LOS standards may seem high, indicating degradation in service, it is important to consider them in conjunction with a vehicle reservation system (discussed in more detail in following sections) and other adaptive management strategies. Furthermore, they reflect the financial situation of WSF, and help ensure that assets are fully utilized before significant capital investments are considered.

# 10. LOS IMPLEMENTATION ISSUES

The proposed LOS standards will be reviewed and possibly refined based on work with locally affected jurisdictions after the completion of the Final Long-Range Plan. WSF would have preferred to go through this process before the Final Plan is finished, but it was not possible given several factors affecting the timing of the work.

In particular, it was necessary to consider the LOS implications of potential operational and pricing strategies on the potential design of a new standard.

There are two factors that largely mitigate concerns with the approach to finalizing LOS standards:

1. The revised approach to LOS standards makes the standard just one of several factors that will influence possible service changes. As a result, the LOS standards no longer have as direct an impact on the proposed service levels in the Long-Range Plan.
2. For all jurisdictions, except Whidbey Island, the ferry LOS standards do not have an impact on local growth management concurrency plans. In the case of Whidbey Island, WSF will work closely with the County to establish an LOS standard that fits with local land use and transportation planning goals.

# OPERATIONS: ADAPTIVE MANAGEMENT STRATEGIES

WSF conducted a comprehensive review of options and best practices to improve operating efficiencies, in response to the question of how the ferry system can operate more efficiently, and taking into consideration legislative direction around operating strategies. It considered the experience of transportation industry professionals and included an extensive national and international best practices review.

There are two ways to address expected increases in peak demand. One way is to build larger boats and terminals, which is problematic both from a capital funding perspective and also due to landside constraints, permitting issues, and community concerns. The other way to deal with it is to try to spread peak vehicle ridership and make better use of existing vessel and terminal capacity.

Through these avenues, a wide range of strategies was identified, and over 90 discrete operational strategies were ultimately considered for inclusion in this Plan (see Appendix H for detailed discussion of all operating strategies). These strategies can be grouped into the following nine categories:

- Vehicle Reservation Systems. Strategies pertaining to the implementation of a system that allows customers to buy a vehicle fare for a specific sailing in advance.
- Transit Enhancements. Strategies encouraging the use of public transit systems and thereby increasing mode shift. They include things like improved connections, transit access at terminals, expanded park-and-ride capacity, improved schedule coordination, real time connections information, and sheltered transit facilities at terminals.
- Non-motorized Enhancements. Strategies to improve ease with which customers can walk-on or ride bicycles in lieu of driving on, including improved pedestrian and bike connections and facilities.
- Optimized Fare Collection Techniques. Strategies to reduce ticketing time and therefore queue lengths outside the tollbooth. They include options like optimizing the electronic fare system, fully automating the system, providing transponder only lanes, expanding

### Legislative direction on operating strategies

WSF must develop, and the Commission must review, operational strategies that (section 5):

- Use data from a current user survey.
- Recognize each travel shed is unique.
- Are consistent with the vehicle level of service standards.
- Use a life cycle cost analysis to find the best balance between capital and operating investments.
- Use methods of collecting fares that maximize efficiency and achieve revenue control.
- Are re-evaluated periodically, at least before a new capital plan is developed.
- Consider the following:
  - Options for leveling vehicle peak demand and increasing off-peak ridership.
  - Feasibility of reservation systems.
  - Ways to shift vehicle traffic to other modes.
  - Dock operation and queuing efficiencies.
  - Costs/benefits of remote holding versus over-water.
  - Methods of reorganizing holding areas to maximize space available for customer vehicles.
  - Schedule modifications.
  - Efficiencies in exit queuing and metering.
  - Interoperability with other transportation services.

fare card coordination and marketing, limiting payment forms accepted, and round-trip ticketing.

- Enhanced User Information. Strategies to encourage mode and time shift through better information and trip planning tools. They include, for example: automated route planning; real-time queuing, departure transit, and wait information; improved wayfinding for bicycles, pedestrians, and parking; and real-time parking capacity information.
- Scheduling. Strategies to better accommodate vehicle demand through sailing schedule adjustments like extending schedules with the existing fleet type or more frequent sailings on smaller vessels. (Note: the ongoing JTC Vessel Study will explore the costs and benefits of these options in more detail).
- Traffic and Dock Space Management. Strategies to reduce queuing outside of the holding area and lessen negative community impacts, including traffic management, metered exit queuing, minimized employee parking at terminals, reorganized flow and lane usage, and relocation of non-essential functions from immediate holding area.
- Promotion and Marketing of Non-SOV Modes. Strategies to encourage mode shift by providing incentives for increased use of HOV options. They include options such as partnering with Transportation Management Associations, expanding carpool definition and HOV priority, creating incentives for car-sharing pods at terminals, subsidizing taxi or rental car services, ongoing marketing and promotion of non-SOV modes of ferry access.
- Parking and Holding. Strategies to increase parking supply and efficiency, thus encouraging mode shift. Options include a parking reservation system, shared parking, decentralized holding, and increased parking capacity at terminals.

The WSTC, in collaboration with WSF, submitted to the Legislature recommendations for all of the operating and pricing strategies the ferry system should be pursuing, as appropriate, in the future. The complete joint recommendations on operating and pricing strategies can be found in Appendix I. While all of these strategies are recognized as having benefits to the ferry system, this section focuses on those strategies with the greatest potential benefits, upon which the Final Plan has been built.

### The Cost of Forgoing Adaptive Management Strategies

In addition to screening criteria that included maximizing demand management benefits, minimizing negative impacts to customers and

communities, and increasing operating efficiencies, the adaptive management strategies were also evaluated in terms of what it would cost the system to not implement these strategies. As many of the strategies have initial capital costs associated with them (and several have operating impacts as well), one might assume that a "do nothing" scenario is the least costly option.

This is not the case. Without strategies to encourage mode shift and manage growing vehicle volume at terminals, the ferry system would need to expand its terminals (and expand its capital program) or allow service degradation and vehicle queuing that translates into significant costs for local communities.

A package of well-coordinated operating strategies designed to address the specific situations faced by each ferry terminal is a key component to the Long-Range Plan. In many cases it eliminates the need for additional terminal investments or even reduces the existing terminal capital program. Furthermore, it reduces and postpones the demand pressure for additional investment in new vessels.

The strategies identified as having the greatest impact on demand management and operating efficiency objectives are cost effective relative to alternatives and described in further detail below.

## 11. TRANSIT ENHANCEMENTS

In addition to other local benefits transit enhancements might provide with respect to commute trip reduction and improved traffic flow, the options included in this Plan are chosen to maximize a customer's ability to shift mode of transportation. This will postpone the need to add additional vessels to the system and mitigate expected service degradation.

The costs to WSF of transit enhancement strategies must therefore be considered in this context. Given that some costs would likely be borne by local transit agencies, a targeted package of transit enhancements is expected to be less costly than the service degradation or earlier vessel acquisition need that would occur under a "do nothing" scenario. A full cost-benefit analysis will be conducted as part of the pre-design requirement around substantial investments in transit enhancements on the part of WSF.

Furthermore, the WSTC customer survey corroborates the notion that transit enhancements are likely to have a significant mode shift impact. Particularly on commuter routes, a large portion of ferry customers identified inadequate transit connections and other transit related issues as a significant driver of mode choices. This would indicate that strategies related to improving transit in and around terminals could be quite effective in achieving mode shift objectives

and would be valued by customers. Survey results showed that three factors clearly dominated the drive-on versus walk-on decision-making:

- The availability of transit or another alternative such as transit from a park-and-ride lot or parking at the ferry to get from their home to the ferry
- The amount of time the trip takes walking-on versus driving-on
- The availability of transit or a second car to get to their final destination

Options for increasing transit availability are included as part of the proposed transit enhancements.

**Exhibit 17**
**Summary of Transit Enhancements**

| Transit Service | Facility Needs | Non-motorized Facilities |
|---|---|---|
| • Downtown Seattle shuttle<br>• Better park & ride connectors<br>• More frequent service during peak<br>• More night and midday service<br>• New routes and better connections<br>• Better timing with vessel arrivals and departures<br>• Hold buses until boat arrives | • Covered walkways<br>• Sheltered bus stops<br>• Improved pedestrian crossings<br>• Preferential access for buses<br>• More park & ride locations away from the terminal<br>• Improved wayfinding through terminal | • Covered and secure bike storage at terminal<br>• Car sharing locations at ferry terminals<br>• Trails and dedicated pedestrian and bike paths to connect with terminals |

Exhibit 17 above summarizes these options, some of which will require coordination with highways, other regions, and local transit agencies. Appendix J includes a complete list of proposed transit enhancements by terminal.

### Coordination with Local Transit Agencies

To effectively implement a package of transit enhancements most likely to result in mode shift behaviors, WSF will need to coordinate closely with local transit agencies. It is expected that some of the costs for improvements would be borne by WSF, while local transit organizations would need to provide other improvements. This does not assume any contracting of local services by WSF, rather an

increased level of coordination and targeted investments by WSF and transit providers.

Without the support of local transit agencies, there are still mode shift benefits to the improvements WSF can provide on its own, and those will be pursued. However, mode shift outcomes are expected to be highest with full support from local transit partners.

WSF will continue to work closely with these agencies to improve transit services at terminals and coordinate scheduling where possible.

## 12. VEHICLE RESERVATIONS

A vehicle reservation system is the primary demand management strategy included in this Plan. Under the current system, automobiles queue within and around the terminals, waiting until there is adequate vehicle capacity on a vessel. This is an extremely inefficient system that has high costs in terms of lost time, unpredictability for riders, customer frustrations, and negative community impacts. Building larger holding areas would only partially improve the system, and would require significant capital investments and would increase operating costs.

At many terminals during periods of high demand, the capacity of the terminal vehicle holding is reached and traffic begins to overflow. When the holding areas overflow, the traffic and congestion impacts are frequently severe on streets and highways surrounding the terminals, and effects are felt by the neighborhoods and businesses in the terminal area. In most cities and towns served by WSF, local and county governments see this traffic impact as untenable. While most understand ferry traffic is an overall benefit to the community, when waiting ferry traffic clogs the streets, increases air pollution, and reduces commerce, it is no longer seen as beneficial and is largely deemed as detrimental.

There are a number of secondary impacts that also result from this situation, including customer inconvenience in terms of lost time, energy use, lack of predictability, and frustration. The system also experiences higher operating costs for traffic control and often the acquisition, construction, and maintenance of auxiliary holding areas to accommodate these peak conditions.

Historically, the solution to this problem has been to consider construction of larger vehicle holding facilities so that even on the highest peak days, vehicles do not back up onto local streets.

### Reservations Allow for Much Smaller Terminals

A major benefit of a reservation system for vehicles is that WSF can operate a high quality service with the smallest possible terminal facilities, while providing predictability for customers and mitigating most of the queuing impacts around terminals.

The ability to operate with smaller terminals also has a significant benefit for WSF, as it would be much more expensive to address some of these issues through terminal investments alone.

For example, even a "low cost" approach that emphasized remote holding facilities would cost approximately $280 million, compared to an investment in a reservation system of $18 million.

There are three primary ways to address how peak traffic is accommodated:

- Facility Approach. Build larger terminals to hold all vehicles, including more extensive use of auxiliary and/or remote holding to accommodate vehicles during overload situation. This could require two or more boat loads of storage.
- Service Approach. Add more ferry service, so arriving demand seldom outstrips the capacity of the terminal. In other words, adding a third boat to a route will increase the frequency of service and throughput capacity, which in turn will reduce the likelihood that there will be significant overloads.
- Operational Approach. Use other methods, such as a vehicle reservation system, to move the overflow into a virtual queue and smooth out the arrival rate. Since there is a better balance of arrival vehicles and space on departing sailings, there will be minimal vehicle storage requirements.

The first two options require significant capital investments for terminal expansion and vessel acquisition, and increase maintenance and other operating costs. In the facility options, there are significant investments in large facilities, which if located over water can be very difficult to permit. In the case of the service approach, the costs could include the acquisition of a new vessel to add to the route, plus the annual cost to maintain and operate the service, or additional docking slips.

Historically, WSF has focused on a facility approach. For example, during the 1990s, WSF was pursuing a multimodal terminal strategy that would have provided a significant increase in the holding capacity at a number of terminals. The total cost of this program was estimated at approximately $1 billion in year of expenditure dollars.

More recently, given the significant reduction in WSF's dedicated capital funding, a much less ambitious program of improvements has been identified that would address vehicle queuing outside terminals, primarily with remote holding facilities. This approach, which is designed to mitigate terminal traffic impacts at a low cost, is estimated to cost approximately $280 million in capital costs.

In contrast, a vehicle reservation system would have much more modest acquisition and operating costs. Terminal updates and system capital investments required to implement a vehicle reservation system are estimated to be approximately $18 million ($11.5 million for terminal modifications systemwide, and $6.5 million for the reservation system and back office equipment, software and systems, including design and contingencies). In addition, a vehicle reservation system is expected to require $1 million per biennium in

operating costs (operating costs will be more fully evaluated as part of the pre-design report.). This investment effectively mitigates the terminal congestion problem, and in comparison to the other options, is much less costly.

Doing nothing about terminal congestion would allow terminal traffic to back up further into local communities, but this would only increase the problems cited above, and would continue to transfer the cost of terminal congestion to local communities.

When compared to the other alternatives ($280 million to as much as $1 billion), and considering its effectiveness with respect to demand management and benefits to communities around the ferry terminals, an $18 million initial investment in a vehicle reservation system is a very cost-effective option. However, many ferry customers have concerns about how a reservation system would work for them. Because of this, WSF will take a route-by-route approach in order to determine the feasibility of a reservation system. Before a new reservation system is implemented, a pre-design report will be presented to the Legislature. The Legislature will decide whether there is sufficient merit to the system, and must approve it if the system is to go forward.

### Reservation Systems In Use Elsewhere

Most large ferry systems around the world have reservation systems, and their methods and experiences have created a knowledge base that will help WSF implement its own system. Many of the ferry systems using reservations are similar in size to WSF, and have a mix of commuter and tourism ridership as well. Several ferry systems in North America as well as the rest of the world were contacted to see how they administer reservations and the policy issues they addressed.

WSF studied these operations when evaluating the feasibility of the system proposed for this Revised Draft Plan. The ferry systems of interest were:

- BC Ferries (Western Canada) – BC Ferries operates in geographical proximity to WSF's service area.
- iDO (Istanbul, Turkey) – iDO's reservation system is robust, real-time, and largely web-based.
- Wightlink (Isle of Wight, Great Britain) – Wightlink has some commuter-based ridership, similar to many of WSF's routes. Their reservation system is deployed broadly throughout their routes.
- Steamship Authority (Martha's Vineyard, Nantucket, Massachusetts) – an island based service similar to the San Juan Islands route serving local residents and seasonal tourists.

- Scandlines (Germany) – a variety of services including shorter commuter based routes and longer multiple hour crossings that are more oriented towards tourism and freight.
- Delaware River Bridge Authority (Cape May to Lewes, linking Delaware to New Jersey) – primarily recreational route with some commercial traffic.
- Bay Ferries (Nova Scotia) – access for island residents and tourist traveling from Prince Edward Island.
- Black Ball (Port Angeles to Victoria, B.C.) – primarily tourist and commercial traffic across the US/Canada border.

A summary of what was learned follows:

- The reasons the reservation systems were developed include customer convenience, more efficient management of traffic, and the elimination of traffic queues in communities where there are ferry terminals.
- The length of time reservations have been in place ranges from several decades for the more established systems to as little as five years. The systems with the longest history of reservations have updated their reservation system several times.
- The amount of space reserved varies by ferry system and routes within systems. Some sailings are reserved 100%, other systems have sailings with as low as 15% reserved.
- Customers make reservations on-line, by phone or, in some cases, in person. The percentage of on-line versus phone varies by system, but as a rule the newer systems have a higher percentage of on-line reservations than systems that have been in place for several decades.
- As they approach the terminal, there are a variety of ways the different ferry systems check people in – ranging from manually checking in with an attendant to fully automated. The latter can include a transponder in the car, a magstripe card with a personal identification number, or a printed booking with a barcode that is scanned. For security reasons, the system cannot be fully automated – there will always be an attendant at WSF terminals.
- All systems require some sort of deposit, to minimize the no-show rate. Some systems charge extra for reservations. One system discounts reserved travel (compared to first come/first serve) if it is booked online.
- Most of the ferry systems contacted have flexible operating policies about the variability of the customers' return trip home (for example, in case of a traveler with reservations getting stuck

in traffic, working later than anticipated, or if a doctor's appointment runs longer than anticipated). If a reservation is missed, most systems put the traveler on the next available sailing with no financial penalty. Several systems indicated that returning travelers often return via an earlier sailing than the one originally reserved – and that they can accommodate the traveler with available space.

### Systemwide Elements of a Vehicle Reservation System

While implementation details and schedules will vary from route to route based upon the unique ridership and operating characteristics of the individual routes and terminals, there are some common issues that would need to be addressed at each terminal:

- Percent of reserved spaces by sailing time, which would vary by route and sailing time.
- Preference given to spaces for:
  - Emergency vehicles
  - Vanpools and carpools
  - Commuters and frequent users on designated sailings
  - Local residents
  - Commercial traffic
- Reservation fees and partial or entire pre-payment of fares. WSF does not plan to charge a fee for use of a reservation system, but would charge a portion of the fare or the entire fare at the time a reservation is made.
- Timing and phase-in of the system. This would occur gradually, as reservations are tailored to each route and sailing time and customers become more accustomed to the system.
- How WSF could pursue opportunities to leverage WSDOT investments in central back office systems as they become available.

### Key Implementation Issues of a Vehicle Reservation System

Initial WSTC survey results and feedback received during public comment found that customers typically did not view a vehicle reservation system favorably. Customers also noted that a reservation system must be dynamic and interactive, showing people how much space is still available, and frequent users should be able to book multiple sailings.

WSF recognizes that for it to be successful, a vehicle reservation system must be designed to work well for its customers as well as addressing the system's demand management needs. While potential implementation issues and operating policies will be addressed in more detail as part of a pre-design effort, WSF has critically analyzed reservation systems employed by other ferry systems and its own experience at Port Townsend-Keystone and Anacortes-Sidney to identify preliminary operating policy issues and key concerns frequently raised by customers.

- How would the customer make and complete a reservation? As noted above, a vehicle reservation system would not require a fee, but would require a form of pre-payment, most likely all or part of the vehicle fare. Cutoff times for making a reservation and for showing up to use the reservation on a particular sailing would be developed with community input as the system is phased in over time. Operationally, the lower the percent of capacity reserved, the more in advance the arrival would need to be, so stand-by vehicles could be loaded in time to meet the schedule. These times would be subject to review and evaluation as part of the system design process.
- What happens if a user misses a reservation? The system would need to have policies guiding how this would work for the customer, for example by transferring the reservation to another sailing, obtaining a credit for a future sailing, receiving a refund, or arriving for the next sailing with priority status in the standby lane. If advance notice was not given, or if the arrival cutoff time was missed, the system would have to have policies on what happens; for example, would the user join the standby line and travel on the next available sailing, and at what point would the user lose some or all of the pre-payment?
- What happens if the ferry system cancels a sailing? WSF would need methods to accommodate passengers with reservations, such as diverting them to alternate routes where possible or giving refunds or credits. When service was restored, how will customers with reservations on earlier sailings be given priority over those with reservations on later sailings?
- Would policies be different for residents, frequent users, and tourists? It will be possible to have a resident and/or frequent user program that would set aside a share of each sailing to give priority to these users for high demand and commute sailings. Customers enrolled in a resident or frequent user program would also be able to make multiple reservations at one time.
- How would a vehicle reservation system differ by route? Many facets of the vehicle reservation system would differ by route.

These include advance arrival requirements, the percentage of each sailing that is reserved, and the percent of each sailing set aside for residents or frequent users.

- How can the ferry system ensure a vehicle reservation system will work? A working vehicle reservation system would begin by identifying the "right" technology, and then making the necessary facility improvements to accommodate the chosen reservation system. The vehicle reservation system will be implemented slowly, with only specific sailings requiring reservations on select routes at first. As operational issues are identified and resolved, routes and sailings will gradually be added to the system. This full system roll out would likely take several years, with input from stakeholders on each route
- How do customers deal with the loss of spontaneity? Although customers will have to change their approach to using WSF, the reservation system will actually improve customers' abilities to make spontaneous travel decisions. A reservation system would reduce the instances where a customer decides to take a ferry on the spur of the moment, only to arrive at the terminal and find the sailing full. Using the system, the user could find out ahead of time if space is available on the sailing, and reserve that space if desired. If space was not available, the user could make a reservation on the next available sailing and spend the waiting time productively instead of at the terminal.
- Finally, how will we measure success? WSF would develop a set of measurements to indicate how well the system is functioning to meet customer needs as well as addressing demand management effectiveness. These measures would be used to make adjustments to reservation system policies and operations.

Given the significant operational change it represents, implementation of a vehicle reservation system would happen gradually, in a phased approach.

### Future reservation system uses

WSF expects a reservation system to be a key element in its marketing program. Ideally, it would be linked with other State facilities, such as parks.

# 13. OTHER OPERATIONAL STRATEGIES

In addition to the 90 operational strategies originally considered for inclusion in this Plan, other strategies believed to have significant cost efficiency benefits (though little to no effect on demand management) were also identified.

## 13.1 Fuel Saving Strategies

Fuel costs comprise a significant portion of WSF's operating costs. The JTC Vessel Study evaluated strategies to conserve fuel consumption.

WSF has also identified a number of actions it can take to conserve fuel and reduce operating costs, and it has already acted on many of them.

Exhibit 18 below details the fuel conservation strategies that WSF has already identified.

**Exhibit 18**
**Fuel Conservation Initiatives**

| Vessel Class | Fuel Saving Initiative | Predicted Savings | Status |
|---|---|---|---|
| **Vessel Specific Strategies** | | | |
| Jumbo Mark II | Upgrade voltage regulators to run vessels on two engines, without using a third during landings | 181,300 gal/year for 3 ferries | In preliminary design phase (vessels already running on 2 engines except during landings) |
| Jumbo Mark I | Upgrade control systems to run vessels on 3 engines instead of 4 | 142,000 gal/year for 2 ferries | Install on both vessels in 2009 |
| Super Class | Upgrade engines and associated systems to enable running on 2 engines instead of 4 | 387,000 gal/year for 3 ferries | Install on Kaleetan in late 2009, Yakima in 2010 |
| Issaquah Class | Change heating system from diesel to steam | 30,000 gal/year per vessel | Install on Issaquah in early 2009, other vessels to follow |
| **Systemwide Strategies** | | | |
| | Develop alternate tie-up method for vessels, allowing a reduction in shaft speed (or shut down of shafts) while docked | 145,000 gal/year per vessel | Investigating alternatives for prototype installation |
| | Slow vessels down 0.5 to 1.0 knots (see “Boat Speed” below) | Up to 2.5% savings for 0.5 knot reduction and 5% for 1.0 knot reduction | WSF will strategically implement vessel speed reductions during non-peak periods in the Winter 2009 schedule |

## Boat Speed

The travel speed of vessels is a major factor affecting fuel consumption. As travel speeds increase, so does fuel consumption. Following this logic, it may be beneficial to reduce the speed of boats, especially during off-peak times. The Long-Range Plan incorporates speed reduction strategies which will vary on a route-by-route basis, as appropriate. These reductions will likely be focused on off-peak seasons and times, to reduce operating costs while minimizing negative impacts to customers.

## 13.2 Other Strategies

In addition to fuel cost saving strategies, WSF is examining ways to more aggressively expand non-fare operating revenue streams. Some avenues for consideration might include:

- Concession sales in terminals and on vessels. WSF currently generates a small portion of its operating revenues from the sale of concessions on vessels and in terminals. It will pursue strategies to grow this revenue stream.
- Naming rights. WSF has received inquiries and expressions of interest from private parties in buying naming rights. WSTC has been directed by the Legislature to consider selling naming rights.
- Advertising. WSF currently generates a small portion of its operating revenues from the sale of advertising space on vessels and in terminals. It will continue to pursue these activities and explore ways to grow advertising revenues.
- Co-development Opportunities. WSF has identified three potential terminals where co-development opportunities might be a feasible option. Such opportunities would enable WSF to leverage private sector investment in capital facilities (see sidebar on page 99 for more information).

### Future Role of Passenger-Only Ferries

As per the legislative direction provided during the 2006 session, the Plan assumes that WSF will not provide passenger-only ferry (POF) service. Where local providers view POF service as a way to improve service or fill potential gaps, it is expected that locally-funded POF service will be evaluated and pursued.

### WSF and Passenger-Only Ferries

WSF provided POF service between Vashon and downtown Seattle between 1990 and 2008, until July 2008 when King County took over the service. In recent years the future of POF service in the region has been the subject of extensive policy activity and debate:

- In 2000, the Joint Legislative Task Force on Ferry Funding recommended that WSF not add any new POF routes and that the Legislature remove barriers to privately-operated POF services.
- In 2003, Kitsap Transit entered into agreements with two private ferry operators to provide POF service to Kitsap County, with service beginning in 2004.
- In 2005, WSF responded to the Legislature's request for a 10-year POF strategy, proposing an expanded "triangle" POF service between Seattle, Southworth, and Vashon as the best short-term solution for future growth.
- In 2005, the Legislature commissioned a Passenger-Only Ferry Task Force to determine the future of POF. The Task Force's report was inconclusive, and the Legislature re-visited the issue in 2006.

Bills passed by the 2006 Legislature directed WSF to maintain the Seattle-Vashon POF service until either King or Kitsap County creates a ferry district and assumes responsibility for the service. The Legislature also directed WSF to sell the Snohomish and Chinook passenger-only ferries and deposit the proceeds into a Passenger Ferry Account, which in the future will be used for operating or capital grants to POF systems. The Snohomish and Chinook were sold in 2009. King County has created a ferry district and has contracted with WSF to operate a route between Seattle and Vashon. The King County Ferry District will assume responsibility for Vashon to Seattle service on September 26, 2009.

# 14. PRICING

**Legislative direction on pricing strategies**

- Recognize that each travel shed is unique, and might not have the same farebox recovery rate and the same pricing policies
- Use data from the current market survey conducted by the WSTC
- Be developed with input from affected ferry users by public hearing and by review with affected ferry advisory committees, in addition to the market survey
- Generate the amount of revenue required by the biennial transportation budget
- Consider impacts on users, capacity, and local communities
- Keep the fare schedules as simple as possible
- Consider options for using pricing to level vehicle peak demand
- Consider options for using pricing to increase off-peak ridership

Within the context of this Long-Range Plan, there are two key objectives associated with pricing strategies: (1) to generate sufficient revenue to meet the fare revenue requirement of the biennial transportation budget, and (2) to help meet the demand management goals of ESHB 2358.

## Revenue Requirements

The biennial transportation budget sets a revenue target for the ferry system. To meet this target, general fare increases above the 2.5% annual inflationary increases might need to be enacted.

### *General Fare Increases and Elasticity Effects*

WSF ridership and fare history has shown that demand for ferry service is sensitive to fares, and for this reason, general fare increases can also have demand management benefits. As prices increase in real terms, total ferry system riders are likely to decrease. Similarly, if prices decrease, demand for services will increase. These changes in ridership relative to changes in prices are referred to as elasticity effects. It is important to note that price is only one factor impacting ridership.

To assess changes in ridership resulting from general fare changes, this analysis relies on the ferry system's revenue model, constructed using a long history of short-term demand responses to actual fare increases. Where possible, elasticity coefficients and mode shift information from the WSTC customer survey were also incorporated.

A more detailed discussion of ferry system elasticity effects is included in Appendix F.

## Transportation Demand Management

In addition to meeting revenue goals, fare policy will need to incorporate demand management strategies. The demand leveling called for by ESHB 2358 will be accomplished primarily through the extensive use of a vehicle reservation system, and the following analysis details options and incentives WSF can use in conjunction with a vehicle reservation system to elicit mode shifts and other desirable behavior.

## WSDOT Survey Inputs and Effectiveness Analysis

Where possible, the WSTC customer survey was used to assess the effectiveness of potential pricing strategies. The survey identified customers' willingness and ability to shift travel times and mode as well as their price sensitivity. The conjoint analysis, a survey module designed to analyze customers' mode shift decisions as they relate to

price, was used to develop elasticity coefficients for subcategories of customers. The onboard survey results and conjoint analysis form the basis of the analysis that follows on the effectiveness of specific pricing strategies.

## 14.1 Pricing and a Vehicle Reservation System

As proposed, there will be no additional fees associated with the vehicle reservation system. Though the WSTC survey showed that a significant portion of customers would be willing to pay for a reservation that guarantees their spot on a vessel (and thus validated the value inherent in such a system), there will be no charge. There were two primary reasons for this decision.

The vehicle reservation system is the primary adaptive management strategy being proposed in this plan. In order to ensure broad acceptance of this strategy and minimize negative impacts to customers, there will be no additional fees. In addition, not charging a reservation fee will prevent people from queuing at the terminal for standby space in order to avoid paying extra.

## 14.2 Fuel Surcharge

Fuel is a large portion of the ferry system's operating costs. The volatile cost of fuel adds uncertainty to WSF's operating expenses, and in recent years has led to decreasing farebox recovery rates. For WSF to have self-sustaining operations, the risk associated with fluctuating fuel costs needs to be mitigated.

To mitigate this fuel risk, WSF could implement a fuel surcharge that would automatically adjust fares up and down to reflect increases and decreases in fuel prices above a pre-determined base fuel price. Under this program, a customer's total fare would be subject to automatic increases in periods of rapid fuel price escalation, effectively passing on this direct operating expense to those benefiting from the service. The surcharge would be reduced when fuel prices fell.

A key analytical question involves how to determine the current base fuel price from which future fuel surcharges would be pegged. For the purposes of this Plan it is assumed that the base price of fuel be set at a price equal to the average fuel costs as defined by the inflation-adjusted average cost of diesel from 1952 to 2008 ($2.15 per gallon), the time period over which the State has owned and operated the ferry system.

As shown in Exhibit 19 below, with a few notable exceptions, the average per gallon price of diesel fuel has been relatively stable over

### Implementation of Tariff Changes

Any changes in existing ferry fares are subject to WAC revisions policies.

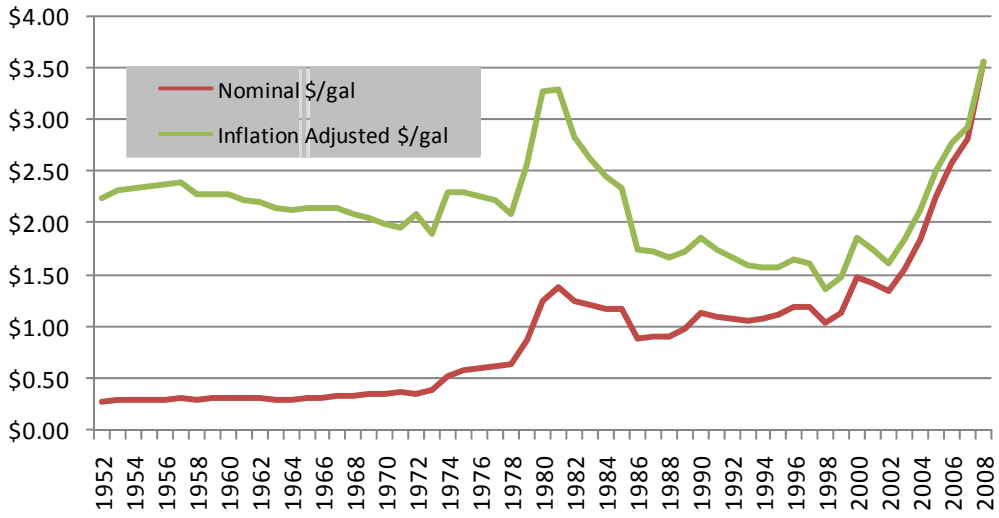
Public outreach is an important part of fare updates and will be undertaken before any fare changes can occur.

the period in question. As a result, setting the base price to the long-term inflation-adjusted price of fuel would incorporate the "typical" level of fuel costs experienced by WSF.

A fuel surcharge would be introduced to the extent that the actual current cost of diesel would differ substantially from this long-term average.

The 2009-11 transportation budget requires that, if the WSTC considers implementing a fuel surcharge, it must first submit an analysis and business plan to OFM and the Legislature.

**Exhibit 19**
**Historic Fuel Prices (1952-2008)**




Source: Energy Information Administration, 2008.

## 14.3 Other Pricing Strategies

In addition to the key strategies outlined above, a number of other strategies were considered as part of this effort. While the ferry system does not intend to implement these strategies immediately, it does intend to re-visit these ideas regularly with public input.

In the near term, the strategies discussed above will be the system's primary area of focus. Depending upon actual experience with a vehicle reservation system and some of the other strategies, the ferry system may need to implement other adaptive management strategies. A complete list and analysis of other pricing strategies considered can be found in Appendix K.

Some of the pricing strategies evaluated would be difficult to implement given that WSF only collects fares in one direction on many routes. For this reason, one-point toll collection issues were

also evaluated as part of this long-range planning process. For more detail on one-point toll collection, please see Appendix L.

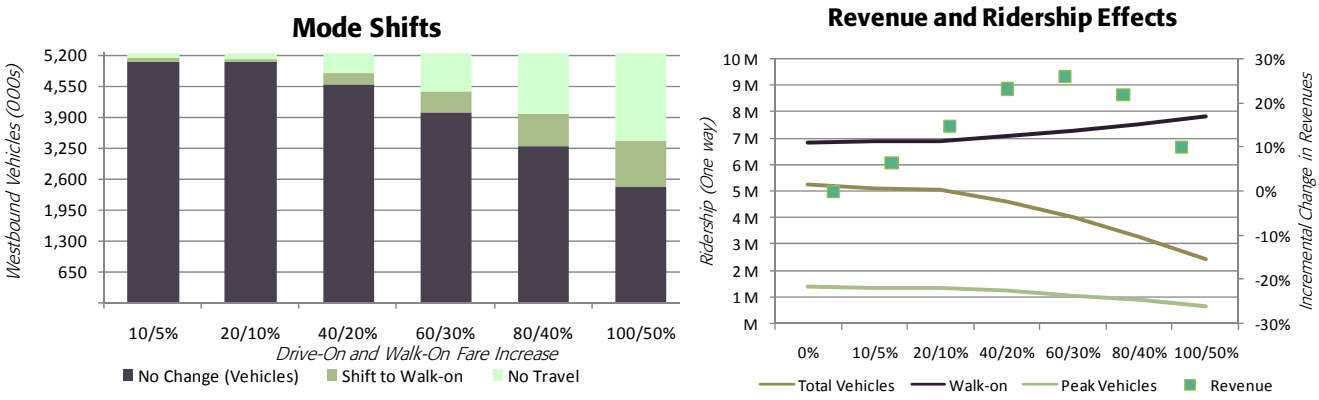
The three strategies discussed below have been brought forward because they have demand management benefits and are narrowly targeted strategies that together could be revenue neutral while providing benefits to local customers. As such, they are likely to be considered for implementation prior to other ideas.

## Differential Vehicle and Passenger Pricing

Differential vehicle and passenger pricing refers to how specific fare categories will be increased to achieve the annual fare increase required to meet Transportation Budget revenue requirements. Increasing passenger fares at a slower rate than vehicle fares allows the differential between the two fare categories to grow more rapidly, creating a stronger pricing incentive for mode shift.

Based on the fare sensitivity and mode shift findings from the WSTC survey, Exhibit 20 shows the expected outcome of such a strategy. It is important to note that the fare increases (expressed as percentage increase over base fare) represent the total expected inflation-adjusted increase over the 22-year planning horizon. Any fare increases will be implemented gradually and with public input.

**Exhibit 20**
**Estimated Effects of Differential Vehicle and Passenger Fare Increases**




As shown above, this strategy has a couple of key advantages. First of all, an increasing differential between vehicle and passenger fares does, in fact, cause vehicles to mode shift, and secondly, the strategy is revenue positive (although less so at high ends of the scale). It is important to note that these price increases are intended to occur over the 22-year planning horizon.

Taking, for example, a scenario where vehicle fares increase by 10% while passenger fares increase by 5%, the ferry system might expect 70,000 annual vehicle trips to switch to walk-on, while losing over 100,000 vehicle trips altogether. The incremental effect is a decrease in vehicle trips and an increase in passenger trips (because the shift from vehicles is greater than the passengers leaving the system due to price increases), with a small decrease in total riders. Revenue effects are positive, and under this scenario, are expected to provide about a 6% annual increase.

It should be noted that this analysis is using short term elasticity effects from the WSTC customer survey, and there is much greater uncertainty about these effects in the long run.

The Legislature specifically directed that vehicles and passenger fares be changed by the same percentage. This pricing strategy will not be used, but remains in the toolbox for future consideration.

### Seasonal Surcharge

WSF's fare structure currently contains a seasonal surcharge component. From the months of May to October, the cash fare is increased on all routes by 25% and on Anacortes-San Juan Islands routes by 35%. Because customers who use the frequent user and multi-ride fare purchase options are exempt from this surcharge, it has the effect of targeting recreational users.

Actual ridership trends show a seasonal peak that is not evenly spread between May and October. July and August represent the "peak of peak" with much higher proportions of cash-paying recreational users. As vehicle capacity constraints are significantly worse during these months, WSF should consider adding a third level to its seasonal pricing structure that allows for a higher surcharge during July and August.

Because this surcharge would target just a small portion of riders (discretionary trips in July and August), revenue impacts are also small, though there would be some demand management benefits. Assuming a July/August cash fare surcharge of an additional 10%, WSF might expect to increase total annual revenues by approximately 1% (based upon elasticity assumptions from the WSF revenue model). With respect to ridership effects, this same scenario would have the effect of decreasing July/August vehicle ridership by 0.5-1.0%, depending upon the route. Routes with more summertime tourist traffic, like Anacortes and Port Townsend, would see larger effects.

### Small Car Discounts

WSF already charges vehicles based on their size, and a small car discount would be a special incentive to encourage people that must drive-on to take smaller cars, allowing more vehicles to fit on deck. It has the advantage of increasing vessel carrying capacity by reducing average vehicle size and providing a lower cost vehicle option that still offers a demand management benefit to the system.

As with the July/August summer surcharge, a small car discount would target a very small portion of total riders. Depending on how the discount is set and what size vehicle would qualify, it could attract some new riders to the system, but would likely draw most of its participants from the pool of standard vehicles. The net revenue effects would therefore be negative but probably on a very small order of magnitude (1-2% systemwide assuming the size cut-off is quite restrictive).

A policy decision exists around the definition of a “small car.” Most newer vehicles classified as “subcompact” have a length at or just over 13 feet, though some very small commuter cars that are popular in Europe and Asia are being successfully introduced to the US market. There are also significant operational issues associated with small car prices. The ticket seller would need a means of determining vehicle size. Without a definite means of measuring car length, each seller would have to estimate size or be able to recognize qualifiying makes and models. This is currently a problem in distinguishing between vehicles over and under 20 feet. Ultimately this would lead to more time at the toll booth and fare disputes.

### Non-Resident Pricing

Another strategy that may have some demand management benefits and takes a different approach to fare equity is a non-resident pricing program. Per initial research, such a program might be feasible as long as “non-resident” is defined as out-of-state.

The revenue impact such a policy might have is uncertain, and WSF will continue to evaluate this option for potential future implementation. As with pricing by size, non-resident differentials have implementation issues. Ticket sellers do not see license plates and do not ask for driver licenses. License plate recognition equipment is available, but is expensive.

### Pricing Strategies for Future Consideration

Once WSF has fully implemented the proposed vehicle reservation system and the effects on demand management are understood, it may be necessary or beneficial to consider some of the other pricing strategies which were shown to be effective in leveling demand, but

would likely have had more significant impacts on customers. These could include:

- Congestion pricing**.** The pricing strategy with the greatest potential to shift travel behavior is congestion pricing. If reservations alone are not sufficient to shift demand then it may be necessary to evaluate a reservations plus variable congestion pricing approach.
- Vehicle frequent-user policies**.** The current frequent user policies are assumed to continue for the purposes of this Plan. A result of this assumption is that a significant number of vehicle trips are paying the same price regardless of when they travel. To achieve its demand management goals it may become necessary to revisit this policy and vary frequent-user fares based on congestion pricing principles.
- Progressive pricing for larger vehicles**.** The concept underlying the small vehicle discount would also apply to the possibility of charging proportionally more for larger vehicles as well, in order to accommodate more total vehicles (especially during peak periods)
- Variable pricing among routes within a travel shed**.** If travel patterns are not sufficiently rebalanced through reservations alone, it may be desirable to consider a pricing mechanism to encourage the use of underutilized routes where customers have a choice (i.e. Bremerton versus Bainbridge or Point Defiance-Tahlequah versus Vashon-Fauntleroy).

The goal of this Plan is to identify a single package of service improvements, demand management strategies, LOS standards, and funding requirements that is responsive to the legislative direction set forth during the 2009 session, and allows the ferry system to maximize the efficiency of existing assets while meeting the needs of local customers and communities.

There are multiple ways to build a plan, each of which includes a different set of tradeoffs with respect to who assumes system costs and how those costs are borne. For example, the ferry system could choose to do nothing other than maintain existing assets and services while allowing degradation in LOS. Conversely, the system could choose to maintain existing LOS standards while adding new services to meet growing demand.

The Revised Draft Plan submitted to Legislature on January 31, 2009 presented two different visions ("bookends") for the future of WSF. Scenario A assumed that current levels of service remained constant with minor improvements, operational strategies were implemented over time, and several new vessels would come online. Scenario B assumed a reduced State-run marine highway system and that most operational strategies would be implemented over time. The detailed discussions of Scenarios A and B are included in Appendix M as a reference.

Using these two scenarios as bookends, the Legislature offered a number of clear policy directives, which have been incorporated into this Final Long-Range Plan. These directives include:

- Funding support so that existing service levels can be maintained.
- Funding support of capital projects to include essential projects that are absolutely necessary to support existing service levels.
- Deferring projects that are either not immediately necessary or where the benefits have not yet been adequately demonstrated.

In addition to the above directives, there was conditional support for two key operational strategies:

- Vehicle reservations (a final decision will come in the 2010 legislative session after a pre-design report due November 2009).
- Transit enhancement investments in terminals, which will be


### Moving Washington

Moving Washington is WSDOT's vision for prioritizing transportation investment over the next 10 years to increase mobility and reduce congestion. Its three strategies are:

- Adding capacity strategically to best use limited resources
- Operating efficiently to get the most out of infrastructure
- Managing demand by offering more choices

The Long-Range Plan aligns with the vision and strategies of Moving Washington:

- Reservations delay the need to upgrade terminals and boats by maximizing the use of existing assets
- There are strategic capacity improvements achieved through the replacement of retired and retiring vessels with larger capacity vessels
- Reservations and pricing strategies manage vehicle demand by encouraging mode and time shifts

reviewed as the need is demonstrated over time through growth in walk-on passengers and an assessment of the availability of local transit service.

# 15. LEGISLATIVE PLAN COMMITMENT

The Legislative policy direction was incorporated into the Legislature's 16-year final plan. This plan captures the level of future funding commitment for the operating and capital programs that were approved as part of the 2009 legislative session.

This section includes a discussion of the program-level detail contained in the 16-year legislative funding plan. This section also extends the basic logic that underlies the 16-year legislative funding plan by six additional years. This 22-year plan represents a vision of the future for ferry services.

## 15.1 Operating Program

The package of operating and pricing strategies will assume a continuation of current service levels with minor adjustments to reflect vessel deployment changes due to vessel acquisitions and recommended vessel slowing to reduce fuel consumption.

The proposed vehicle reservation system would be such a fundamental change in how customers make use of ferry services, that it is difficult to estimate the actual ridership response. Recognizing this, the proposed operating program will provide marginal capacity improvements on several routes related to the vessel procurement program.

The vessel procurement program also restores the system's capability of having a viable standby vessel so that service can be maintained in the event of a vessel breakdown.

## Proposed 2030 Service Details

The proposed vessel deployment plan is shown in Exhibit 21 for both 2015 (which is the end of the first vessel procurement cycle) and for 2030 (which is the end of the second vessel procurement cycle). **Error! Reference source not found.** uses the summer sailing schedule to illustrate the specific impacts to routes from new vessel deliveries. Appendix N includes similar exhibits for all schedule seasons.

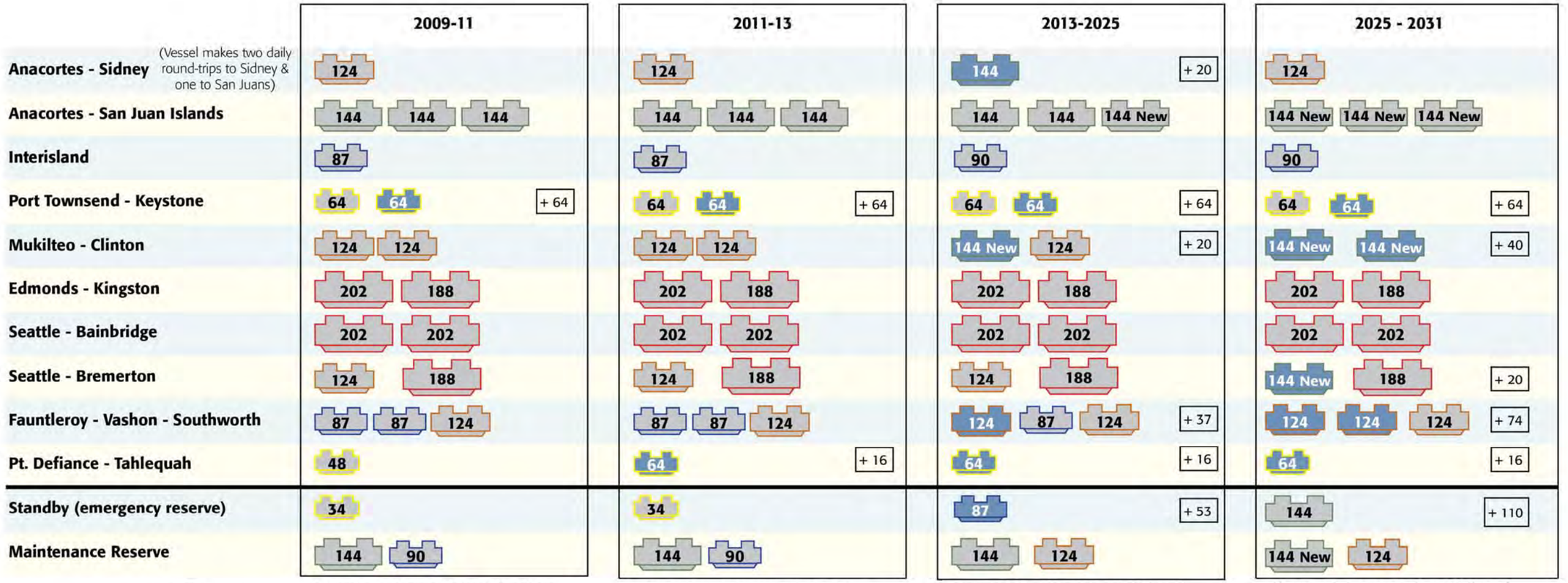
### Exhibit 21
### Summary of Proposed Long-Range Plan
### Fleet Deployment

| | 2015 Proposed Fleet Deployment Plan | | | |
|---|---|---|---|---|
| **Route** | **# of Vessels** | **Fall, Winter, Spring** | **Shoulder** | **Summer** |
| Bainbridge | 2 | 2 Jumbo | | |
| Bremerton | 2 | 2 Large | | 1 Medium<br>1 Jumbo |
| Clinton | 2 | 1 Large<br>1 Medium | | |
| Kingston | 2 | 2 Jumbo | | |
| Point Defiance | 1 | 1 Small | | |
| Port Townsend | 1 or 2 | 1 Small | 2 Small | |
| San Juans & Sidney | 3 or 4 | 2 Large<br>1 Med. (Sidney ex. Winter) | | 4 Large |
| Interisland | 1 | 1 Small (Winter) | 1 Mid-Size | |
| Fauntleroy-Vashon-Southworth | 3 | 2 Medium<br>1 Mid-Size | | |
| **Total Deployed** | | **17** | **18** | **19** |

| | 2031 Proposed Fleet Deployment Plan | | | |
|---|---|---|---|---|
| **Route** | **# of Vessels** | **Fall, Winter, Spring** | **Shoulder** | **Summer** |
| Bainbridge | 2 | 2 Jumbo | | |
| Bremerton | 2 | 2 Large | | 1 Large<br>1 Jumbo |
| Clinton | 2 | 2 Large | | |
| Kingston | 2 | 2 Jumbo | | |
| Point Defiance | 1 | 1 Small | | |
| Port Townsend | 1 or 2 | 1 Small | 2 Small | |
| San Juans & Sidney | 3 or 4 | 2 Large<br>1 Med. (Sidney ex. Winter) | | 3 Large<br>1 Medium |
| Interisland | 1 | 1 Small (Winter) | 1 Mid-Size | |
| Fauntleroy-Vashon-Southworth | 3 | 2 Medium (2 in Winter)<br>1 Mid-Size (Winter Only) | 3 Medium | |
| **Total Deployed** | | **17** | **18** | **19** |

| Vessel class | Vehicle capacity |
|---|---|
| Jumbo | 188-202 |
| Large | 144 |
| Medium | 124 |
| Mid-Size | 87-90 |
| Small | 34-64 |

## Exhibit 22
## Vessel Assignments & Procurement Impacts – Final Long-Range Plan (Summer)




- **Two 64-car vessel (Island Home) are delivered**
- **Funding for one 64-car vessels (under construction)**
- Two new 64-car vessels are delivered; one in 2010 & one in 2011 (Port Townsend - Keystone)

- **64-car vessel program is complete; delivery of final 64-car vessel**
- **Start new 144-car vessel program**
- One new 64-car vessel is delivered (Pt. Defiance - Tahlequah) in 2012
- Rhododendron is retired

- **Two new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2014 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to Fauntleroy - Vashon - Southworth and increases route capacity
- One new 144-car vessel to San Juan Domestic in 2014. 144 from San Juan Domestic moves to Sidney and increases route capacity to both Sidney and San Juan Domestic routes
- 124 from Sidney moves to Fauntleroy - Vashon - Southworth and increases route capacity
- 87 bumped from Fauntleroy - Vashon - Southworth increases standby capacity
- Evergreen State and Hiyu are retired

- **Five new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2027 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to Fauntleroy - Vashon - Southworth and increases route capacity
- Two new 144-car vessels are delivered in 2028 and 2029 (San Juan Domestic)
- One new 144-car vessel to maintenance in 2028 moves Hyak to standby and retires Klahowya
- One new 144-car vessel is delivered in 2029 to Bremerton.
- 124 from Bremerton moves up to Sidney
- Tillikum and three 144-car vessels are retired (Elwha, Kaleetan, and Yakima)

### *Seattle-Bainbridge*

- Two 202-car Jumbo Mark II vessels running full-time year-round.

### *Seattle-Bremerton*

- At the end of the planning period there would be two 144-car vessels running in the fall, winter, and spring; one 144-car and one 188-car Jumbo Mark I running in the summer. Beginning in 2015, the second new 144-car vessel will run in the fall, spring, and winter replacing a 124-car vessel. Beginning in 2029, a new 144-car vessel will run in the summer and replace a 124-car vessel.

### *Mukilteo-Clinton*

- Current service is provided by two 124-car vessels. The first new 144-car vessel delivered would replace a 124-car vessel in 2014. Beginning in 2027, a new 144-car vessel would replace the remaining 124-car vessel.

### *Edmonds-Kingston*

- One 202-car Jumbo Mark II and one 188-car Jumbo Mark I year-round.

### *Fauntleroy-Vashon-Southworth*

- By 2015 one of the two 87-car Evergreen Class vessels, would be replaced by a 124-car vessel.
- By 2030 there will be three 124-car vessels operating fall-winter-spring on this route and two 124-car and the 90-car Sealth would operate in winter.

### *Point Defiance-Tahlequah*

- This route would be served by a 64-car Island Home Class vessel on a 16 hour/day schedule, replacing the 48-car Rhododendron in 2012.

### *Port Townsend-Keystone*

- Under this proposal, one 64-car Island Home Class vessel would be assigned to the route year-round by mid-2010. A second 64-car Island Home vessel would be assigned to the route for eight hours/day in the shoulder and summer schedule periods starting in 2012.

### *San Juan Islands and International*

Winter. Under this proposal, the San Juan Islands would be served by two 144-car vessels, one 124-car vessel, and a 64-car Island Home as the interisland vessel. As with the existing winter schedule, the interisland vessel would not operate on weekends, and one of the

#### Changes in Financial Assumptions

Since release of the Revised Draft Long-Range Plan on January 31, 2009, a number of changes have been made to the revenues and costs presented in this document.

Many of the updates reflect legislative direction and are discussed in detail in this Final Plan.

In addition to the programmatic changes, a number of other refinements and modifications were made as follows:

- Revenue forecasts updated to June 2009 State forecast
- Review and modifications to cost escalation assumptions
- Re-scoped several terminal projects
- Updated cost estimates for reservations
- Reduced administrative and support costs associated with on-going capital support functions

144-car vessels would be crewed nine hours per day Monday through Thursday. Currently there is no Sidney service during the winter.

Spring and Fall. Anacortes-San Juan Islands service would be provided by two 144-car vessels for 16 hours/day and with the 124-car vessel when it is not engaged in Sidney service. The 90-car Sealth would provide interisland service and is available to make one round trip to Anacortes on weekends to assist with peak weekend traffic. All vessel assignments would be implemented with the deployment of the second 144-car vessel in 2015. Sidney service would be provided for one round-trip per day with the 124-car vessel Chelan.

Summer. Two round trips to Sidney with the 124-car Chelan, three new 144-car vessels would be assigned to the route from Anacortes to the San Juan Islands. However, between 2013 and 2025 a 144-car vessel will replace the 124-car Chelan on the Sidney route. The ferry system could continue to operate with an increased capacity in the San Juans after 2025, however this would reduce the amount of maintenance weeks for the 144-car vessel class and would require that one of the new 144-car vessels be built to SOLAS standards.

Interisland. The interisland vessel provides necessary connections between the four ferry-served San Juan Islands. By one vessel providing interisland service, the other vessels on the route can be scheduled in more efficient ways to move traffic between the San Juan Islands and the Anacortes/Skagit County mainland. For instance, a mainland vessel can make up to five round trips in a 16-hour operating day if it does not have to operate on the interisland circuit; making interisland stops would reduce its overall capacity to three round trips in a 16-hour operating day.

As there is a considerable amount of truck traffic on the interisland route, and there are multiple destinations, traffic either has to turn around on the vessel or back on, so it is important that the interisland vessel has a relatively unobstructed vehicle deck. For future projected winter service volumes, an Island Home class 64-car vessel should be adequate for the service. For the Spring, Summer, and Fall, however, the 90-car Sealth is proposed as an interisland vessel, because:

- It has an unobstructed car deck for turning large interisland vehicles around instead of backing on.
- There is flexibility to use the Sealth on Anacortes-based route on weekends when interisland traffic is lower; potentially to address recreational travel sensitivity tests which indicate the possibility for higher growth rates during those time periods.

## 15.2 Capital Program

With the passage of the 2009-11 Budget, the Legislature provided WSF with direction on how it intends to fund the first 16 years of the Long-Range Plan.

The Legislative plan funds capital projects that are absolutely necessary to support existing service levels. This includes the preservation of terminals and vessels, replacing retiring vessels (largely in-kind), funding selected terminal improvements, and providing an allowance for emergency repairs and vessel improvements to meet regulatory (i.e. Coast Guard) requirements.

The Long-Range Plan has taken this direction and extended it six more years to construct a full 22-year plan of capital expenditures. This 22-year capital program is summarized below in Exhibit 23.

Some of the WSF capital needs that were identified in the Revised Draft Plan were determined by the Legislature to be non-essential and excluded from the current level of Legislative commitment. These projects could reconsidered in the future, if conditions changed or additional funding sources, primarily Federal, were to become available. These projects will be discussed in the next section.

**Exhibit 23**
**22-Year Capital Expenditures (YOE$)**

| | Emergency Repairs | Terminal Preservation | New Vessel Construction | Terminal & Vessel Improvements | Vessel Preservation | Admin, Support, & Indirect | Expenditure Total |
|---|---|---|---|---|---|---|---|
| **2009-11** | 6.3 | 50.7 | 117.3 | 36.2 | 50.3 | 24.0 | **284.8** |
| **2011-13** | 4.6 | 69.3 | 139.4 | 24.4 | 33.4 | 21.2 | **292.3** |
| **2013-15** | 4.9 | 55.9 | 249.0 | 20.6 | 68.3 | 21.7 | **420.4** |
| **2015-17** | 5.2 | 173.2 | 0.0 | 40.6 | 101.6 | 22.3 | **342.9** |
| **2017-19** | 5.6 | 95.9 | 0.0 | 24.2 | 98.9 | 23.1 | **247.8** |
| **2019-21** | 6.0 | 129.2 | 0.0 | 7.3 | 99.1 | 24.0 | **265.6** |
| **2021-23** | 6.4 | 49.3 | 0.0 | 7.8 | 112.7 | 24.9 | **201.1** |
| **2023-25** | 6.9 | 49.2 | 13.6 | 7.5 | 126.8 | 25.8 | **229.8** |
| **16-Yr Subtotal** | **46.0** | **672.7** | **519.2** | **168.5** | **691.1** | **187.0** | **2,284.6** |
| **2025-27** | 7.4 | 129.7 | 655.7 | 8.0 | 140.5 | 26.8 | **968.0** |
| **2027-29** | 7.9 | 79.3 | 718.7 | 8.6 | 219.5 | 27.8 | **1,061.8** |
| **2029-31** | 8.5 | 103.4 | 0.0 | 9.2 | 227.2 | 28.8 | **377.1** |
| **LRP Total** | **69.8** | **985.1** | **1,893.6** | **194.3** | **1,278.2** | **270.4** | **4,691.5** |

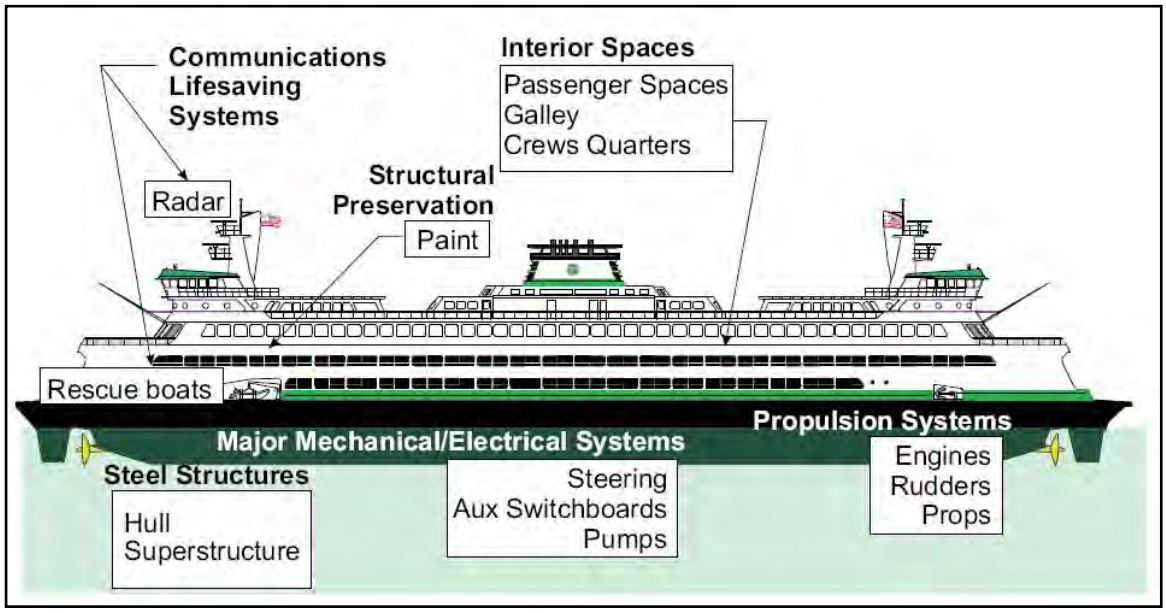
## Vessel Program

WSF faces a significant fleet recapitalization requirement over the next 22 years. The fleet is among the oldest of any major ferry operator, with an average vessel age of more than 35 years (with oldest vessel being 62 years old, and the newest being 11 years old). The needs are significant over the next 22 years, as WSF will continue to invest in the ongoing preservation of its aging fleet as well as invest in a significant new vessel construction program to replace retiring vessels. The elements of the vessel program include:

1. Preservation
2. Procurement of new vessels
3. Improvements

For purposes of the following discussion, Exhibit 24 below shows examples of vessels systems that typically that require preservation and improvements.

**Exhibit 24**
**Examples of Vessel Systems**




Vessel Preservation. Vessel preservation needs are developed using the Life Cycle Cost Model (LCCM), which identifies when assets are expected to be replaced, based on current condition ratings and an expected useful life. The total 22-Year cost of this program is estimated to be $1.2 billion (YOE$).

Vessel Improvements. The plan includes approximately $83 million over 22 years to address future vessel improvement needs. These include investments in the following three areas:

- Fuel conservation. These vessel investments are designed to support the fuel conservation program in the 2009-11 biennium. No further investments are assumed, because in new vessels, fuel conservation measures will be incorporated into the design.
- Regulatory-related and other target improvements. This is a biennial allowance of about $3.6 million to address issues raised by regulatory compliance agencies, such as the Coast Guard or the EPA, as well as the kind of vessel investments which cannot be foreseen. An example of this type of investment is the fuel conservation investments in the 2009-11 biennium.

Emergency Repairs. Consists of expenditures related to the emergency repair of vessels.

Vessel Procurement. The most significant capital funding need over the next 22 years is new vessel acquisitions to support the upcoming retirements of several aging vessels in the fleet. The proposed procurement program, summarized in Exhibit 25, includes the following elements:

- In the near-term, acquire three Island Home Class vessels estimated to cost a total of $184.2 million (YOE$).
- Invest approximately $17.6 million in the Hyak to extend its life 20 years.
- After the initial three Island Homes are built there will be a procurement of 144-car vessels, assuming funding is available. The first grouping will include the procurement and construction of two 144-car vessels. Both will be constructed and delivered in 2014. The total procurement costs of new vessels constructed between 2010 and 2014 are estimated to be $321.4 million (YOE$). (see sidebar for discussion of alternative procurement plan).
- A second procurement grouping of 144-car vessels will include five additional vessels with pre-design beginning in 2024 and the first delivery to occur in 2027. The total new vessel costs of the last five vessels are estimated to be $1,387.9 million (YOE$); this includes pre-design expenditure totals of $13.6M (YOE$).
- Once the second new 144-car vessel is built and put into operation in 2014, WSF will be able to maintain a de-crewed 87-

### Implications of Alternate Initial Procurement Plan (4+1)

For the purposes of the operating plan contained in the 22-Yr Long-Range Plan, the funding assumption is that initially, three Island Home 64-car vessels will be constructed, followed by two 144-car vessels.

An alternative option that could be considered would be to construct four Island Homes and only one 144-car vessel. The fourth new 64-car vessel would allow an 87-car vessel to serve as a standby reserve and would also allow the Hiyu to be retired. However, there are some disadvantages to this plan which include:

- **Fleet Composition.** Due to its small size, the 64-car vessel would not effectively substitute on routes more suitable for larger vessels. This limits the ferry system's flexibility in terms of serving the greatest number of routes.
- **Interisland.** The 4+1 plan would downsize the Interisland route by running the small 64-car vessel year-round instead of only in the winter. Given the fleet composition discussed above, additional service capacity would not be possible for other routes.

car vessel to serve as standby so that it will be available for emergency backup service.

This vessel procurement program results in a fleet of 22 vessels, which provides sufficient capacity to meet fleet preservation needs while maintaining an adequate standby vessel.

Exhibit 25
Vessel Procurement

| Year | Vessel | Notes |
|---|---|---|
| 2010 | Island Home #1 | Replace a Steel Electric (Port Townsend) |
| 2011 | Island Home #2 | Replace a Steel Electric (Port Townsend) |
| 2011 | Hyak reinvestment | Invest in the Hyak to extend life 20 years |
| 2012 | Island Home #3 | Replace the Rhododendron (go to Point Defiance) |
| *Procurement #1 (144's)* | | |
| 2014 | 144-car vessel #1 | Replace the Evergreen State |
| 2014 | 144-car vessel #2 | Restore standby/reserve capacity; 87-car vessel moved to standby |
| *Procurement #2 (144's)* | | |
| 2027 | 144-car vessel #3 | Replace the Tillikum |
| 2028 | 144-car vessel #4 | Replace the Klahowya |
| 2028 | 144-car vessel #5 | Replace the Elwha |
| 2029 | 144-car vessel #6 | Replace the Kaleetan |
| 2029 | 144-car vessel #7 | Replace the Yakima |

This procurement schedule is different than the one that has been put forward previously and that had been the basis of the 2008 Legislative Financial Plan. This procurement program was developed in response to several changes in conditions, including:

1. Financial and funding challenges in the next biennial budget
2. Findings and recommendations from the JTC Vessel Acquisition Sizing and Timing report

The revised program better reflects the current and expected needs of the system, assuming a continuation of current service levels, and extends vessels to their full service lives before retirement. The Legislature has directed WSF to develop a comprehensive vessel maintenance plan. The purpose of this plan is to ensure that out-of-service time is minimized across the fleet.

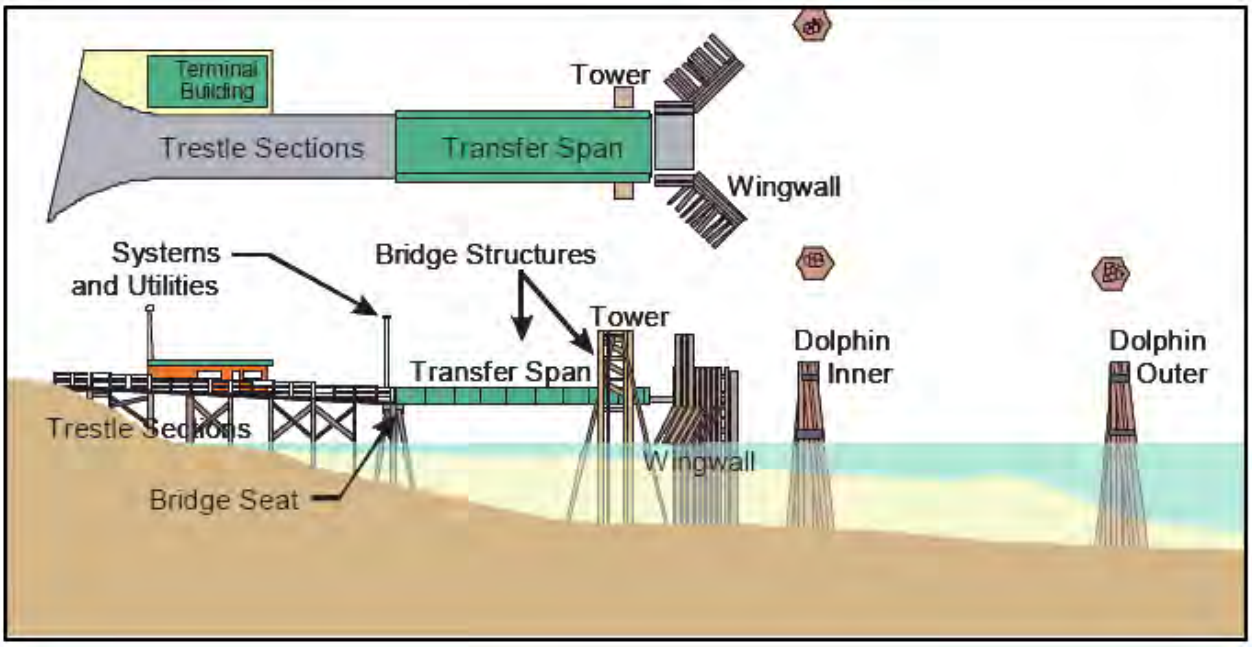
Maintenance Plan. WSF has been asked by Legislature to assess the design of its vessel maintenance plan in order to minimize vessel out-of-service time and free-up additional weeks of stand-by. By minimizing vessel out-of-service time, WSF may be able to operate with one fewer vessel. The cost savings impact to the

operating and capital programs would include reduced fixed vessel costs and a reduced vessel construction program.

### Terminal Program

For purposes of the following discussion, Exhibit 26 below shows examples of terminal systems that typically require preservation and improvements.

**Exhibit 26**
**Examples of Terminal Systems**



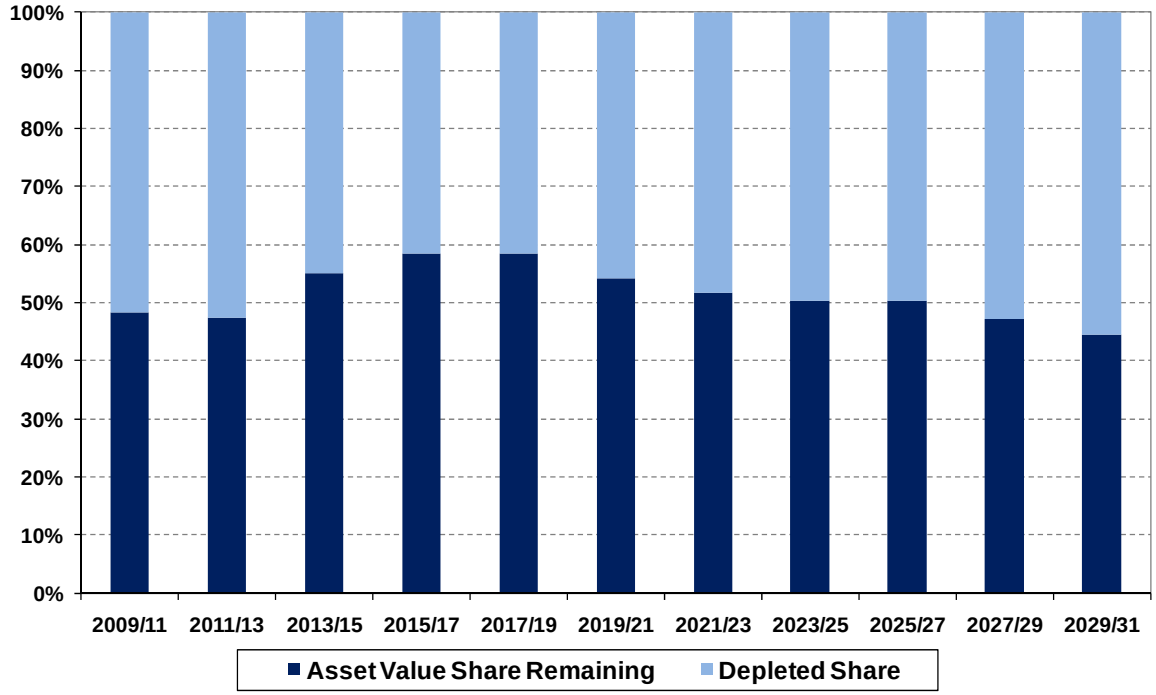

Terminal Preservation. The preservation program for terminals focuses on identifying the needs for operating at current service levels and maintaining, preserving, and replacing existing capital assets. Terminal preservation needs are developed using a Life Cycle Cost Model (LCCM), which has been updated for current facility condition ratings and to reflect current costs of asset replacement. Legislative direction for the 16-Year Plan was to reduce work on non-vital systems to get closer to WSF's asset maintenance performance goals, and to defer projects not due in the LCCM. Total asset maintenance costs for the 16-Year Plan amount to $570.0 million ($ '08). Extending the Plan six more years would add an additional $247 million ($ '08). Exhibit 27 provides a brief summary of the key preservation activities at each facility.

## Exhibit 27
## Summary of Essential Terminal Preservation Projects
## ($ '08 millions)

| Terminal | Slip Preservation | Trestle | Wingwalls & Dolphins | Buildings & Overhead Loading | Other | Total |
|---|---|---|---|---|---|---|
| Point Defiance | $1.1 | $3.5 | $10.6 | $0.9 | $0.7 | **$16.8** |
| Tahlequah | $1.1 | $4.0 | $5.1 | $0.3 | $0.6 | **$11.0** |
| Fauntleroy | $1.6 | $34.0 | $7.1 | $1.8 | $1.6 | **$46.1** |
| Southworth | $1.0 | $15.5 | $7.9 | $2.2 | $1.3 | **$27.9** |
| Vashon | $2.3 | $32.5 | $18.5 | $3.2 | $1.8 | **$58.2** |
| Seattle | $27.2 | $101.2 | $19.4 | $69.3 | $3.6 | **$220.6** |
| Bremerton | $9.6 | $0.0 | $16.8 | $3.4 | $1.1 | **$30.9** |
| Bainbridge | $4.1 | $0.0 | $14.1 | $8.7 | $1.7 | **$28.6** |
| Edmonds | $1.0 | $8.0 | $13.6 | $3.6 | $1.4 | **$27.7** |
| Kingston | $7.7 | $1.0 | $27.8 | $7.1 | $1.2 | **$44.8** |
| Clinton | $2.0 | $0.0 | $13.0 | $2.4 | $2.3 | **$19.7** |
| Mukilteo | $2.5 | $0.0 | $6.1 | $0.0 | $0.0 | **$8.6** |
| Keystone | $11.1 | $0.0 | $6.6 | $0.0 | $0.9 | **$18.6** |
| Port Townsend | $18.5 | $0.0 | $7.0 | $0.3 | $2.6 | **$28.4** |
| Anacortes | $8.0 | $17.7 | $21.4 | $39.7 | $7.5 | **$94.3** |
| Friday Harbor | $1.5 | $8.4 | $7.9 | $1.6 | $3.1 | **$22.4** |
| Orcas | $4.6 | $2.8 | $7.1 | $1.0 | $1.4 | **$17.0** |
| Lopez | $11.7 | $2.2 | $6.5 | $0.7 | $1.6 | **$22.8** |
| Shaw | $1.3 | $3.2 | $3.1 | $0.1 | $0.3 | **$8.1** |
| Eagle Harbor | $4.4 | $15.3 | $22.9 | $18.3 | $3.7 | **$64.6** |
| **Total** | **$122.2** | **$249.3** | **$242.6** | **$164.5** | **$38.4** | **$817.0** |

As shown in Exhibit 28, the result of this level of preservation investment is that the average remaining value of the terminal asset base will fluctuate between approximately 40% and 59% throughout the planning horizon.

**Exhibit 28**
**Asset Value Remaining per Biennium (All Terminals)**




Terminal Improvements**.** Legislative direction for the Long-Range Plan reflects some modest terminal improvements, where these improvements can be demonstrated to add significant value. All improvements projects fall within the 16-year funding timeframe and total $125.6M ($ '08), of which $99.2 million ($ '08) is funded from expected resources. One improvement project is scheduled to be completed at Edmonds in the 2029-31 biennium and will total $26.0M ($ '08). The difference will likely need to be made up through higher federal funding commitments for several key projects. A summary of the major terminal improvement elements include:

- Major terminal projects at Mukilteo, Seattle, Anacortes, and Edmonds $114.5 million ($ '08). The Edmonds improvements are assumed to occur outside the 16-year legislative planning window.
- Addition of modifications to support the proposed vehicle reservation program $16.4 million ($ '08).
- Modest improvements including utility investments, building preservation, seismic strengthening and ADA requirements $20.7 million ($ '08).

The following is a brief summary of the major elements of the Terminal Improvement Program.

### *Vehicle Reservation System*

A vehicle reservation system is the key adaptive management strategy included in this Plan, moving vehicle queues away from the terminals and better distributing traffic.

The total capital costs of a vehicle reservation system are estimated to be $16.4 million ($ '08). The Legislature requires WSF to conduct the following before implementation:

- Develop a pre-design report and submit to the JTC before implementation of a pilot project and eventual broad implementation, and
- Conduct evaluations to ensure that the reservation system is working together with the current Wave2Go Electronic Fare System (EFS) and ORCA.
- The pre-design report will also ensure that the reservation system is consistent with an eventual move to a statewide WSDOT tolling back-office system.

### *Major Terminal Projects*

- Mukilteo Relocation. The Mukilteo terminal is proposed for relocation to the tank farm site just east of the current terminal. This proposal would address a number of issues that cannot be adequately addressed at the current site and removal of traffic conflicts at the existing site, but it does not include overhead loading. The total cost of the entire project is $106 million ($ '08). This will be partially offset by $70 million of avoided preservation needs at the current facility (with no realignment), making the net cost of the new facility $46 million.

  Legislative direction was to continue environmental and archeological studies in the 2009-2011 biennuem to determine the feasibility of moving the terminal. Currently total funding for the project is about $55.0 million ($ '08); $63.3 million (YOE$). The Legislature has directed WSF to seek federal funding to support the higher cost of moving the terminal.

- Seattle. The majority of the major Seattle terminal costs relate to preservation ($220.6M), where significant elements of the current facility will need to be replaced during the next 20 years including, the north trestle and the terminal building. In addition to the major rebuild elements, improvements would include funding for terminal building electrical upgrades of about $7.1 million ($ '08).

- Anacortes. This project includes the construction of a replacement building and associated terminal reconfiguration to improve circulation. The building replacement was found to be desirable as a preservation matter. This new building would be larger and better suited to the longer wait-times that are typical at this facility, especially in the summer. The cost of this project was estimated to be $26.4 million ($ '08). The project has been approved by the Legislature but only if WSF can secure federal funds for this project.
- Edmonds. The Plan assumes that the Edmonds terminal will remain in its current location. An allowance of $26 million is included to enhance multimodal connections.

#### *Other Projects*

Projects in this category include relatively minor terminal improvements (most are below $1.0 million) such as seismic retrofits, EFS, and security improvements. Funds for relocating tollbooths to a side-by-side configuration at Port Townsend were included to improve fare collection.

## 16. ADDITIONAL LONG-TERM FERRY NEEDS

### Projects Needs Beyond the 16-Year Legislative Budget

The Legislature limited the funding commitment to capital projects that were determined to be essential for continuing current service levels. This reflects a significant focus on vessel and terminal preservation needs and vessel replacement investment requirements, and to a much smaller degree on terminal improvements.

During Plan development, a number of terminal projects have been identified that would meet specific service enhancement needs or otherwise provide potential benefits to customers and communities. Some of these projects have preliminary legislative support, but a funding commitment is contingent on other factors, such as additional funding from other sources (federal, regional, or local) or operational considerations (ridership growth, increased walk-ons, etc.). Exhibit 29 below summarizes the deferred projects.

### Possible Crew Endurance Needs

The US Coast Guard has required the Ferry System to eliminate touring watches due to concerns about the effect sof these types of shifts on crew endurance and fatigue levels.

While the impact of these changes are still being worked through, there is a possibility that a new tie-up slip at Southworth might be the most effective approach to both meeting the Coast Guard concerns and maximizing service efficiency and overall cost effectiveness on the Southworth-Vashon-Fauntleroy route.

If this is determed to be the preferred approach, approximately $5 million of the estimated $11.5 million project has been secured via a federal earmark appropriation.

**Exhibit 29**
**Projects Beyond the Legislative Commitment ($ '08)**

| Terminal | Transit-Related | Improve Dwell Time | Other Improvements | Total |
|---|---|---|---|---|
| Point Defiance | $0.0 | $2.3 | $0.3 | **$2.6** |
| Tahlequah | $0.0 | $2.4 | $0.4 | **$2.8** |
| Fauntleroy | $0.0 | $17.2 | $0.6 | **$17.9** |
| Southworth | $0.0 | $0.0 | $1.2 | **$1.2** |
| Vashon | $0.0 | $0.0 | $0.8 | **$0.8** |
| Seattle | $0.0 | $0.0 | $3.8 | **$3.8** |
| Bremerton | $0.0 | $0.0 | $9.8 | **$9.8** |
| Bainbridge | $30.2 | $0.0 | $4.1 | **$34.3** |
| Edmonds | $0.0 | $0.0 | $0.8 | **$0.8** |
| Kingston | $1.4 | $0.0 | $1.6 | **$3.0** |
| Clinton | $9.9 | $21.9 | $2.6 | **$34.4** |
| Mukilteo | $0.0 | $0.0 | $0.5 | **$0.5** |
| Keystone | $0.0 | $1.0 | $0.5 | **$1.5** |
| Port Townsend | $0.0 | $7.0 | $1.2 | **$8.2** |
| Anacortes | $0.0 | $0.0 | $7.4 | **$7.4** |
| Friday Harbor | $0.0 | $0.2 | $0.9 | **$1.1** |
| Orcas | $0.0 | $0.0 | $0.7 | **$0.7** |
| Lopez | $0.0 | $0.0 | $1.2 | **$1.2** |
| Shaw | $0.0 | $0.0 | $0.7 | **$0.7** |
| Eagle Harbor | $0.0 | $0.0 | $3.1 | **$3.1** |
| **Total** | **$41.5** | **$52.0** | **$42.3** | **$135.7** |

## 16.1 Terminal Improvements

### *Transit-Related Improvements*

Transit-related improvements include projects such as improved terminal access for pedestrians and transit vehicles, which are necessary to accommodate increasing volumes of walk-on customers. These improvements are expected to cost $41.5 million ($ '08), with a large portion of that cost incurred at the Bainbridge Island Terminal. The Legislature has deferred funding for these projects until increased walk-on ridership is realized, additional transit service is available, and pre-design studies are received.

To the extent that these improvements can encourage mode shift, it reduces demand on the vehicle deck and forestalls the need to invest in additional vessels. New vessels, in addition to the significant capital expense, are also the largest source of fixed operating expense (maintenance and engine room labor).

Targeted transit enhancements that enable and encourage customers to shift modes away from single occupancy vehicles

(SOV) are another key component of operating strategies. From existing resources, WSF intends to implement targeted improvements like designated Zipcar spaces at select terminals that don't require major capital investments.

Exhibit 30 includes a list of the specific proposed transit enhancements by terminal. In addition to these investments, further enhancements requiring coordination with other divisions of WSDOT and local transit agencies are necessary for full mode shift benefits. These could include better coordinated schedules, the provision of real time information on transit departures and new/expanded transit services to better connect ferry customers with their destinations on both sides of the water.

**Exhibit 30**
**Proposed Transit Enhancements**

| Terminal | Transit Enhancement | Expected Capital Cost ($ '08) |
|---|---|---|
| Bainbridge | Passenger Pick-up/Drop-off Improvements | $1,349,000 |
| | Transit Facility Improvements | $5,896,000 |
| | Transit-related Improvements to Terminal Building & OHL | $18,489,000 |
| | Improved intersection at Winslow Way for Bikes & Peds | $4,464,000 |
| Kingston | Relocate tollbooth for improved transit access | $1,377,000 |
| Clinton | Walkway for park n' ride | $9,877,000 |
| **Total** | | **$41,452,000** |

### *Improvements Targeting Dwell Time*

These improvements would allow the ferry system to minimize terminal time and maximize capacity during peak periods in order to maintain schedule reliability on routes. The type of improvements include projects such as overhead loading for passengers, and other modifications that improve traffic flow and move customers through the terminals more quickly.

The most significant dwell time improvements are the overhead loading projects proposed for Clinton and Fauntleroy, which continue to load passengers above the auto transfer span on two of the busiest routes in the system. These improvements will also provide passenger comfort and safety benefits that also support the transit enhancement and mode shift goals. A list of proposed dwell time improvements is below in Exhibit 31.

## Exhibit 31
## Proposed Dwell Time Improvements

| Terminal | Dwell Time Improvement | Expected Capital Cost ($ '08) |
|---|---|---|
| Clinton | Overhead Loading | $21,896,000 |
| Fauntleroy | Overhead Loading | $17,239,000 |
| Friday Harbor | Pedestrian Gates and Barriers | $227,000 |
| Keystone | Add Signal at Exit Lane Intersection | $959,000 |
| Point Defiance | Tollbooth Improvements | $578,000 |
| | Increased Holding Capacity | $1,673,000 |
| Port Townsend | Straighten Exit Lanes (Relocate Park) | $7,005,000 |
| Tahlequah | Add Exit Lane to Allow Double Lane Offload | $2,431,000 |
| **Total** | | **$52,008,000** |

### *Small Terminal Projects*

A few minor terminal projects were excluded from the 16-year Legislative Plan. These projects include storm drainage improvements for all terminals at a total cost of $28.4 million ($ '08), $379,00 ($ '08) in ADA compliance projects, and $1.0 million ($ '08) for generators at Port Townsend and Shaw.

### Preservation Needs due to Deferred Improvement Projects

The deferral of one major terminal building improvement project at Anacortes until additional funding could be acquired and one transit-related project at Bainbridge Island until increased ridership is realized would increase preservation capital costs in the 16-year planning period beyond the current assumed preservation commitments discussed earlier.

- Anacortes. This deferred project, as discussed above, was to implement a design for a replacement building and associated terminal reconfiguration to improve circulation. The cost of this project was estimated to be $26.4 million ($ '08) and the preservation impacts of deferring the project are estimated to be $11.6 million ($ '08). Preservation needs include terminal and secondary buildings and paved areas on the trestle, traffic lanes, holding areas, and parking.
- Bainbridge. This deferred project included transit-related building improvements and overhead loading. The cost of this project was estimated to be $18.5 million ($ '08) and the preservation impacts of deferring the project are estimated to be $17.6 million ($ '08). Preservation needs include terminal and secondary buildings and overhead loading on the trestle, traffic lanes, holding areas, and parking.

# 17. LONG-TERM FUNDING IMPLICATIONS

The proposed package of services and investments will result in a significant unfunded gap of approximately $3.3 billion over 22 years, or an average of approximately $300 million per biennium. While the gap is not a surprise, given the reduction in dedicated tax funding for ferries, the magnitude of the gap reflects a significant recapitalization effort related to aging assets, particularly with vessels. A noteworthy point is that the funding shortfalls are almost exclusively in the capital program.

To address this need, there are two ways to fill the gap:

1. Reallocation of a higher share of current resources. As discussed previously, WSF has been getting a share of general highway funds to backfill for the lost MVET since 2000. The estimated gap in capital funding outlook already assumes that significant funds are transferred from highway accounts, at the level assumed in the 2009 Legislative Financial Plan. One option would be to allocate higher shares of these funds or a new allocation of some other existing state, regional, or local fund source. However, feasibility is very questionable due to the funding gap highway and other non-ferry transportation projects.
2. New revenues. The other possible source is from new revenues, either at the state, regional, or local level. This typically means new or higher taxes.

The question of where additional funding might come from was the subject of the WSTC's Ferry Funding Study, which was a parallel effort to the development of this Plan. The WSTC was charged with identifying and recommending an approach to restoring WSF to a financially sustainable condition. WSTC's recommendations were based on the needs identified in the Draft submitted to Legislature in January. WSTC's recommendations are discussed below.

## 17.1 Operating Program

Providing the Plan's service level is estimated to cost approximately $6.4 billion over the 22-Year Long-Range Plan planning horizon as summarized in Exhibit 32. Total revenues are estimated to be approximately $6.0 billion, with $5.1 billion coming from operations and the rest from dedicated tax support and a small amount from

### Public Private Partnerships Opportunities at Terminals

The Washington State Department of Transportation Office of Public Private Partnerships (PPP) has, at the request of the Legislature, conducted a study to identify any opportunities for public-private development at WSF terminals. This study was submitted to the Legislature during the 2009 session.

The study identified three terminals with potential market opportunities – Seattle, Bainbridge, and Edmonds.

This Plan does not incorporate any findings from the PPP's study. If there are opportunities that emerge that warrant further review, WSF will work with the Office of PPP to determine how these might be integrated with the transportation needs of the system, for the benefit of WSF and its customers.

transfers from other highway funds. The methodology and assumptions used to develop the operating program revenues and expenditures are detailed in Appendix O.

## Exhibit 32
## Operating Funding Outlook (YOE$ in millions)

| | LRP (22-Yr) | 16-Year |
|---|---|---|
| *2009-11 Cash Carry-Forward* | ***(4)*** | ***(4)*** |
| **Operating Revenue:** | | |
| Farebox Revenue | $4,966 | $3,228 |
| Miscellaneous Revenue (Concessions, etc) | $112 | $73 |
| **Total Revenue from Operations** | **$5,078** | **$3,301** |
| **Operating Program:** | | |
| Vessel Costs | $4,595 | $3,048 |
| Terminal Costs | $1,106 | $732 |
| Management & Support Costs | $736 | $502 |
| Other Misc Costs (State Employee Compensation Adj) | ($39) | ($28) |
| **Total operating program** | **$6,399** | **$4,255** |
| ***Farebox revenue as % of Total Operating costs*** | *78%* | *76%* |
| **Net operating income/(subsidy required)** | **($1,321)** | **($954)** |
| Dedicated Ferry Taxes (Operating Account) | $782 | $542 |
| Administrative Transfers (Operating Account) | $57 | $54 |
| **Estimated Subsidy Available** | **$840** | **$595** |
| **Net operating surplus/(deficit)** | **($486)** | **($363)** |
| *Average per biennium* | ($44) | ($45) |
| Fuel Surcharge Revenues | $297 | $229 |
| **Net operating surplus/(deficit) with Fuel Surcharge** | **($189)** | **($134)** |

**Note**: Operating revenues, dedicated tax revenues, and fuel costs are based on June 2009 Transportation Economic & Revenue Forecast. Legislative Plan was adopted using March forecast.
**Note:** Fuel Surcharge would be implemented only if Legislature approves the fuel surcharge plan
**Note:** Parenthetical values represent shortfalls in the operating program; positive values represent operating surpluses

- Ridership growth and fare increases result in an average farebox recovery rate of 78% over the 22-year horizon.
- Base fare assumptions assume the revenue equivalent of the current policy (annual increases of 2.5%).
- Dedicated tax revenues and fares alone would not be enough to support the operating program in both the 16- and 22-year windows. The additional State support needed over the 22-year plan would be $486 million.
- The funding analysis assumes that WSF will receive the expected $46.4 million in support from other transportation funds over the next two biennia (per 2009 Legislative session). Following that period, no additional support is anticipated from the motor vehicle fund, except treasury deposit earnings and a small amount of

MVET distributions related to the elimination of the handling loss deduction for the motor vehicle fuel tax set forth by SB 5027.

There is considerable risk in the assumed growth in fuel prices. The costs shown in Exhibit 32 are based on Global Insights June 2009 baseline forecast for the 22-Year Long-Range Plan. Using this June forecast increased total fuel cost estimates by almost $300 million from March forecasts used to develop Scenario A submitted to Legislature in January.

Two recent pieces of legislation (RCW 43.19.642 and HB 1303) have the potential to require WSF to power its fleet with at least a portion of biodiesel in the near future. RCW 43.19.642 requires state agencies to use a minimum of 20% biodiesel in their fleets by June 1, 2009, and HB 1303 would require that agencies, to the extent practicable, power their diesel fleets with 100% biodiesel by June 1, 2015. For 2009-11, WSF is directed to use up to five percent biodiesel if the price differential does not exceed five percent.

With these goals, the State is recognizing that biodiesel pollutes less; releases fewer air toxins and cancer-causing compounds, degrades faster, and is less toxic than petroleum diesel. Using biodiesel or biodiesel blends will also help the State comply with ultra-low sulfur diesel requirements, as well as the alternative fuel purchase requirements of the national Energy Policy Act of 1992. In preparation for these requirements, WSF has been testing the use of biodiesel in a pilot program funded by outside grants. The pilot program has been successful, but deploying biodiesel across the fleet will have costs not accounted for in this Plan.

## 17.2 Capital Program

The capital program proposed for the Plan is estimated to cost a total of $4.9 billion over the 22-Year Long-Range Plan horizon. This includes the 16-year Legislative commitment total of approximately $2.5 billion that was adopted as part of the 2009 Legislative session. Even with dedicated funding, assumed federal funding, and other committed state funds, the capital program is still unbalanced. As Exhibit 33 illustrates, to fund the 16-year capital commitment will require $954 million more than current assumed funding; $3.1 billion will be needed to fund the full 22-year capital program. The funding that is already committed includes:

- Transfers from the Motor Vehicle and Multimodal Accounts in the 16-Year Plan which are assumed to stop at the end of the 16-year commitment.
- Dedicated funding (gas tax) is based on the June forecast.
- Bond proceeds as per the 2009 Legislative Financial Plan.

- An assumed average of about $15 million per year in Federal funding.

**Exhibit 33**
**Capital Funding Outlook (YOE$ millions)**

| | LRP (22-Yr) | 16-Year |
|---|---|---|
| *2009-11 Cash Carry-Forward* | ***$2*** | ***$2*** |
| | | |
| **USES OF FUNDS** | | |
| Terminals Preservation | $985 | $673 |
| Vessel Preservation | $1,278 | $691 |
| New Vessel Construction | $1,894 | $519 |
| Terminal & Vessel Improvements | $194 | $169 |
| Existing Debt Service | $212 | $212 |
| Miscellaneous Uses | $336 | $230 |
| **Total core capital program** | **$4,899** | **$2,494** |
| | | |
| **SOURCES OF FUNDS** | | |
| Dedicated tax distributions to Ferries | $711 | $575 |
| Administrative Transfers | $450 | $450 |
| Federal Funds | $340 | $252 |
| Local Funds & Deposit Earnings | $15 | $15 |
| Bond Proceeds | $245 | $245 |
| **Total Sources** | **$1,762** | **$1,538** |
| | | |
| **Net Funding Capital Program** | **($3,136)** | **($954)** |
| *Average per biennium* | ($285) | ($119) |

**Note**: Dedicated tax revenues are based on June 2009 Transportation Economic & Revenue Forecast. Legislative Plan was adopted using March forecast.

**Note**: The 16-Year new vessel construction expenditures include $13.6 million of additional costs attributable to new vessel design for five new 144-car vessels.

**Note:** Parenthetical values represent shortfalls in the capital program; positive values represent capital surpluses

Including the additional WSF needs that were not part of the Legislative budget (dwell time improvements, transit-related improvements, etc.) would increase capital costs by $229 million. This would increase the net capital funding gap to $3.4 billion, and would cover the total amount of capital funding needed to meet all of the capital projects identified in this LRP. The methodology and assumptions used to develop the capital program revenues and expenditures are detailed in Appendix O.

## 17.3 Long-Term Funding Outlook

This document was put together to serve as a framework policy document that would guide future actions and decisions regarding ferry services and investments. The Legislature set clear direction for what the 16- and 22-year operating and capital commitments would encompass. However, the elements of this Plan are subject to further

review (many will require pre-design studies) and ultimately, funding availability.

### Additional Federal Support

A ferry system bill entitled The U.S. Ferry Systems Investment Act of 2009 was sponsored by Senator Murray and Congressman Larsen in late April of 2009. This bill would provide more than $1 billion to the nation's ferry systems between FY 2010 and FY 2015, at an annual investment level of $200 million per year. The funding would be divided into two parts. Half of the money would be distributed according to a formula that takes into account passenger and vehicle ridership and how many total miles the routes contain. The other half would be distributed at the discretion of the Secretary of Transportation using a competitive process. It is estimated that the State could receive about $40 million per year under the proposed formula.

### Washington State Transportation Commission Funding Study

During the 2007 Legislative session, as part of EHSB 1094, the Washington State Transportation Commission (WSTC) was directed to conduct a study to identify and evaluate long-term funding alternatives for WSF. The study was coordinated with a number of concurrent studies mandated by EHSB 2358.

The analysis was focused on identifying WSF's long-term funding challenges and how to address those challenges with state, regional, or local funding options. The report presented alternative funding scenarios for WSF, citing that operating and capital shortfalls could be funded by a combination of state and local taxes, fare increases, and/or other operating income (advertising).

The WSTC delivered this report on major challenges faced by WSF on March 2, 2009. Neither the Governor nor the Legislature has yet acted on these recommendations. However, the Joint Transportation Committee is conducting a comprehensive analysis of mid-term and long-term funding mechanisms as part of its 2009 work plan which includes a review of all state transportation funding needs, including those identified for WSF.

The major findings and recommendations from the final WSTC study are summarized below.

- Increase fares and other operating revenues to close operating gap. Fare increases would need to be greater than 2.5% in order to close the operating gap. For example, the operating gap could be closed as early as 2014 with 6% annual fare increases, or by 2018 with annual fare increases of 4%.

Annual increases of 2.5% would occur in both scenarios following the breakeven year. Other methods of increasing operating revenues include:

  - o Reducing the impacts of fuel price volatility by implementing a fuel surcharge.
  - o Adding a super summer surcharge on single fare purchases during the busiest traffic months.
  - o Increasing ancillary revenues such as advertising and naming rights, and expanding on-board and terminal concessions.

- Use fare increases in lieu of local tax funding, while leaving the option open for the future. This would include creating government structures (Transportation Benefit District, Ferry District) that could be employed to raise funds through regional taxes such as the property tax. Fare increases would still be a simpler and more viable option, because of the substantial effort and cost required to obtain local funding.
- Fund long-term capital needs with vehicle-based excise or similar tax. Utilizing a reliable and stable tax source, such as vehicle excise tax, over the long-term is more feasible than using the motor vehicle fuel tax. Without new revenue for capital, administrative transfers would need to increase to fund the capital needs of this Plan. An MVET or similar tax would allow for the elimination of these transfers.
- Set state tax rate to allow elimination of administrative transfers. The amount of MVET should be set at an amount that not only eliminates the funding gaps of WSF, but also eliminates the administrative transfers. This MVET would likely be in the range of 0.15% - 0.22%.

The long-term funding challenges that WSF is facing will need to be addressed as part of future budget decisions.

# 18. OTHER ISSUES AND RISKS

## 18.1 Environmental Considerations and Regulatory Risks

WSDOT conducted an environmental evaluation (Appendix P) to analyze potential environmental impacts from, and the ability to meet environmental regulatory obligations through implementation of the long range plan. For the analysis, the study area was defined as the Washington State Ferries (WSF) system in Puget Sound which includes the 19 terminal locations and the maintenance facility, and

serves the communities of Kitsap, King, Island, Pierce, Skagit and San Juan Counties.

This environmental evaluation does not provide any National Environmental Policy Act (NEPA) or State Environmental Policy Act (SEPA) level analysis, but rather provides a qualitative assessment of the major environmental elements that could pose substantial issues on future development of any of the ferry terminals and implementation of operational solutions.

### Land Use

Strategies that have been developed in the Long-range Plan are not expected to change the land uses of any of the ferry communities with exception of Mukilteo where the terminal may be relocated. At Mukilteo, if feasible, the terminal will be relocated to an abandoned industrial property to allow an active, urban water front for commercial uses. This change is consistent with the city's comprehensive and land use plan.

### Air Quality

- Air quality improvements are anticipated in the communities near terminals where the proposed reservation system will be implemented. Emissions from passenger vehicles using the ferry system will be reduced by shortening the queues of idling vehicles.
- This plan delays the installation of transit-related improvements to the terminals until increased walk-on ridership is realized, and maintains the current cost pricing ratio between vehicles and passengers. The delay to terminal transit improvements, and not changing the pricing strategy, will likely delay the shift of ferry ridership from single occupancy vehicles to alternative modes of transit. This assumption is based on the ease of use, accessibility and cost factors that affect transportation choices. If this assumption is accurate, then it may be difficult for the for the ferry system to contribute to statutory per capita vehicle miles traveled and greenhouse gas reduction targets. Delaying a greater shift to transit will also delay the realization of potential reductions in criteria pollutants associated with transit use.
- The proposed demand management strategies and transit improvements are expected to create greater efficiency in system. This would minimize the number of vessels needed to meet projected demand, and therefore help minimize air emissions related meeting the projected demand. The proposed new vessels are designed to maximize fuel efficiency and will meet new EPA standards for emissions control. The replacement of the fleet's oldest vessels with vessels that meet current EPA

standards is expected to reduce emissions of criteria pollutants from the fleet.

- Although total greenhouse gas emissions are expected to decrease with this plan, given currently identified fuel use reduction strategies, it is uncertain and perhaps unlikely that WSDOT will be able to meet statutory greenhouse gas reduction targets without significant changes in fuel, propulsion technology and/or operations of the vessels.

### Noise

- Terminal preservation and improvements identified in the plan may have noise related impacts during construction. During project development and implementation, it is WSDOT's practice to work with the applicable cities and counties to minimize noise related construction impacts, as is practicable, and ensure compliance with local ordinances.
- Implementation of the plan is unlikely to cause noticeable changes to the noise levels associated with system operations. WSDOT studies indicate that the loudest source of noise at the terminals during operations is from passenger vehicle loading and unloading.

### Water Quality

- Implementation of the proposed reservation system is expected to minimize, and in some cases reduce, the amount of vehicle holding area needed at the terminals. Consequently, this is expected to avoid the need for addressing additional pollution loading surfaces in the system.
- Because the mechanism for funding stormwater system upgrades is currently dependent on the development and implementation of terminal improvement projects and proposed terminal improvements have been postponed or delayed within the final plan, upgrades to the stormwater treatment at the terminals will also be postponed or delayed. The result is that stormwater runoff from many of the terminals will continue to be untreated. In addition, the plan does not appear to address resources that will be required to comply with new stormwater permit requirements.

### Ecosystem and Species

- The Puget Sound ecosystem supports a diversity of habitats and species, many of which are found or could occur near ferry terminals. Protected habitats and species include eelgrass beds, Puget Sound Chinook salmon, Hood Canal summer chum salmon, Steelhead, Humpback whale, Killer whale, Leatherback Sea turtles, Steller sea lion, Bull trout, and Marbled murrelet.

- Aspects of the Puget Sound Ecosystem are degraded including surface water quality from pollutants carried in stormwater runoff, regional air quality from pollutants partially generated by the transportation sector, and fish and wildlife species populations, as is evident in the listing of multiple species under the Endangered Species Act.
- Typical impacts from improvements to terminals include shading from overwater structures, underwater noise impacts from steel pile driving, and changes to the harbor line. The Mukilteo Multi-Modal project, which would relocate the terminal to a different location, is expected to impact the habitat of the near-shore environment at the new terminal location.
- WSDOT follows a tiered approach for minimizing adverse impacts to protected wildlife, fish and their habitats. Through project design, construction scheduling and implementation planning, WSDOT first seeks to avoid potential adverse impacts to protected species and their habitat. If impacts are unavoidable, WSDOT works to minimize the magnitude and duration of the impacts to the extent feasible. Remaining impacts that are considered significant and adverse are mitigated to the extent feasible and in accordance with local, state and federal regulations.
- WSDOT conducts in-water pile driving to maintain the safety of key facilities at ferry terminals. The department is performing independent research and working jointly with other states and resource agencies to identify how noise works underwater, how fish and diving birds are affected by the noise, and what mitigation, if any, may be warranted.
- WSDOT also analyzes wake-wash and propeller scour of new vessels to identify and minimize impacts to the shore and near-shore habitat. Maximum vessels speeds are identified for transit near shorelines identified as sensitive to erosion.
- Engine noise is minimized through vibration dampening engine mounts and tighter clearances in gearbox assemblies. In addition, propeller noise is minimized through cavitation-minimizing propeller design.
- Furthermore, to avoid adverse impacts to marine mammals, the vessels are operated in accordance with National Oceanic and Atmospheric Administration's "Be Whale Wise" guidelines.

### Earth

- Terminals already identified as having erosion related problems include Fauntleroy (erosion) and Southworth (bluff erosion).

Terminals that may be susceptible to seawall problems from storm surges include Mukilteo, Seattle and Fauntleroy.

- The current DNR maps indicate that the several WSF terminals are within a moderate to high liquefaction susceptibility areas. And, based on the age of the facilities, some of the ferry terminal structures do not meet current design standards for earthquake or liquefaction.
- The susceptibility of the area to erosion, storm surge damage, liquefaction and sub-standard design of existing structures will have to be taken into consideration during development of any terminal improvement project. Soils that are susceptible to liquefaction may require retrofit measures such as ground stabilization, selection of deeper foundations, different types of foundations, and/or selection of appropriate structural systems to accommodate anticipated displacements.

### Traffic/Congestion

- The proposed reservation system will reduce ferry-related vehicles queuing traffic impacts on the local communities. The increases in vessel vehicle capacity is expected to increase peak off-load traffic on some routes. If off-load traffic is projected to increase significantly over historical off-load levels, WSDOT will assess and mitigate as appropriate.

### Tribal Resources and Treaty Rights

- The relocation of a terminal, as is proposed for Mukilteo, has the potential to impact tribal Treaty Usual and Accustomed fishing grounds. If the project is found to impact the Treat Usual and Accustomed fishing grounds then WSDOT will be required to mitigate the impacts. This may take the form of a mitigated settlement to be negotiated with treaty tribe(s).

### Historic and Cultural Resources

- Based on a recent WSDOT inventory of the ferry system terminals the proposed terminal projects are not anticipated to have any impact on historical resources.
- Project level cultural resource surveys completed at some of the terminals show there might be the presence of archaeological resources. Consultations with the Washington Department of Archaeology and Historic Places and Puget Sound Tribes have occurred on potential known sites. Further surveys and consultation will be warranted for any proposed project at potential sites.
- Implementation of a reservation system will minimize the terminal area “foot-print” requirement, on land and over water, of the ferry

system. This affects the quantity and scale of terminal improvements projected for the system. The result is a minimization of likely impacts to cultural resources, and reduction in the potential for these impacts when compared with previous long range system plans.

### Park and Recreational Lands

- Some of the ferry terminals are located in or adjacent to parks and recreation lands, and therefore improvement projects at the terminals could have the potential to impact these areas. Actual impacts to and mitigation for parks recreational lands will be evaluated at the individual project level.

### Department of Natural Resources Lands

- Implementation of the plan may require harbor line revisions at terminals where preservation or capital improvements are programmed. Identification of needed harbor line revisions will occur at the individual project level.

## 18.2 Ridership and Demand Risk

There is considerable risk in the Plan's assumed growth in ridership. The interlocking reasons for the declines in ridership from 2000 through today (fare increases, increased telecommuting, rising gasoline prices, economic conditions, changing demographics, etc.) are not well understood.

- The baseline ridership forecast assumes an approximately 37% increase in ridership over the next 22 years.
- If baseline ridership is lower, then demand pressure to improve services will be reduced. Also, lower ridership would mean lower fare revenues, which would increase the operating funding gap. For example, the impact of declining annual ridership by 0.5% over current projections would decrease farebox revenues by $290 million over 22 years. This implies that the operating gap would also increase by $290 million. Across the board annual fares would have to increase to 3.3% in order to return the operating gap back to its original level of $133 million. In this scenario of lower ridership and demand the ferry system would be in a position to reconsider the size of replacement vessels to address the lower ridership and decreased demand pressure.
- Conversely, if baseline ridership is higher, then demand pressure to improve services will increase and WSF would have to address this increased demand pressure.
- WSF plans to increase marketing efforts in order to mitigate some of these risks associated with decreasing ridership and demand.

### WSF Marketing Plan

As a way to mitigate some of the long-term ridership and demand risks faced by WSF, the Legislature provided $1.1 million to WSF to develop and implement an aggressive marketing strategy starting in the 2009-11 biennium.

- Changing demographics of WSF's service area also present a risk in predicting how ridership and demand will grow in the next 22-years. The ferry system is making strides in understanding its customers better and refining ridership forecasts. Although not perefect, utilizing exisiting projections from PSRC and OFM will assist the ferry system in predicting patterns in employment and population that affect ridership.

## 18.3 Cost and Inflation Risk

There is considerable risk in projecting cost changes over the 22-year time horizon. The greatest risk is using an inflation index that is too low, which would underestimate future costs. For example, inflationary pressures on salary and wages are different than those on construction costs of new vessels. The inflation indices used in constructing the Long-Range Plan reflect the current view of future prices. Any significant changes to these inflation assumptions would impact expenditures greatly, compounding year over year, exacerbating the funding challenge that is already a significant issue for WSF.

WSF has some ability to mitigate its operating risk through contract negotiations. However, the market dictates the price of goods for commodities such as fuel and labor and materials for capital projects. Even minor shifts, when compounded over time, make the existing funding problems much larger.

- For example, the capital program (and funding gap) would increase by more than $653 million if the indexes used to inflate capital costs increased annually by 1%. In addressing this inflation risk, especially as it pertains to construction, more money will be needed, or WSF will need to build less.
- In a scenario where all non-fuel operating costs were to increase annually by 1% would increase the operating gap by about $150 million. Additional operating revenues would be needed to offset the increased costs, primarily from annual fare increases.

### Fuel Price Volatility

There are also sizeable risks in the assumed growth in fuel prices. Diesel fuel costs in the last year have fluctuated between approximately $1.25 and $4.62 per gallon. Exhibit 35 below is based on Global Insights projections for the last year, and illustrates the risk that fuel prices pose to the operating program.

A fuel surcharge would significantly eliminate the budget risk of fuel cost variability by shifting this risk to the customer, who would face higher fares in the event of significantly higher fuel costs. The surcharge concept is that all fares would be adjusted to collect the

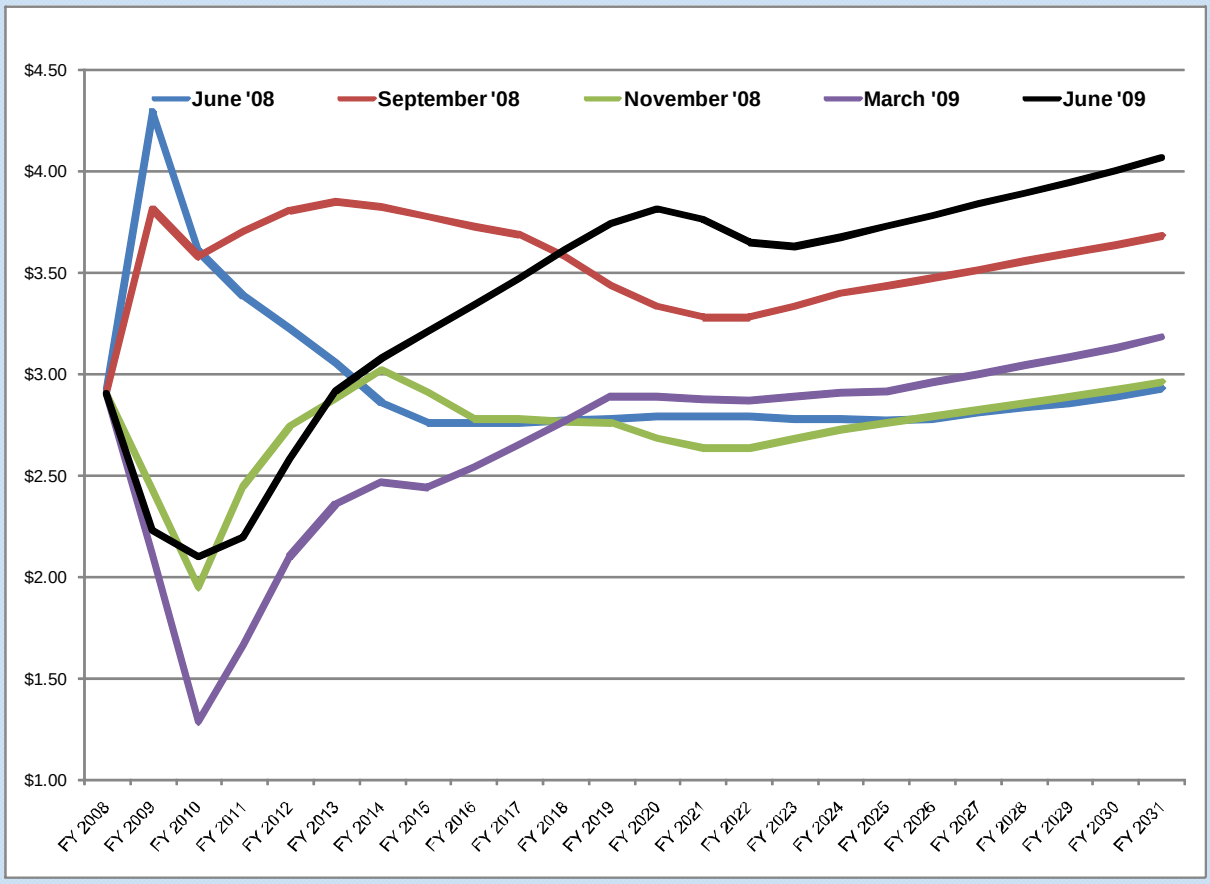
additional revenue needed to recover the cost of fuel beyond the "historical base cost of fuel." Legislature agreed with the fuel surcharge concept, but provided no formal decision on implementing a fuel surcharge that would adjust fares up and down for fluctuations in fuel prices. If the fuel surcharge were to not be applied, the higher price of fuel would exacerbate the operating funding challenges that are already a significant issue for WSF.

- The impact of a 1% annual increase to the diesel price per gallon would increase operating costs by more than $150 million over 22 years.
- The fare surcharge would cover the additional increase in operating costs.

### *Fuel Price Risk*

The implementation of a fare charge to recover 100% of budgeted fuel costs is designed to negate any fuel price impacts to the operating funding gap. If fuel price projections were to become higher, the fuel charge would adjust to recover the higher total fuel cost. Because of this higher fuel charge, total fare prices would also increase. The chart below illustrates the potential variability in fuel price per gallon and the difficulty in accurately predicting future fuel costs.

**Exhibit 34**
**Comparison of Recent Fuel Price Forecast History**



## 18.4 Fleet Age and Service Reliability

WSF's fleet is among the oldest of any major ferry operator, with four vessels retired on an emergency basis in 2007. WSF is also faced with a significant level of capital investment over the next 22 years, most of which is vessel replacement. Recognizing that ferry vessels are 60-year investments, the type and timing of replacements becomes an extremely important decision. The service reliability of the fleet is directly correlated to the age of the fleet. By extending the life of its oldest vessels beyond their retirement dates, WSF would make itself vulnerable to events that would drive up maintenance costs and out-of-service time. Replacing vessels at their retirement dates and having an emergency standby vessel are both ways that WSF plans to mitigate these risks.

The replacement of vessels is not an isolated problem within the 22-year time horizon. Much of the existing fleet is scheduled for retirement within ten years of 2031. The retirement schedule just beyond the 22-year Long-Range Plan, up to 2042, includes:

- Hyak 2032
- Two Jumbo Mark I vessels to be retired in 2033;
- The first Issaquah class vessel to be retired in 2039;
- Two additional Issaquah class vessels (Kitsap and Kittitas) retired in 2040;
- Final two Issaquah class vessels (Cathlamet and Chelan) retired in 2041; and
- Sealth retired in 2042.

## 18.5 LOS Standards

The proposed new LOS standards presented earlier in this Plan were developed with the same ridership funding assumptions used for other elements of the Plan. Assuming ridership and funding expectations are met, WSF foresees that all of its routes would be in compliance with the new proposed LOS standards throughout the planning horizon.

However, depending upon actual ridership changes and capital funding availability for the vessel procurement plan, WSF may be presented with a situation where the proposed new LOS standards are not being met on one or more routes.

In this situation, WSF would need to evaluate the best feasible course of action and choose one or a combination of the following options:

- Employ additional adaptive management strategies;
- Invest in capital assets to increase capacity;
- Allow degradation in LOS provided and update standards to reflect this.

As the Plan describes in previsous sections, LOS is just one element of a broader decision-making process. WSF recognizes that allowing a degradation in LOS has a negative impact on communities served by the affected routes. Decision-making around affected routes would consider fuding available at the time and engage the affected customers and communities.

With the exception of the Mukilteo-Clinton route, there is no Growth Management Act or regulatory issue triggered by non-compliance with LOS. WSF will continually update its forecasts of LOS performance based on ridership and other relevant information. If a route is projected to fall out of compliance with LOS standards, WSF still take steps to engage stakeholders to address the situation. In the case of Mukilteo-Clinton, WSF will work closely with the County to ensure that local land use and transportation planning goals are being met.

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX A
## SUMMARY OF LEGISLATIVE REQUIREMENTS

# SUMMARY OF LEGISLATIVE REQUIREMENTS

| | ESHB 2358 | SSB 6932 | Budget Proviso | Where to Find/Response |
|---|---|---|---|---|
| **Ridership** | | | • WSF must recast and reconcile ridership demand forecasts (section 225 (8)(b)).<br>• JTC receipt of forecast (section 205 (1)(b)(i)). | Section 7 in the Final Plan |
| **Customer Survey** | Commission must, with involvement of WSF, conduct a survey of users (section 3). Survey must:<br>• Include info on recreational users, walk-on and vehicle customers, freight, and reactions to possible operational strategies and pricing policies<br>• Commission must provide opportunity for FAC input.<br>• Must be updated at least every two years | | • JTC participation in, and review of, the survey (sections 206(1) and 205(1)(a)(i)). | Section 6.1 in the Final Plan |
| **Level of Service Standard** | When setting level of service standard (currently boat waits), WSF may adjust for seasons (section 1). | | • WSF to re-establish vehicle level of service standards and evaluate if boat wait is the right measure (section 228 (8)(a)(ii)).<br>• JTC participation in, and evaluation of, the re-establishment of level of service standards (section 205 (1)(a)(ii)). | Sections 8, 9 and 10 in the Final Plan |
| **Service Levels** | (section 8)<br>• WSF must get public input and receive legislative approval before adding/deleting a route.<br>• WSF must get public input and consult with affected ferry users before making a substantial change to service levels. | | | Sections 5.1, 5.2, and 15.1 in the Final Plan |

| | ESHB 2358 | SSB 6932 | Budget Proviso | Where to Find/Response |
|---|---|---|---|---|
| **Fares and Pricing Policies** | (section 5 and 6)<br>• WSF continues to review fares annually. Commission continues to approve fares by rule. Fare schedule adoption changed from April to September 1, effective 2008.<br>• Annual review must include pricing policies.<br>• Starting in 2008, reviews must:<br>o Generate the amount of revenue required by the transportation budget.<br>o Consider options for using pricing to increase off-peak ridership and level peak vehicle demand.<br>o Recognize each travel shed is unique.<br>o Consider impacts on users, capacity, and local communities.<br>o Keep fares as simple as possible.<br>o Use data from a current user survey.<br>o Be developed with input from affected users by public hearing and by reviews with FACs.<br>• Fares may not be raised until the fare rules contain pricing policies, or September 1, 2009, whichever is later.<br>• WSF director continues to have authority to use promotional (discounted) fares.<br>• If operation revenues are used to support capital, must be specially identified in fares. | | • WSF to develop pricing policy proposals and evaluate the one-way fare policy in effect on some routes (section 225 (8)(a)(iii)).<br>• JTC participation in, and review of, the development of pricing policies (section 205 (1)(a)(iii)). | Section 14 of the Final Plan and Appendices K and L. |

| | ESHB 2358 | SSB 6932 | Budget Proviso | Where to Find/Response |
|---|---|---|---|---|
| **Operational Strategies** | WSF must develop, and the Commission must review, operational strategies that (section 5):<br>• Use data from a current user survey.<br>• Recognize each travel shed is unique.<br>• Are consistent with the vehicle level of service standards.<br>• Use a life cycle cost analysis to find best balance between capital and operating investments.<br>• Use methods of collecting fares that maximize efficiency and achieve revenue control.<br>• Are re-valuated periodically, at least before a new capital plan is developed.<br>• Consider the following:<br>o Options for leveling vehicle peak demand and increasing off-peak ridership.<br>o Feasibility of reservation systems.<br>o Ways to shift vehicle traffic to other modes.<br>o Dock operation and queuing efficiencies.<br>o Costs/benefits of remote holding versus over-water.<br>o Methods of reorganizing holding areas to maximize space available for customer vehicles.<br>o Schedule modifications.<br>o Efficiencies in exit queuing and metering.<br>o Interoperability with other transportation services. | | • JTC participation in, and review of, the initial development of operational strategies (section 205 (1)(a)(iv)). | Sections 11, 12, 13, 15.1, and 17.1 of the Final Plan, and Appendices H and J. |

| | ESHB 2358 | SSB 6932 | Budget Proviso | Where to Find/Response |
|---|---|---|---|---|
| **Life Cycle Cost Model (LCCM)** | WSF must maintain a life cycle cost model that (section 10):<br>• Is used in developing preservation funding requests.<br>• Uses available industry standards or department-adopted standards when standard life cycles are not available.<br>• Is updated when inspections are made to reflect asset condition.<br>• Does not include systems that aren't replaced on a standard life cycle or that are not yet built.<br>• Is updated at least every three years. | The life cycle cost model will (section 4):<br>• Be used in estimating future terminal and vessel needs.<br>• Be the basis for developing the budget request for terminal and vessel preservation funding. | • WSF to update LCCM no later than August 1, 2007 (section 225 (8)(c)).<br>• JTC to review updated LCCM (section 205 (1)(b)(ii)).<br>• JLARC to ensure LCCM complies with requirements in bill (section 108 (2)). | Section 3.3 of the Final Plan |
| **Terminal Design Standards** | WSF must develop terminal design standards (section 12) that:<br>• Adhere to vehicle level of service standards.<br>• Adhere to operational and pricing strategies.<br>• Find the most efficient balance between capital and operating. | | • JTC participation in, and review of, terminal design standards (section 205 (1)(a)(v)). | Section 3.3 of the Final Plan and Appendix B |
| **Capital Expenditures** | • Capital definitions must conform to OFM definitions (section 3)<br>• Systemwide costs to be allocated to projects (section 9).<br>• Preservation funding request may only be for items in the LCCM (section 11).<br>• JLARC to review implementation of cost allocation methodology, and assignment of preservation and improvement costs for FY 09 (section 15) | (section 7)<br>• Appropriations made for WSF capital program may not be used for maintenance.<br>• Appropriations made for preservation projects may only be spent on preservation<br>• Systemwide capital program costs will be allocated to specific capital projects.<br>• The vessel emergency repair budget may not be used for planned maintenance and inspection of inactive vessels. | • WSF to develop cost allocation methodology to conform to bill's definitions and direction on expenditures (section 225 (8)(d)).<br>• JTC to review the proposed cost allocation methodology (section 205 (1)(b)(iv)).<br>• JLARC to review assignment of preservation costs for FY 08 (section 108 (1)). | Sections 15.2 and 17.2 of the Final Plan |

| | ESHB 2358 | SSB 6932 | Budget Proviso | Where to Find/Response |
|---|---|---|---|---|
| **Pre Design Study** | • Requests for preservation over $5 M must be submitted with a pre-design study (section 11).<br>• Requests for terminal improvement design or construction must be submitted with a pre-design study that (section 14):<br>o Meets OFM requirements.<br>o Identifies basic and ancillary elements and their costs.<br>o Identifies local requested and multimodal elements, their costs, and the proposed funding source.<br>o Identifies additional elements to provide ancillary revenue and customer comforts.<br>o Included construction phasing options consistent with forecasted ridership.<br>o Identifies all contingency amounts. | • When planning for new vessel acquisitions the long-term vessel operating costs and related fuel efficiency and staffing (section 6). | | Sections 11, 15.2, and 17.2 of the Final Plan |
| **Long Range Capital Planning** | Capital plan must adhere to (section 13):<br>• Current ridership demand forecast.<br>• Vehicle level of service standards.<br>• Operational strategies.<br>• Terminal design standards. | • Capital plan must be reviewed by the commission, and reported to the transportation committees of the legislature (section 1).<br>Capital plan must include the following (section 3):<br>• A current vessel preservation plan.<br>• A current systemwide vessel rebuild and replacement plan.<br>• A current vessel deployment plan.<br>• A current terminal preservation plan. | • JTC participation in, and review of, long range capital plan (section 205 (1)(a)(vi)).<br>• JTC to make recommendation regarding the most efficient timing and sizing of future vessel acquisitions beyond those currently authorized by legislation. | Sections 15.2 and 17.2 of the Final Plan |

| | ESHB 2358 | SSB 6932 | Budget Proviso | Where to Find/Response |
|---|---|---|---|---|
| **Long-Term Financing** | | | • Commission to conduct long-term financing alternative study (section 206(2)).<br>• JTC to make recommendations regarding capital financing strategies for consideration in the 2009 session (section 205 (1)(c)(ii)). | Sections 3 and 17.3 of the Final Plan and Appendix O |
| **Other JTC Review** | | | • JTC to review administrative operating costs, nonlabor and nonfuel operating costs, Eagle Harbor maintenance program and maintenance costs, administrative and systemwide capital costs, and vessel preservation costs (section 205 (b)(iii)). | Sections 2.2, 3.3, 4.1,, and 15.2 of the Final Plan and Appendix C |
| **Vessel Rebuild and Replacement Plan** | | (section 2)<br>WSF will develop and maintain a vessel rebuild and replacement plan, that includes:<br>• Retirement dates for all vessels.<br>• Projected rebuild dates for all vessels.<br>• Vessel replacement timelines, including business decisions, design, procurements, and construction.<br>• Summary of the condition of all vessels, including active and inactive. | | Sections 15.2 and 17.2 of the Final Plan |

| | ESHB 2358 | SSB 6932 | Budget Proviso | Where to Find/Response |
|---|---|---|---|---|
| **Vessel Maintenance and Preservation Plan** | | (section 5)<br>WSF will develop and maintain a plan that:<br>• Includes a bilge and void maintenance program.<br>• Includes a visual inspection/audio gauging steel preservation program<br>• Uses a lowest life-cycle cost method.<br>• Maximizes cost efficiency by:<br>o Reducing planned out-of-service time.<br>o Striving to eliminate planned peak season out-of-service periods. | | Sections 15 and 16 of the Final Plan |

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX B
## TERMINAL DESIGN STANDARDS

# TERMINAL DESIGN STANDARDS

## INTRODUCTION

Under ESHB 2358, the Washington State Department of Transportation (WSDOT) Ferries Division was tasked with developing terminal design standards that choose the most efficient balance between capital and operating investments, and that adhere to operational strategies and vehicle level of service standards.

The terminal design standards were developed by the Terminal Engineering Department of the Ferries Division, in collaboration with other departments within the agency. In keeping with the intent of ESHB 2358, the standards provide comprehensive guidelines for the design of ferry terminal facilities, which optimize the capital and operating investments while continuing to support the overall mission of the agency to provide a safe, secure, efficient, reliable, and environmentally sound marine transportation for people and goods throughout Puget Sound.

In order to provide context to the presentation of the terminal design standards, a brief description of the functional make-up of a ferry terminal and how it operates is first provided.

# FUNCTIONAL ELEMENTS OF A FERRY TERMINAL

A typical ferry terminal is composed of several elements, each with a distinct function. Following is a brief description of these various elements and the function they serve.

## Terminal Buildings

The terminal buildings accommodate passenger and staff areas. The passenger terminal typically includes the waiting rooms (indoor and outdoor), the ticketing area, restrooms, and other amenities. Some terminals also include an overhead loading structure. The staff areas include the various office spaces and equipment rooms.

## Vehicle Holding and Support Areas

The vehicle holding area is where ticketed vehicles are staged while waiting to board the ferry. It also includes circulation and traffic lanes. Depending on the location, the holding can either be on-shore, off-shore, or a combination of the two. The vehicle holding support areas include the toll plaza, restrooms, and other amenities.

## Terminal Outbuildings

The terminal outbuildings are climate controlled structures which house electrical, IT and security equipments, as well as supply and vendor storage.

## General Terminal Areas

The general terminal areas include electrical and mechanical equipment, such as stand-by generators, transformers, sewer lift stations, and waste management equipment.

## Terminal Enclosures

The terminal enclosures are unheated spaces used for storage of equipment, such as oil booms, oil spill kits, and hazardous material kits.

## Parking

Parking spaces are provided for the Vessel and Terminal Security (VATS) team, and depending on the terminal, employees and vendors. Employee parking is currently a Union contractual issue.

## Customer Signage/Way Finding

This includes all signage elements, such as sign bridges, variable message signs, entrance/exit and directional signs, and Highway Advisory Radio (HAR).

## OPERATIONAL CRITERIA

The operation of a ferry terminal is a complex process, influenced by many factors, each with a varying degree of predictability. The design of a successful and efficient facility will result in an optimal balance between capital investments and operational costs. One of the parameters used in measuring a terminal's ability to operate efficiently is the *dwell time*.

Dwell time can be described as the time during which the vessel is positioned at the ferry dock. A typical sequence of events occurring during the dwell time can be summarized as follows:

- Vessel landing is made.
- Vessel is secured (2 minutes is provided for this).
- Traffic arm is raised.
- Passengers are directed to disembark to shore side passenger exit way (if OHL is provided the passenger disembarkation occurs simultaneously with the sequence described below).
- Bicycles are directed to disembark with separation*.
- Motorcycles are directed to disembark with separation*.
- Vehicles are directed to disembark in same order as they were staged with oversized vehicles disembarking in a single lane.
- At completion of offload the traffic gate is lowered and vessel crews conduct security sweeps of all decks and spaces.
- At completion of security sweep the vessel crew mans stations in preparation for loading.
- Vessel crew communicates to terminal staff to begin loading.
- Passengers are directed to embark onto the vessel via the vehicle deck (if OHL is provided the passenger embarkation occurs simultaneously with the sequence described below).
- Bicycles are directed to board with separation*.
- Motorcycles are directed to board with separation*.
- Vehicles are directed to board based on a first come first served basis with oversized vehicles embarking in a single lane.
- Prior to completing loading for a "full boat" direction is given for single lane loading the last few vehicles as available deck space is reduced from depths to widths.
- Upon completion of loading vehicles:
    - Remaining bicycles are directed to board with separation*.
    - Remaining motorcycles are directed to board with separation*.
    - Remaining passengers are directed to board onto the vessel via the vehicle deck.

- Upon completion of loading procedures the traffic gate is lowered and crew is directed to make ready to depart (2 minutes is provided for this).
- Vessel departs.

  *Separation: to ensure safe operation, each mode is handled separately. The next mode is not released until the previous mode has cleared the area (the area varies with each terminal).

While the dwell time is in part governed by the vessel size and capacity, the design of the terminal can have a significant impact on this parameter. Lack of vehicle holding space, remote or distant holding of ferry traffic, single lane load/unload, toll booth configuration, and transit connections are all factors that can increase the dwell time.

It is also important to note that the area surrounding a terminal can also significantly impact the dwell time because of the presence of railroad crossings, traffic lights and intersections, pedestrian street crossings, curves on adjacent roadways, and reduced sight distance.

## TERMINAL DESIGN STANDARDS

Terminal design standards were developed to optimize the balance between capital and operating investments, and to support adopted operational strategies and vehicle level of service standards.

The development of the design standards required an in-depth evaluation of internal engineering practices, a detailed analysis of the operational requirements that guide the design of terminal facilities, and a comparison with other ferry agencies design standards.

### Terminal Building

Separate terminal building standards were developed for the passenger and staff areas.

### Passenger areas

The sizing of passenger waiting areas for walk-on customers and drive-on customers wishing to leave their vehicles is based on three parameters: pedestrian level of service, type of ridership, and target date.

Pedestrian level of service (LOS): the passenger waiting areas are designed to Level of Service B, as defined in the *Transit Capacity and Quality of Service Manual - TCRP Report 100*, published by the Federal Transit Administration. At Level of Service B, "standing and partially restricted circulation to avoid disturbing others within the queue is possible". It provides 10 to 13 square feet per person.

*"Levels of service for queuing areas are based on available standing space, perceived comfort and safety, and the ability to maneuver from one location to another. Since pedestrian LOS is based on the amount of pedestrian space available, the LOS thresholds can be used to specify desirable design features such as platform size, number and width of stairs, corridor width, and so forth" (TCRP 100).*

Type of Ridership: while each ferry route has its unique characteristics, it is possible for the purpose of standardization to divide the routes in three categories: commuter routes, recreational routes, and mixed routes (combinations of the two). Tailoring the design of the passenger areas to each type of ridership is critical to achieving the most efficient balance between capital and operating investments.

### Commuter Route

The Bainbridge Island to Seattle route is a good example of a route considered to be a "commuter route". These routes are generally busy year-round and exhibit minimal increases in traffic flow during the summer months. Commuters have a very different way of accessing the ferry terminal compared to recreational users. For example, the majority of commuters at Bainbridge Island, over 55%, tend to arrive within the last 10 minutes before a boat's scheduled departure.

### Recreational Route

At the other end of the spectrum is the recreational route, such as the Anacortes-San Juan Islands route. At Anacortes, less than 13% of walk-on riders arrive within the last 10 minutes. Because of the less frequent service to these remote islands (boats tend to depart every 2 to 3 hours) riders tend to arrive 1 to 3 hours prior to departure in the summer months.

### Mixed Route

The other routes serve a broader mix of customers. The design of a mixed use terminal requires an approach that combines commuter and recreational terminal elements.

Once a route has been categorized, the design of the passenger areas will follow the following criteria:

#### *Walk-on Passengers*

100% of passengers arriving 0-10 minutes prior to departure would not be provided inside standing/waiting space, they'd simply pass right through and board the vessel.

100% of passengers arriving 10-20 minutes prior to departure would be provided inside waiting space, as these customers would be queuing to board the vessel; approximately 80% standing, 10% sitting, and 10% sitting at tables.

50% of passengers arriving 20-30 minutes prior to departure would be provided inside waiting space; approximately 45% standing, 45% sitting, and 10% sitting at tables.

50% of passengers arriving 30-45 minutes prior to departure would be provided inside waiting space; approximately 55% standing, 25% sitting, and 20% sitting at tables.

50% of passengers arriving 45 minutes or more prior to departure would be provided inside waiting space; approximately 10% standing, 60% sitting, and 30% sitting at tables.

### *Drive-on Passengers*

All drive-on passengers for Anacortes must arrive 60 minutes prior to departure. Of those drive-on customers, 50% would be provided space inside the terminal and use the facility; approximately 20% standing, 20% sitting, and 60% sitting at tables.

The remaining 50% would not be provided terminal building space.

For terminals with significant numbers of recreational users, such as Anacortes, the passenger areas will be divided as follows: 55% heated/air-conditioned space, 25% covered space (non-heated) and 20% open space (non-covered). For terminals with significant numbers of commuters, such as Bainbridge Island, the passenger areas will be divided as follows: 88% heated/air-conditioned space, 6% covered space (non-heated) and 6% open space (non-covered).

Target date: the standard design of passenger areas will be based on the "85th percentile" method. The benefit of this method is that facilities are not oversized for the great majority of the year. In the case of the "85th percentile" (or the 55th busiest day) the facility will be adequately designed for 310 days of the year. However, it is important to note that the facility will be over capacity according to the design for 55 days of the year.

## Staff areas

The development of design standards for staff areas required that operational office space requirements for each terminal be quantified and compared to *WSDOT Maintenance and Operations, Facilities Office Master Planning Template, Appendix B*. The template was created by the General Administration (GA) and has been used by WSDOT to determine uniform office space requirements throughout the organization. The template is based on an employee's position or level within the organization.

While the GA template includes most of the positions within the Ferries Division Headquarters, its guidelines do not easily translate to the terminal staff areas such as auto toll booths, seller safe rooms and supervisor office space. As a result, the design standards for staff areas are based on the GA guidelines whenever possible, but also include revised office sizes for unique ferry terminal positions.

## Vehicle Holding

The design standard for the sizing of vehicle holding areas is based on the assumption that a reservation system will be implemented. Under this assumption, the terminal will need to hold the full capacity of the largest vessel assigned to the route. Depending on the terminal, space also needs to be provided to accommodate HOV, van and car pool programs, bicycles, motorcycles, and oversized vehicles. A system-wide detailed evaluation of the minimal vehicle holding requirements is included at the end of this document.

Another component of the vehicle holding is the toll plaza. The standard number of toll booths at a terminal is based on the vessel dwell time and sale transaction processing rate. With the implementation of a reservation system, the use of transponder technology will become standard at terminals on commuter routes. One transponder lane per terminal will

increase transaction/processing time and customer convenience, as well as reduce revenue exposure.

## Customer Information

The successful implementation of a reservation system relies on improved real-time customer information. The terminal design standards include the use of technology to inform the public of vessel capacity status and propose alternate routes. Examples of technology to be implemented include Variable Message Signs (VMS) and Highway Advisory Radios (HAR) (WSDOT Design Manual Chapter 860).

Washington State Department of Transportation

# POSTCARD COMMENTS REGARDING SAN JUAN INTER-ISLAND ROUTE

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

WE ♥ OUR INTERISLAND FERRY!

PLACE STAMP HERE

TO WHOM IT MAY CONCERN,
THE INTERISLAND FERRY ROUTE IS A NECCESARY PART OF LIVING HERE IN THE SAN JUANS, MANY PEOPLE USE THIS FERRY ROUTE TO COMMUTE TO WORK & TO & FROM SCHOOL. TO LOWER THE LEVEL OF SERVICE MORE THAN IT ALREADY HAS BEEN WILL HURT THE PEOPLE WHO USE THIS ROUTE TO & FROM WORK. IT WILL ALSO LOWER COMMERCE BETWEEN THE ISLANDS THUS HURTING US ECONOMICALLY, AS TOURISTS ALSO USE ~~THIS~~ FERRY ROUTE TO EXPLORE THE SAN JUANS, IF IT WERE REMOVED IT WOULD HURT OUR ISLANDS ECONOMICALLY.
WE NEED OUR INTERISLAND FERRY ROUTE!

**ADDRESS**

P.S. AS IT STANDS MY HUSBAND HAS TO STAY ON LOPEZ 'TIL THE 9:10 FERRY HOME SINCE THE 7:20 HAS BEEN CUT FROM LOPEZ-ORCAS ON THE WINTER SCHEDULE.

HE LEAVES @ 7AM ARRIVES HOME AT 10:20 THAT MAKES FOR A LONG DAY.

SINCERELY,
ROBIN GAVRIEL
PO BOX 156
DEER HARBOR, WA 98243





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

YOU NEED TO START THINKING OUTSIDE THE BOX ON FERRY ISSUES. USE SMALLER FERRIES IN LOWER NEED TIMES
START SAVING FOR FERRY REPLACEMENT & REPAIRS – DON'T WAIT.
UNDERSTAND THE IMPACT ON LOCAL ECONOMIES YOU HAVE BY FILLING A VOID W/SERVICE & THEN YANKING THAT SERVICE OUT OF LINE. THINK DOMINOE'S THEORY.

**ADDRESS**

THE SAN JUAN ISLANDS ARE PART OF THE LARGER ATTRACTION FOR TOURISM IN WASHINGTON STATE. "THE JEWEL OF WA. ST." PEOPLE WHO COME HERE HAVE BEEN EDUCATED FOR YEARS THROUGH PUBLICITY. THEY EXPECT ACCESS TO THE SAN JUANS. THEY EXPECT ACCESS TO VICTORIA B.C. THROUGH THE SAN JUANS. WHAT LEVEL OF DISAPPOINTMENT STARTS TO EFFECT WA. ST. ECON.

I KNOW YOU WANT TO BE PROFITABLE – BUT ACTUALLY THAT IS A LESSER NEED IN RELATIONSHIP TO THE OVERALL EFFECT ON ST. ECON. LOCAL ECON. AND "LONG TERM" ECON RECOVERY.
WHAT DO WE LOOSE LATER BY CUTTING BACK NOW?. OUR LOCAL ECON IS ~~UNDERGOING~~ GREATLY BASED ON "Good" FERRY SERVICE.
JEFF PATTERSON ORCAS ISLAND.

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I STRONGLY OPPOSE THE REDUCTION OF FERRY SERVICE BETWEEN ANACORTES AND THE ISLANDS. ALSO THE REDUCTION OF SERVICE BETWEEN ISLANDS WILL MAKE A FURTHER HARDSHIP ON THE WORKING PEOPLE LIVING IN THE ISLANDS WHO NEED TO WORK ~~AT~~ AND SERVICE OTHER ISLANDS. CANCELLATION OF THE SUNDAY RUN IS SHORTSIGHTED.

I LIVE AND WORK ON ORCAS AND TRAVEL TO SMALL COPIZ-SAN JUAN FOR WORK AND SERVICE CALLS ON THOSE ISLANDS

MICHAEL DURLAND
BX 26 DEER HARBOR.

Michael Durland

ADDRESS





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I commute every day to work on the ferry if you cut service it will affect many Island jobs and may cause our shop to close or move! Don't cut service at commute times!

Keep our jobs!

ADDRESS

Russell Folkins
POB 401
Shaw Island
WA 98286

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Although I don't think that we should support the Sidney ferry we should use have a ferry reservation system so that there is enough ferry service when it is needed. We need to get rid of the Border Customs agents in Anacortes

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Katie Hover
Friday Harbor WA
98250



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Even though I make regular use of the inter-island boat, it obviously runs well below capacity late at night + weekends - save money there.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Dean Dougherty
136 Belle Ln
Olga WA
98279

Artist: Tom Sanislo — all rights reserved
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

We need our boat !!!
My job depends on it.
I wark on small shaw Island, which is made up of mostly retired people who need ferry service to get to doctors and school Childern who comute to school, and Many workers who go to the other Islands to their jobs. losing the Inter-Island Boat would mean many of us having to leave the Islands.

ADDRESS

Now is when we need our boat, when the whole economy is failing us we need Stability. You will be a big help if you allow us to continue to have the Interisland boat!!! What are taxes compared to our jobs! Besides we love our boat and its Crew. Jael C. Finney

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Hardy Schmidt. Dear Sirs!
I have an excavating business and an account with WSF. My business on Shaw is totally dependant on inter-island service between Orcas & Shaw. We have no quarry on shaw and every tablespoon of gravel for roads, driveways and building backfill & septic systems has to come from Orcas.

ADDRESS

Sincerely
Hardy Schmidt
Hardy Schmidt Exc. Inc.

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

AFTER LOOKING AT YOUR WEEKEND FERRY SCHEDUAL, IF YOU TRY ~~AND~~ TO PUT THAT ON A WEEK DAY, I WILL EITHER LOOSE MY JOB OR LOOSE, MY HOUSE, I'M WONDERING WHITCH ONE YOU WILL PAY FOR?

ROGER McGILVREY
FRI. HSB

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Washington State Ferry Service—
Please do not cut ferry service. I teach on Shaw Island but live on Orcas. I need my job & my ferry. Orcas is already under served

-thanks!

Jennifer Pratt

* had to work couldn't make the meeting!

ADDRESS

Jennifer Kitch
329 Dolphin Bay Rd
Eastsound, WA
98245

1+360-376-4466

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO whom it may Concern;
As a rider of the WA state ferries (2 days a week) I would be under a hardship to complete my studies. The ferries are our Public Transportation. We depend on them. I believe we need to Add rather than take away service. Thank you, Luann Pamatian



**ADDRESS**

Luann Pamatian
83 Oberon Lane
Eastsound, WA
98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

When you deliberate these ferry runs, please keep in mind that this is our highway - our government services are on one Island. Some of us commute as well - me being one.

Our economy is dependent on tourism - we need better service in Spring + Summer.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Cathy Ferver
324 Longwood Ln
PO Box 436
Eastsound Wa
98245

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

We so appreciate the ferry service we enjoy here in San Juan County. Please do not reduce the level of service — it is critical to our way of life here. The capital asset replacement issue must be addressed.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Dennie Carter
PO Box 776
Eastsound, WA
98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

PLEASE SAVE OUR FERRYS!

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

JOAN CARDENAS
P.O. BOX 1054
EASTSOUND WA
98245

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

To WA. ST. - Whom it May Concern,

Please DO NOT remove our ferries from service in the San Juans. The ferries are our roadway systems - not accessories, but necessities, esp. to our county seat, FRIDAY HARBOR.

Removing the inter-Island would be catastrophic for many who work & need to travel inter-Island. I am commuting to Skagit Valley Community College, San Juan Ctr. For this Quarter & Sundays need to come to San Juan Is., the Court House for many reasons. Without the Inter-Is. Ferry, I could never bring

Artist: Tom Sanislo — all rights reserved
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

My car & only 2 ferries Wed. run at all to FRL. Harbor. FRL. Harbor would die w/out our multi-Island support. Please don't! Economies wd. Blank.

The Sydney run is our only way to get to Vancouver Is. without much more mainland travel & expense. Again our Economies, Canada's & ours are inter-dependent. Please keep all ferries running.

Thank you! Deborah Dalmer
Please write back. We're friends here in

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

you guys are crazy to cut the service right Before the Olympics?

Artist: Tom Sanislo — all rights reserved
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Wayne Sorvedal
PO 97
Deer Harbor
WA

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I would like to See a permanent Schedule printed. All seasons could be Printed into one booklet and changed every 5 years I think that would save a lot of money and waste.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Kathy Foley
P.O. Box 521
[illegible]



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

Peja Schussler
Box 1797
E.S.

PLACE STAMP HERE

Since I am working + unable to attend this meeting I feel it necessary to write my comments.

Reducing any Ferry Service + raising rates is a hardship for the San Juans. These Ferry Routs are our Highways. We do Not have an option to drive to work or shopping or medical appointments. We have to take a Ferry. So please Consider that having affordable + decent schedules + options is a necessity not just something we can do or not do. These routes in the San Juans are possibly the only just "Highways" in the Puget Sound.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Artist: Tom Sanislo — all rights reserved
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Interisland ferries are vital to the livelihood of the San Juans. So many businesses operate on multiple islands. By ending interisland ferries, services would be disrupted or terminated and many businesses would be put into jeopardy.

The relative ease in moving between islands was a major factor in our decision to settle on Orcas.

Mark Seiler

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Mark Seiler
360 Indralaya Rd
Eastsound WA
98245.



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I totally disagree with your nifty idea of cutting ferry service to S.J. Islands. We, as islanders are punished enough for living in "pasadise". The hours we have to wait in ferry lines to come home or leave to attend a apt. that services are not offered. The money we pay to come home, the missed ferries, the missed appts. it is endless. Please

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

dont add to it by limiting our freedom.
Shame on you!

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO WHOM IT MAY CONCERN:

I AM A COUNTY EMPLOYEE WHO LIVES ON ORCAS + COMMUTES TO FH DAILY. AS A VICTIM ADVOCATE I TRAVEL THROUGHOUT THE DAY FOR MTGS + VICTIMS TRAVEL TO SEE ME FROM OTHER ISLANDS. MANY ISLAND RESIDENTS NEED ACCESS TO SERVICES ON OTHER ISLANDS + THE MAINLAND. PLEASE KEEP THIS IN MIND WITH YOUR DECISION.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

SUE KIMBALL
PO BOX 392
EASTSOUND, WA.



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I work for a business that relies on the inter-island ferry for its customers. This unfortunate cut would greatly reduce our customer base!

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Jennifer Edington
360 Indralaya Rd
Eastsound, WA
98245

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please don't dis continue inter-island ferry services. Businesses providing valuable inter-island services depend on this route as well as individuals who commute from island to island. The termination of our inter island ferry services could cause grave economic consequences for our community.

Sincerely,
R Augenstein

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

River Augenstein
360 Indralaya Rd.
Eastsound WA 98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please do not cut off the Service of the inter-island ferry. Not only do people depend on it to get to school and work, but it is good for island tourism and bringing our island community more dollars!

Shandra

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Shandra Augenstein
360 Indralaya rd.
Eastsound, WA 98245

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Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I am writing this comment on the meeting to reduce ferry service to the San Juan Islands. A reduction in ferry service will bring hardship to many who depend on regular ferry service between the islands for work, meeting and access to services. I am opposed to any reductions in ferry service between the islands. Bruce Myers

**ADDRESS**

Bruce Myers
5178 Orcas Rd
Eastsound, WA
98245

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

To Whom it may Concern.

The inter-island is a very pivitable part of this community, and would be a big mistake for W.S.F. to Eleminate this ferry or compromise it in anyway.

**ADDRESS**

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I am at work during this meeting I commute to Lopez I. from Friday Harbor 5 days a week. We need this boat!

PS: Bring Back THE Illahee!

ADDRESS

June Arnold
Friday Harbor
378-8521





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

DO NOT MAKE OUR Bridge to other ISLANDS SMALLER, we need to get to work.

ADDRESS

Danny Thurman
PO 194
Friday Hbr

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

PLEASE NO CUTS IN SERVICE

WE NEED THE INTER ISLAND SERVICE

Lithography by Continental Printing, Inc., Seattle, Washington

ADDRESS

DENNIS WHITMAN

FRIDAY HARBOR



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Regarding Plan B:

- The ferries are not just for tourists; we live here! Reducing the service this much affects not just our transportation to our homes, but also the cost of our food, gas, & supplies. This will make it necessary for yet more of our "service" families to leave.

An Alternative Idea:

Take a cue from our new President-Elect, & develop a way to use the ferries for economic development. Keep the Sydney boat & set up SJ/Olympic packages. Put commerce on the boats — dance lessons — get creative! Keep the service!

Lithography by Continental Printing, Inc., Seattle, Washington

ADDRESS

Jan Scilipoti
214 Lopez Military Rd
Lopez WA 98261

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I DO NOT SUPPORT ANY REDUCTION IN FERRY SERVICE IN THE SAN JUAN ISCANDS. THE CURRENT SCHEDULES ARE ALREADY TOO LIMITED IN MY OPINION.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

JAY JOHNSON
413 ISLAND DR.
FRIDAY HARBOR, WA
98250



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I am not in favor of a reduction of service. Our service has been cut already.

The scheduling of the mtg. at a time when most citizen are at work is stupid.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

MATT SHILDNECK
P.O. BOX 3225
FRIDAY HARBOR, WA
98250

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

How Does The Ferry System Be So Insenitive To The CITZENS of San Juan County STATE of WASHINGTON who Wholly Depend upon the Ferry as Our "Highway" Schedule Meetings AT Times So different From Down Sounder. IF you Really want OUR suggestions & Support Please Schedule Times So working People Can ATTEND. Plan "B" would NOT WORK AT All For Working People.

ADDRESS

FRED SCHALLER
685 SPRING ST
FRIDAY Harbor WA

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I can't Believe
You would consider
anything other than plan A
its already difficult enough
trying to work on the
other Islands as it is.
plan B would make it
just about impossible

ADDRESS

Robert Low
SJC Fire Marshal
520 Spruce St
Friday Harbor

Lithography by Continental Printing, Inc., Seattle, Washington

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Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

please, please, please, do not cut interisland service: it is my lifeblood that allows me to live & survive (work) in these islands. I can not attend today's meeting because I am working. thank you for your understanding. Alberta Peate



**ADDRESS**

alberta peate
live on lopez,
commute to
friday harbor
for work



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO WSF,

My family & I ride these ferrys in the San Juans all the time. I cannot attend the meeting due to when you scheduled it & where.

Please don't cut the ferry service. Thank you,

marilyn Goff



**ADDRESS**

marilyn Goff
122 Douglas Ln
Friday Harbor,
WA 98250
360-378-3370

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I have commuted on the inter island ferry's for seven years to work at a retail shop on F.H. I live on Orcas and can make more money managing a shop on F.H. SALES IN our towns are down. we need local inter-island communication in order to stay open. alot of our traffic shopping, all year around, IS from families who stay on a small island and want to travel to the big city (F.H.) to do their shopping for the day. We need inter-island RUNS and lots of them in order for Retail to survive in the Islands.

ADDRESS

Cedra Gutschmidt
PO Box 1725
Eastsound, WA
98245
360.472.0299
Cedrag11@gmail.com





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

DON'T REMOVE THE INTERISLAND FERRY ROUTE! I USE IT TO COMMUTE BACK & FORTH FROM HOME TO WORK. TO LOSE IT WOULD BE DETRIMENTAL TO MYSELF & MY FAMILY'S LIVELY-HOOD!

ADDRESS

CHARLES ANDERSON
ORCAS ISLAND
P.O. BOX 156
DEEP HARBOR IN-
98243

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

As a San Juan County resident, I would like to have ferry service to and between the islands remain the same as currently in use. We depend on this service for business as well as personal use. I cannot attend today's meeting, but want to voice my opinion

**ADDRESS**

WSF

Keep Ferry Service the same

360-376-4452
33 Mountain View
Eastsound, WA
Lucille Wettake 98245





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I'd like to see ferry fares go down.

A newer fleet.

Routes in San Juan County work OK but should not be reduced.

The Illahee would work fine as an inter-island vessel, current boat is too large in San Juan county.

Cut fat from the system

Give locals a price-break.

I ride the inter-island ferry 3-4 times per week with my garbage truck. (San Juan Sanitation)

It's necessary to transport garbage daily inter-island or else there would be garbage and recycling build up on Orcas, San Juan, Shaw and Lopez. This would create major health hazards.

— Thanks.

**ADDRESS**

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

PLEASE DONOT CUT ANOTHER FERRY FROM OUR SYSTEM. IT IS EXPENSIVE AND HARD ENOUGH TO GET AROUND AS IT IS. WE PAY TAXES FOR THE ROADS WE DON'T USE IN OUR STATE. THESE FERRIES ARE OUR ROADS. I COMMUTE FROM LOPEZ TO FRIDAY HARBOR EVERY DAY FOR WORK.

RICK VAN EECKHOUT
LOPEZ

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

THE SUMMER FERRY RIDERSHIP IS QUITE HIGH. YOU CANT EVEN KEEP UP WITH THAT LOAD. SO HOW DO YOU THINK CUTTING FERRIES IS GOING TO HELP? THE WINTER/SPRING SCHEDULES ALLOW A PERSON TO WORK ON OTHER ISLANDS MORE EFFICIANTLY AND SHOULD'NT BE CHANGED LET ALONE CUT BACK.

ADDRESS

BOB BRUBAKER
PO BOX 851
EASTSOUND, WA
98245

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO WHOM IT MAY CONCERN;

PLEASE DO NOT CUT OUT A FERRY!
I HAVE CHILDREN THAT REQUIRE OFF ISLAND DOCTORS. CUTTING OUT ONE FERRY LESSENS OUR OPTIONS OF GETTING THEM TO THEIR APPOINTMENTS!

THANK YOU!

ED.



**ADDRESS**

ED LAGO
PO BOX 1994
EASTSOUND, WA
98245



Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

DOE
Meeting 1/15

I am unable to attend today's meeting, however would like to voice my opinion on the current proposal — Please do not close any lighthouses to the mainland !! Sincerely,
Ed Lagello, Eastsound, WA 98245

PLACE STAMP HERE

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

1/15/02
Dear DOE,

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Do not cut our ferries down!!! I have a family of 4 - and we rely on the ferries for everything. My two children play sports and travel off island regularly. I use the ferries to travel to Friday Harbor & Lopez from Orcas for work. I don't agree with this cut at all.

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

San Juan Ferry Runs

PLACE STAMP HERE

I travel on the ferries frequently. The current schedule was difficult for my plans again yesterday.

The ferries are our livelyhood + connection to the rest of families + communities.

1. Please schedule future meeting so that we may attend - evenings please
2. Please keep our ferries running. We need all of them to alleviate "rush hour" in the ferry systems!

Thank you! Karin Becker
Kbecker@opalco.com

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please don't Cut the Level of service to the Islands and Schedule the Meetings on Weekend or after hours. Working

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Kevin Loomis
29 Lowell Ln.
Eastsound, WA
98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

1/15/09
TO WHOM IT MAY CONCERN.
MY NAME IS FREDERICK NELSON MOULTON, 5693 OLGA ROAD, OLGA WA 98279. I AM WRITING TO NOTIFY WSF THAT I DO NOT SUPPORT THE REMOVAL OF FERRY CAPACITY ON THE SAN JUAN ROUTES.

F NELSON MOULTON

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

We need same or more service.
peterfisher
POBox 130 98249

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

A. J. CULVER
2279 DEER HARBOR RD.
EASTSOUND, WA.
98245

IF FERRY SERVICE WERE TO CHANGE IT WOULD GREATLY HINDER MY BUSINESS AND PERONAL NEEDS.
12/15/09

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Don't Cut The Ferry service to Orcas. IT's slow enough Now.

**ADDRESS**

Ben Crane
1292 Crow Valley RD
Eastsound 98245





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please Don't cut Ferry Service From ANAcortes to SAN JUAN Islands. This would cause great Heartship For us, Thank You

**ADDRESS**

Larry + Judi Lindgren
P.O. Box 1817
Eastsound WA.
98245

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I do not support the proposed service cuts. It will hamper my ability to make a living

Shan Geer

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Shan Geer
2324 Pacific
Bellingham WA
98226



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I WOULD LIKE THE FERRY SERVICE TO REMAIN THE SAME.

THANK YOU!

FRANK M. GATES
29 CANDLEWOOD LN.
EASTSOUND, WA 98245

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX C
## LIST OF PARTICIPANTS

# LIST OF PARTICIPANTS

The Final Long-Range Plan reflects the technical expertise and contributions of numerous organizations and individuals, listed below. Development of the Final Long-Range Plan was a highly collaborative process, and WSF is grateful for the time and input of all participants.

## JOINT TRANSPORTATION COMMITTEE

### Ferries Policy Group

Representative Christine Rolfes

Representative Larry Seaquist

Representative Norma Smith

Representative Judy Clibborn

Representative Doug Ericksen

Senator Mary Margaret Haugen

Senator Dan Swecker

Senator Derek Kilmer

Senator Harriett Spanel

Jill Satran (Governor's representative)

### JTC Staff Group

Jill Satran, Governor's Office

Paul Neal, JTC staff

Senate and House Transportation Staff

Kathy Scanlan, Cedar River Group

Steve Reinmuth, WSDOT Chief of Staff

Gary Lebow, WSDOT Program Delivery Manager

Reema Griffith, WSTC Executive Director

Rich Struna, Office of Financial Management

Robin Rettew, Office of Financial Management

David Moseley, WSDOT/WSF Assistant Secretary

Marta Coursey, WSDOT/WSF Communications Director

Ray Deardorf, WSDOT/WSF Planning Director

## TRANSPORTATION COMMISSION FERRIES SUBCOMMITTEE

### Ferries Sub-Committee Members

Dick Ford, WSTC Commissioner

Bob Distler, WSTC Commissioner

Dan O'neal, WSTC Commissioner

### WSTC Staff and Consultants

Reema Griffith, WSTC Administrator

Bill Young, WSTC Technical Advisor (survey)

Opinion Research Corporation, Survey consultant

Cambridge Systematics, Financing Study consultant

## LOCAL AGENCY REVIEW TEAM

### Regional

Puget Sound Regional Council, Principal Planner Stephen Kiehl

Island County Public Works, Transportation Planner Mike Morton

Kitsap Regional Coordinating Council, Executive Director Mary McClure

### Local

City of Seattle, Department of Transportation, Senior Transportation Planner Ann Sutphin

City of Bainbridge Island, Director of Planning and Community Development Kelly Dickson

City of Edmonds, Director of Community Services Stephen Clifton

City of Mukilteo, Director of Community Development Heather McCartney

City of Friday Harbor, Land Use Administrator Mike Bertrand

City of Anacortes, Director of Planning and Community Development Ian Munce

City of Port Townsend, Director of Planning Rick Sepler

City of Bremerton, Director of Public Works Phil Williams

San Juan County, County Administrator Pete Rose

Kitsap County Public Works, Transportation Planner Greg Cloc

### Transit

Kitsap Transit, Director of Service Development John Clausen

Sound Transit, Senior Planner Matt Sheldon

King County Metro, Management Services Analyst Mike Sudduth

## FERRY ADVISORY COMMITTEES

### Executive Committee

Alan Mendel, Vashon Island

Duane Clark, Anacortes (previously Ian Munce)

Ed Sutton, San Juan Islands

Gary Dawson, Fauntleroy

Joan Dingfield, Bremerton

Julia Hodson, Keystone

Kenton Jones, Edmonds

Martha Burke, Bainbridge Island

Rex Nelson, Southworth

Tim Caldwell, Port Townsend

Todd Bits, Clinton

Walter Elliot, Kingston

Warren Mitchell, Clallam County

Donna Lansberry, Mukilteo

## TRAVEL FORECASTING WORKGROUPS

Celine Gihring, Ferries Division

Amy Arnis, Assistant Secretary/CFO of Strategic Planning and Financial Operations

Ray Deardorf, Ferries Division

Bob Sicko, Fehr & Peers/Mirai & Associates, JTC Travel Forecast Consultant

Larry Blain/Mark Charnews, Puget Sound Regional Council

Shuming Yan, Urban Planning Office

Parsons Brinckerhoff, Inc., Travel Forecast Consultant

RSG Inc., Transportation Survey Consultant

Berk & Associates, Ferry System Plan Consultant

Washington State Department of Transportation

# POSTCARD COMMENTS REGARDING SAN JUAN INTER-ISLAND ROUTE

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

WE ♥ OUR INTERISLAND FERRY!

PLACE STAMP HERE

TO WHOM IT MAY CONCERN,
THE INTERISLAND FERRY ROUTE IS A NECCESARY PART OF LIVING HERE IN THE SAN JUANS, MANY PEOPLE USE THIS FERRY ROUTE TO COMMUTE TO WORK & TO & FROM SCHOOL. TO LOWER THE LEVEL OF SERVICE MORE THAN IT ALREADY HAS BEEN WILL HURT THE PEOPLE WHO USE THIS ROUTE TO & FROM WORK. IT WILL ALSO LOWER COMMERCE BETWEEN THE ISLANDS THUS HURTING US ECONOMICALLY, AS TOURISTS ALSO USE ~~THIS~~ FERRY ROUTE TO EXPLORE THE SAN JUANS, IF IT WERE REMOVED IT WOULD HURT OUR ISLANDS ECONOMICALLY.
WE NEED OUR INTERISLAND FERRY ROUTE!

**ADDRESS**

P.S. AS IT STANDS MY HUSBAND HAS TO STAY ON LOPEZ 'TIL THE 9:10 FERRY HOME SINCE THE 7:20 HAS BEEN CUT FROM LOPEZ-ORCAS ON THE WINTER SCHEDULE.

HE LEAVES @ 7AM ARRIVES HOME AT 10:20 THAT MAKES FOR A LONG DAY.

SINCERELY,
ROBIN GAVRIEL
PO BOX 156
DEER HARBOR, WA 98243





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

YOU NEED TO START THINKING OUTSIDE THE BOX ON FERRY ISSUES. USE SMALLER FERRIES IN LOWER NEED TIMES
START SAVING FOR FERRY REPLACEMENT & REPAIRS – DON'T WAIT.
UNDERSTAND THE IMPACT ON LOCAL ECONOMIES YOU HAVE BY FILLING A VOID W/SERVICE & THEN YANKING THAT SERVICE OUT OF LINE. THINK DOMINOE'S THEORY.

**ADDRESS**

THE SAN JUAN ISLANDS ARE PART OF THE LARGER ATTRACTION FOR TOURISM IN WASHINGTON STATE. "THE JEWEL OF WA. ST." PEOPLE WHO COME HERE HAVE BEEN EDUCATED FOR YEARS THROUGH PUBLICITY. THEY EXPECT ACCESS TO THE SAN JUANS. THEY EXPECT ACCESS TO VICTORIA B.C. THROUGH THE SAN JUANS. WHAT LEVEL OF DISAPPOINTMENT STARTS TO EFFECT WA. ST. ECON.

I KNOW YOU WANT TO BE PROFITABLE – BUT ACTUALLY THAT IS A LESSER NEED IN RELATIONSHIP TO THE OVERALL EFFECT ON ST. ECON. LOCAL ECON. AND "LONG TERM" ECON RECOVERY.
WHAT DO WE LOOSE LATER BY CUTTING BACK NOW?. OUR LOCAL ECON IS ~~UNDERGOING~~ GREATLY BASED ON "Good" FERRY SERVICE.
JEFF PATTERSON ORCAS ISLAND.

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I STRONGLY OPPOSE THE REDUCTION OF FERRY SERVICE BETWEEN ANACORTES AND THE ISLANDS. ALSO THE REDUCTION OF SERVICE BETWEEN ISLANDS WILL MAKE A FURTHER HARDSHIP ON THE WORKING PEOPLE LIVING IN THE ISLANDS WHO NEED TO WORK ~~AT~~ AND SERVICE OTHER ISLANDS. CANCELLATION OF THE SUNDAY RUN IS SHORTSIGHTED.

I LIVE AND WORK ON ORCAS AND TRAVEL TO SMALL COPIZ-SAN JUAN FOR WORK AND SERVICE CALLS ON THOSE ISLANDS

MICHAEL DURLAND
BX 26 DEER HARBOR.

Michael Durland

ADDRESS





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I commute every day to work on the ferry if you cut service it will affect many Island jobs and may cause our shop to close or move! Don't cut service at commute times!

Keep our jobs!

ADDRESS

Russell Folkins
POB 401
Shaw Island
WA 98286

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**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Although I don't think that we should support the Sidney ferry we should use have a ferry reservation system so that there is enough ferry service when it is needed. We need to get rid of the Border Customs agents in Anacortes

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Katie Hover
Friday Harbor WA
98250



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Even though I make regular use of the inter-island boat, it obviously runs well below capacity late at night + weekends - save money there.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Dean Dougherty
136 Belle Ln
Olga WA
98279

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**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

We need our boat !!!
My job depends on it.
I wark on small shaw Island, which is made up of mostly retired people who need ferry service to get to doctors and school Childern who comute to school, and Many workers who go to the other Islands to their jobs. losing the Inter-Island Boat would mean many of us having to leave the Islands.

ADDRESS

Now is when we need our boat, when the whole economy is failing us we need Stability. You will be a big help if you allow us to continue to have the Interisland boat!!! What are taxes compared to our jobs! Besides we love our boat and its Crew. Jael C. Finney

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Hardy Schmidt. Dear Sirs!
I have an excavating business and an account with WSF. My business on Shaw is totally dependant on inter-island service between Orcas & Shaw. We have no quarry on shaw and every tablespoon of gravel for roads, driveways and building backfill & septic systems has to come from Orcas.

ADDRESS

Sincerely
Hardy Schmidt
Hardy Schmidt Exc. Inc.

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Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

AFTER LOOKING AT YOUR WEEKEND FERRY SCHEDUAL, IF YOU TRY ~~AND~~ TO PUT THAT ON A WEEK DAY, I WILL EITHER LOOSE MY JOB OR LOOSE, MY HOUSE, I'M WONDERING WHITCH ONE YOU WILL PAY FOR?

ROGER McGILVREY
FRI. HSB

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Washington State Ferry Service—
Please do not cut ferry service. I teach on Shaw Island but live on Orcas. I need my job & my ferry. Orcas is already under served

-thanks!

Jennifer Pratt

* had to work couldn't make the meeting!

ADDRESS

Jennifer Kitch
329 Dolphin Bay Rd
Eastsound, WA
98245

1+360-376-4466

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
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**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO whom it may Concern;
As a rider of the WA state ferries (2 days a week) I would be under a hardship to complete my studies. The ferries are our Public Transportation. We depend on them. I believe we need to Add rather than take away service. Thank you, Luann Pamatian



**ADDRESS**

Luann Pamatian
83 Oberon Lane
Eastsound, WA
98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

When you deliberate these ferry runs, please keep in mind that this is our highway - our government services are on one Island. Some of us commute as well - me being one.

Our economy is dependent on tourism - we need better service in Spring + Summer.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Cathy Ferver
324 Longwood Ln
PO Box 436
Eastsound Wa
98245

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**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

We so appreciate the ferry service we enjoy here in San Juan County. Please do not reduce the level of service — it is critical to our way of life here. The capital asset replacement issue must be addressed.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Dennie Carter
PO Box 776
Eastsound, WA
98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

PLEASE SAVE OUR FERRYS!

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

JOAN CARDENAS
P.O. BOX 1054
EASTSOUND WA
98245

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**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

To WA. ST. - Whom it May Concern,

Please DO NOT remove our ferries from service in the San Juans. The ferries are our roadway systems - not accessories, but necessities, esp. to our county seat, FRIDAY HARBOR.

Removing the inter-Island would be catastrophic for many who work & need to travel inter-Island. I am commuting to Skagit Valley Community College, San Juan Ctr. For this Quarter & Sundays need to come to San Juan Is., the Court House for many reasons. Without the Inter-Is. Ferry, I could never bring

Artist: Tom Sanislo — all rights reserved
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

My car & only 2 ferries Wed. run at all to FRL. Harbor. FRL. Harbor would die w/out our multi-Island support. Please don't! Economies wd. Blank.

The Sydney run is our only way to get to Vancouver Is. without much more mainland travel & expense. Again our Economies, Canada's & ours are inter-dependent. Please keep all ferries running.

Thank you! Deborah Dalmer
Please write back. We're friends here in

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

you guys are crazy to cut the service right Before the Olympics?

Artist: Tom Sanislo — all rights reserved
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Wayne Sorvedal
PO 97
Deer Harbor
WA

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I would like to See a permanent Schedule printed. All seasons could be Printed into one booklet and changed every 5 years I think that would save a lot of money and waste.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Kathy Foley
P.O. Box 521
[illegible]



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

Peja Schussler
Box 1797
E.S.

PLACE STAMP HERE

Since I am working + unable to attend this meeting I feel it necessary to write my comments.

Reducing any Ferry Service + raising rates is a hardship for the San Juans. These Ferry Routs are our Highways. We do Not have an option to drive to work or shopping or medical appointments. We have to take a Ferry. So please Consider that having affordable + decent schedules + options is a necessity not just something we can do or not do. These routes in the San Juans are possibly the only just "Highways" in the Puget Sound.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

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Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Interisland ferries are vital to the livelihood of the San Juans. So many businesses operate on multiple islands. By ending interisland ferries, services would be disrupted or terminated and many businesses would be put into jeopardy.

The relative ease in moving between islands was a major factor in our decision to settle on Orcas.

Mark Seiler

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Mark Seiler
360 Indralaya Rd
Eastsound WA
98245.



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I totally disagree with your nifty idea of cutting ferry service to S.J. Islands. We, as islanders are punished enough for living in "pasadise". The hours we have to wait in ferry lines to come home or leave to attend a apt. that services are not offered. The money we pay to come home, the missed ferries, the missed appts. it is endless. Please

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

dont add to it by limiting our freedom.
Shame on you!

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**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO WHOM IT MAY CONCERN:

I AM A COUNTY EMPLOYEE WHO LIVES ON ORCAS + COMMUTES TO FH DAILY. AS A VICTIM ADVOCATE I TRAVEL THROUGHOUT THE DAY FOR MTGS + VICTIMS TRAVEL TO SEE ME FROM OTHER ISLANDS. MANY ISLAND RESIDENTS NEED ACCESS TO SERVICES ON OTHER ISLANDS + THE MAINLAND. PLEASE KEEP THIS IN MIND WITH YOUR DECISION.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

SUE KIMBALL
PO BOX 392
EASTSOUND, WA.



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I work for a business that relies on the inter-island ferry for its customers. This unfortunate cut would greatly reduce our customer base!

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Jennifer Edington
360 Indralaya Rd
Eastsound, WA
98245

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Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please don't dis continue inter-island ferry services. Businesses providing valuable inter-island services depend on this route as well as individuals who commute from island to island. The termination of our inter island ferry services could cause grave economic consequences for our community.

Sincerely,
R Augenstein

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

River Augenstein
360 Indralaya Rd.
Eastsound WA 98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please do not cut off the Service of the inter-island ferry. Not only do people depend on it to get to school and work, but it is good for island tourism and bringing our island community more dollars!

Shandra

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Shandra Augenstein
360 Indralaya rd.
Eastsound, WA 98245

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Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
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PLACE STAMP HERE

I am writing this comment on the meeting to reduce ferry service to the San Juan Islands. A reduction in ferry service will bring hardship to many who depend on regular ferry service between the islands for work, meeting and access to services. I am opposed to any reductions in ferry service between the islands. Bruce Myers

**ADDRESS**

Bruce Myers
5178 Orcas Rd
Eastsound, WA
98245

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

To Whom it may Concern.

The inter-island is a very pivitable part of this community, and would be a big mistake for W.S.F. to Eleminate this ferry or compromise it in anyway.

**ADDRESS**

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I am at work during this meeting I commute to Lopez I. from Friday Harbor 5 days a week. We need this boat!

PS: Bring Back THE Illahee!

ADDRESS

June Arnold
Friday Harbor
378-8521





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

DO NOT MAKE OUR Bridge to other ISLANDS SMALLER, we need to get to work.

ADDRESS

Danny Thurman
PO 194
Friday Hbr

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

PLEASE NO CUTS IN SERVICE

WE NEED THE INTER ISLAND SERVICE

Lithography by Continental Printing, Inc., Seattle, Washington

ADDRESS

DENNIS WHITMAN

FRIDAY HARBOR



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Regarding Plan B:

- The ferries are not just for tourists; we live here! Reducing the service this much affects not just our transportation to our homes, but also the cost of our food, gas, & supplies. This will make it necessary for yet more of our "service" families to leave.

An Alternative Idea:

Take a cue from our new President-Elect, & develop a way to use the ferries for economic development. Keep the Sydney boat & set up SJ/Olympic packages. Put commerce on the boats — dance lessons — get creative! Keep the service!

Lithography by Continental Printing, Inc., Seattle, Washington

ADDRESS

Jan Scilipoti
214 Lopez Military Rd
Lopez WA 98261

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I DO NOT SUPPORT ANY REDUCTION IN FERRY SERVICE IN THE SAN JUAN ISCANDS. THE CURRENT SCHEDULES ARE ALREADY TOO LIMITED IN MY OPINION.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

JAY JOHNSON
413 ISLAND DR.
FRIDAY HARBOR, WA
98250



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I am not in favor of a reduction of service. Our service has been cut already.

The scheduling of the mtg. at a time when most citizen are at work is stupid.

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

MATT SHILDNECK
P.O. BOX 3225
FRIDAY HARBOR, WA
98250

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

How Does The Ferry System Be So Insenitive To The CITZENS of San Juan County STATE of WASHINGTON who Wholly Depend upon the Ferry as Our "Highway" Schedule Meetings AT Times So different From Down Sounder. IF you Really want OUR suggestions & Support Please Schedule Times So working People Can ATTEND. Plan "B" would NOT WORK AT All For Working People.

ADDRESS

FRED SCHALLER
685 SPRING ST
FRIDAY Harbor WA

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I can't Believe
You would consider
anything other than plan A
its already difficult enough
trying to work on the
other Islands as it is.
plan B would make it
just about impossible

ADDRESS

Robert Low
SJC Fire Marshal
520 Spruce St
Friday Harbor

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

please, please, please, do not cut interisland service: it is my lifeblood that allows me to live & survive (work) in these islands. I can not attend today's meeting because I am working. thank you for your understanding. Alberta Peate



**ADDRESS**

alberta peate
live on lopez,
commute to
friday harbor
for work



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO WSF,

My family & I ride these ferrys in the San Juans all the time. I cannot attend the meeting due to when you scheduled it & where.

Please don't cut the ferry service. Thank you,

marilyn Goff



**ADDRESS**

marilyn Goff
122 Douglas Ln
Friday Harbor,
WA 98250
360-378-3370

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I have commuted on the inter island ferry's for seven years to work at a retail shop on F.H. I live on Orcas and can make more money managing a shop on F.H. SALES IN our towns are down. we need local inter-island communication in order to stay open. alot of our traffic shopping, all year around, IS from families who stay on a small island and want to travel to the big city (F.H.) to do their shopping for the day. We need inter-island RUNS and lots of them in order for Retail to survive in the Islands.

ADDRESS

Cedra Gutschmidt
PO Box 1725
Eastsound, WA
98245
360.472.0299
Cedrag11@gmail.com





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

DON'T REMOVE THE INTERISLAND FERRY ROUTE! I USE IT TO COMMUTE BACK & FORTH FROM HOME TO WORK. TO LOSE IT WOULD BE DETRIMENTAL TO MYSELF & MY FAMILY'S LIVELY-HOOD!

ADDRESS

CHARLES ANDERSON
ORCAS ISLAND
P.O. BOX 156
DEEP HARBOR IN-
98243

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

As a San Juan County resident, I would like to have ferry service to and between the islands remain the same as currently in use. We depend on this service for business as well as personal use. I cannot attend today's meeting, but want to voice my opinion

**ADDRESS**

WSF

Keep Ferry Service the same

360-376-4452
33 Mountain View
Eastsound, WA
Lucille Wettake 98245





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I'd like to see ferry fares go down.

A newer fleet.

Routes in San Juan County work OK but should not be reduced.

The Illahee would work fine as an inter-island vessel, current boat is too large in San Juan county.

Cut fat from the system

Give locals a price-break.

I ride the inter-island ferry 3-4 times per week with my garbage truck. (San Juan Sanitation)

It's necessary to transport garbage daily inter-island or else there would be garbage and recycling build up on Orcas, San Juan, Shaw and Lopez. This would create major health hazards.

— Thanks.

**ADDRESS**

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

PLEASE DONOT CUT ANOTHER FERRY FROM OUR SYSTEM. IT IS EXPENSIVE AND HARD ENOUGH TO GET AROUND AS IT IS. WE PAY TAXES FOR THE ROADS WE DON'T USE IN OUR STATE. THESE FERRIES ARE OUR ROADS. I COMMUTE FROM LOPEZ TO FRIDAY HARBOR EVERY DAY FOR WORK.

RICK VAN EECKHOUT
LOPEZ

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

THE SUMMER FERRY RIDERSHIP IS QUITE HIGH. YOU CANT EVEN KEEP UP WITH THAT LOAD. SO HOW DO YOU THINK CUTTING FERRIES IS GOING TO HELP? THE WINTER/SPRING SCHEDULES ALLOW A PERSON TO WORK ON OTHER ISLANDS MORE EFFICIANTLY AND SHOULD'NT BE CHANGED LET ALONE CUT BACK.

ADDRESS

BOB BRUBAKER
PO BOX 851
EASTSOUND, WA
98245

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

TO WHOM IT MAY CONCERN;

PLEASE DO NOT CUT OUT A FERRY!
I HAVE CHILDREN THAT REQUIRE OFF ISLAND DOCTORS. CUTTING OUT ONE FERRY LESSENS OUR OPTIONS OF GETTING THEM TO THEIR APPOINTMENTS!

THANK YOU!

ED.



**ADDRESS**

ED LAGO
PO BOX 1994
EASTSOUND, WA
98245



Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

DOE
Meeting 1/15

I am unable to attend today's meeting, however would like to voice my opinion on the current proposal — Please do not close any lighthouses to the mainland !! Sincerely,
Ed Lagello, Eastsound, WA 98245

PLACE STAMP HERE

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

1/15/02
Dear DOE,

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Do not cut our ferries down!!! I have a family of 4 - and we rely on the ferries for everything. My two children play sports and travel off island regularly. I use the ferries to travel to Friday Harbor & Lopez from Orcas for work. I don't agree with this cut at all.

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

San Juan Ferry Runs

PLACE STAMP HERE

I travel on the ferries frequently. The current schedule was difficult for my plans again yesterday.

The ferries are our livelyhood + connection to the rest of families + communities.

1. Please schedule future meeting so that we may attend - evenings please
2. Please keep our ferries running. We need all of them to alleviate "rush hour" in the ferry systems!

Thank you! Karin Becker
Kbecker@opalco.com

ADDRESS

Lithography by Continental Printing, Inc., Seattle, Washington

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please don't Cut the Level of service to the Islands and Schedule the Meetings on Weekend or after hours. Working

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Kevin Loomis
29 Lowell Ln.
Eastsound, WA
98245



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

1/15/09
TO WHOM IT MAY CONCERN.
MY NAME IS FREDERICK NELSON MOULTON, 5693 OLGA ROAD, OLGA WA 98279. I AM WRITING TO NOTIFY WSF THAT I DO NOT SUPPORT THE REMOVAL OF FERRY CAPACITY ON THE SAN JUAN ROUTES.

F NELSON MOULTON

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

We need same or more service.
peterfisher
POBox 130 98249

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

A. J. CULVER
2279 DEER HARBOR RD.
EASTSOUND, WA.
98245

IF FERRY SERVICE WERE TO CHANGE IT WOULD GREATLY HINDER MY BUSINESS AND PERONAL NEEDS.
12/15/09

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Don't Cut The Ferry service to Orcas. IT's slow enough Now.

**ADDRESS**

Ben Crane
1292 Crow Valley RD
Eastsound 98245





**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

Please Don't cut Ferry Service From ANAcortes to SAN JUAN Islands. This would cause great Heartship For us, Thank You

**ADDRESS**

Larry + Judi Lindgren
P.O. Box 1817
Eastsound WA.
98245

**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I do not support the proposed service cuts. It will hamper my ability to make a living

Shan Geer

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Shan Geer
2324 Pacific
Bellingham WA
98226



**Washington State Ferry KLICKITAT**
Built in San Francisco, California, 1927.
Length: 256 feet. Capacity: 75 cars — 800 passengers

PLACE STAMP HERE

I WOULD LIKE THE FERRY SERVICE TO REMAIN THE SAME.

THANK YOU!

FRANK M. GATES
29 CANDLEWOOD LN.
EASTSOUND, WA 98245

Lithography by Continental Printing, Inc., Seattle, Washington

**ADDRESS**

Artist: Tom Sanislo — all rights reserved.
Ferrytale Productions, P.O. Box 1004, Friday Harbor, WA 98250 ©

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX E
## AGENCY AND STAKEHOLDER COMMENTS ON DRAFT PLAN

**TOWN OF VIEW ROYAL**
45 View Royal Avenue, Victoria, B.C., Canada V9B 1A6
Tel: (250) 479-6800 • Fax: (250) 727-9551
e-mail: info@town.viewroyal.bc.ca

Washington State Ferries
Attention: Mr. David Moseley (moseled@wsdot.wa.gov)

January 21, 2009

Dear Sir,

**RE: Washington State Ferries Long-Range Plan, December 2008**

I am writing on behalf of the Council of the Town of View Royal to appeal to Washington State Ferries and the Washington State Legislature not to follow through with the cancellation of the international ferry service between Anacortes Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view, there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local government business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry

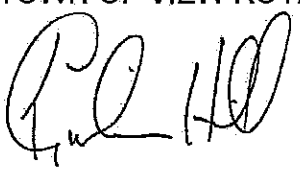
system in this regard. However, it is our strong belief that the Anacortes/Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes/Sidney ferry service is retained, for now, and long into the future.

Thank you for you consideration.

Sincerely,

TOWN OF VIEW ROYAL



Graham Hill, Mayor

**Saanich Peninsula Chamber of Commerce**
*The Voice of Business*

#201 - 2453 Beacon Avenue
Sidney, British Columbia V8L 1X7
Phone: 250-656-3616
Fax: 250-656-7111
Email: eleddy@peninsulachamber.ca
Web: www.peninsulachamber.ca

January 20, 2009

Mr. David Moseley
Washington State Ferries

Dear Mr. Moseley,

**Re: Washington State Ferries Long Range Plan, December 2008**

We are writing to appeal, on behalf of the Saanich Peninsula Chamber of Commerce and the business community of the Saanich Peninsula and Southern Vancouver Island, that Washington State Ferries set aside the proposed cancellation of the Sidney-Anacortes run at the end of the 2009 season.

The Sidney-Anacortes run is a vital link between Vancouver Island and Washington State. Visitors arriving from Anacortes inject millions of dollars, directly and indirectly, into the local, regional and Southern Vancouver Island economies annually. The implications of losing this revenue are staggering for business here.

In the summer of 2007, chamber executives from Skagit County, including Anacortes, converged on Sidney for a day of touring and information exchange. High on the agenda was the need to cross-promote between our two regions, with the goal of boosting both economies. Without the ferry run, opportunities for revenue generating cross-promotion disappear.

The arrival of the Anacortes ferry in Sidney every spring, marks the official beginning of the tourist season here and is cause for hope and celebration on this side of the border, owing to the economic benefits it brings to stakeholders in the town and the region. The highly active and visible Sidney Sister Cities association organizes a welcoming party to mark the occasion.

Cutting the ferry run would mean a significant loss in tourism revenue for Sidney, the Saanich Peninsula and Southern Vancouver Island. It would also interrupt the close cultural bond that has formed between our two complementary regions.

We believe that retaining the Sidney-Anacortes run is in the best interests of Washington State, as well as our region, for now and for the future. Observers on this side will attest to the vehicle line-ups, city blocks long, twice daily, at the ferry terminal: destination the San Juans and Anacortes. A recent ridership forecast for the ferry run estimated a net gain for Sidney of 78% over the next 20 years. We are hopeful that, for all of these good reasons, including the information contained in the Hovee Report, that the Sidney-Anacortes run can be retained.

Thank you.

Sincerely,

Eileen Leddy
Executive Director

# CITY OF COLWOOD

3300 Wishart Road, Colwood, B.C. V9C 1R1
www.colwood.ca

(250) 478-5541 – Administration/ CAO
(250) 478-5999 – Bylaw Enforcement/Building
(250) 478-5999 – Engineering
(250) 478-5530 – Finance & Property Taxes
(250) 478-8321 – Fire Department
(250) 478-5590 – Planning & Zoning
(250) 474-4133 – Public Works Yard
(250) 478-7516 – Facsimile
mayorsaunders@telus.net mayor@colwood.ca


January 21, 2009

Washington State Ferries:

**Sent Via Email: moseled@wsdot.wa.gov**

Attention: Mr. David Moseley

**Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to the Washington State Ferries and the Washington State Legislature to not follow through with cancellation of the international ferry service between Anacortes Washington and Sidney, British Columbia. The City of Colwood would like to add its voice to the vigorous campaign to preserve this important marine link between our countries.

We support the position of the Town of Sidney, and many other agencies, in their view that a number of compelling reasons exist to defend retention of the service:

1. There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (Hovee Report of July 2007).

2. A detailed analysis has not been undertaken on the Canadian side, yet it would be logical to assume that similar economic benefits from the service apply to Sidney and the entire Capital Regional District.

3. Ridership could be significantly improved by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. A coordinated marketing program through a consortium of stakeholders on both sides of the service would accomplish this.

4. An assessment of departure and arrival times for all terminals could vastly improve ridership. A schedule that requires travellers to leave a terminal late one day, stay overnight, and return first thing the next morning is not attractive to travellers – they are left with little time to enjoy their destination.

5. The significant value to the connection between Anacortes and Sidney is difficult to quantify. In a cultural, historical and social context it is nothing less

than priceless. The Sister City relationship is a clear expression of the importance of the relationship between these communities. In these times, living in a world facing significant hardship and unrest, we should do all we can to encourage and strengthen our relationships.

We are all in the local governance business and we are keenly aware of the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard, but it is still our belief that this service is a net fiscal gain for the State of Washington. We also believe there are value to this important connection that cannot be measured by dollars and cents. When considering any of the services we provide, and the costs associated with operating those services, we must also consider the *desires* of the community as well. The ferry system is a community service that allows communities from different countries establish and build friendship and business relationships that strengthen both our economies and provide immeasurable benefits to the personal well-being of all our citizens.

It is our sincere wish that the Anacortes / Sidney ferry service be retained for the valuable service and important link it provides to the people of the United States of America and Canada – and it should remain in service long into the future.

Thank you for your consideration.

Sincerely,

Corporate Officer

for David Saunders,
Mayor, City of Colwood

cc: Mayor Dean Maxwell, City of Anacortes – dean@cityofanacortes.org
Mr. Duane Clark, Save Our Ferry - dclark@capsantecourt.com
Honourable Gary Lunn, MP - lunnmp@garylunn.com
Honourable Murray Coell, MLA - murray.coell.mla@leg.bc.ca
Saanich Peninsula Chamber of Commerce – eleddy@peninsulachamber.ca
Sidney Business Association - manager@sidneybusiness.ca
Tourism Victoria - kelsi.woodward@tourismvictoria.com

21 January, 2009

TO: Washington State Ferries Planning Division
FROM: Preston Schiller, preston.schiller@wwu.edu, Transit Coordinator, North Sound Connecting Communities Project (NSCCP or "Farmhouse Gang")
ATTN: Joy Goldenberg, Ray Deardorf (wsfplanning@wsdot.wa.gov)
RE: Comments on transit-related matters in the Washington State Department of Transportation Ferries Division Draft Long-Range Plan, December 2008
cc/Bruce Agnew (Cascadia Center), Liz Illg (Town of Friday Harbor), Bill Watson (SJI-EDC), Shannon Wilbur (San Juan Co. Public Works)

There is considerable attention in this plan to the need and prospects for improving the linkages between WSF and local transit services as well as making terminal improvements to facilitate better transit and pedestrian access and rider information about transportation options at terminals.

The purpose of this brief communication is to make you aware of the interest of the NSCCP in these and related matters, especially in regards to the Anacortes WSF Terminal and the potential for improved connections between it and the Amtrak services at Skagit Station in Mount Vernon. Part of the mission of the NSCCP is to promote public transportation, improved traveler information, and improved intermodal connections in the North Sound region.

We note that although there are many references to improving transit connections to WSF services, and improving some WSF facilities in order to better accommodate transit and walk-ons, there are no specific plans for improving either at Anacortes WSF or the San Juan Islands terminals. We believe that more attention should be given to the specifics of improving these matters in regards to the latter-mentioned facilities.

The NSCCP has worked with WSF, Skagit Transit, Whatcom Transportation Authority, Island Transit, Everett Station, and the Whatcom Council of Governments in the development of improved traveler information and displays at key regional intermodal facilities. (see http://wcog.org/Completed-Projects/Kiosk-Project/266.aspx) A facility-by-facility description of our installations and remaining issues is available from me at my e-mail address above.

We have also been engaged over several years in discussions about improved transit connections at both ends of the Anacortes-San Juan Islands ferry services. At present, and partly as a result of the San Juan Transportation Summit of September 2008, there is renewed interest in this matter.

We are also exploring ideas about how a service connecting Skagit Station and Anacortes-WSF might better connect these facilities. At present there are several services, public and private, between these facilities, although none is direct or seamless or integrated with the schedule of the other. There are many challenges in offering a direct and seamless connection and we shall analyze these as well as offer suggestions in a forthcoming white paper. We will also be discussing these matters at an upcoming NSCCP Rail-Transit committee and San Juan Islands sub-committee meeting in early March. We shall keep you informed of the details of the report and the meetings in the hope that representatives from the WSF will participate and that our efforts will hopefully help your planning efforts.

# The Corporation of the District of Central Saanich

January 21, 2009 File No. 0220-01

Washington State Ferries

Attention: Mr. David Moseley
moseled@wsdot.wa.gov

Dear Mr. Moseley:

**Re: Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical, and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

.../2

1903 Mount Newton Cross Road, Saanichton, B.C. V8M 2A9
Phone: (250) 652-4444 Fax: (250) 652-0135

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Yours truly,

Jack Mar
Mayor

C: Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Honourable Gary Lunn, M.P.
Honourable Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Sidney Business Association
Tourism Victoria
Town of Sidney

DISTRICT OF HIGHLANDS

January 20, 2009

File: 1415 - 20

*VIA EMAIL: (moseled@wsdot.wa.gov)*

Transportation Building
Washington State Department of Transportation
310 Maple Park Avenue SE, PO Box 47300
Olympia WA 98504-7300

Attention: Mr. David Moseley

Dear Sir:

***Re: Washington State Ferries Long-Range Plan, December 2008***

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes Washington and Sidney British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

This ferry service provides tangible net mutual benefits to the communities it serves, fiscally and otherwise. Surely it will be more difficult to re-establish this important and valued service in the future should it be discontinued now.

It is our sincere wish that this service be retained for now and long into the future.

Sincerely,

DISTRICT OF HIGHLANDS

Jane Mendum,
Mayor

c: Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Honourable Gary Lunn, M.P.
Murray Coell, MLA
Saanich Peninsula Chamber of Commerce
Sidney Business Association
Tourism Victoria

1980 Millstream Road, Victoria, British Columbia V9B 6H1
Tel: (250) 474-1773 Fax: (250) 474-3677 Web: www.highlands.ca

# TOWN OF SIDNEY

2440 Sidney Avenue, Sidney, British Columbia V8L 1Y7
Phone: (250) 656-1184 Fax: (250) 655-4508
email: townhall@sidney.ca Website: www.sidney.ca

**Office of the Mayor Tel: (250) 656-1139 Fax: (250) 656-7056**

January 9, 2009

Washington State Ferries
Attention: Mr. David Moseley (moseled@wsdot.wa.gov)

Dear Sir:

**Re: Washington State Ferries Long-Range Plan – December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Larry Cross
MAYOR

c: Mayor Dean Maxwell, City of Anacortes
Honourable Gary Lunn, M.P.
Honourable Murray Coell, M.L.A.
Tourism Victoria
Duane Clark, Save Our Ferry
Saanich Peninsula Chamber of Commerce
Sidney Business Association

*MAYOR'S OFFICE*
*CITY OF LANGFORD*
*2nd Floor, 877 Goldstream Ave*
*Langford, BC*
*V9B 2X8*

*City of Langford*

***Administration & Finance***
***Tel: (250) 478-7882***
***Fax: (250) 478-7864***
***Website: cityoflangford.ca***

January 20, 2009

File No. 0400-50/SID

Washington State Ferries
Attention: Mr. David Moseley
VIA E-MAIL: moseled@wsdot.wa.gov

Dear Sir:

**Re: Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes Washington and Sidney British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local government business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is

our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Stewart Young
Mayor

cc: Mayor Dean Maxwell, City of Anacortes (dean@cityofanacortes.org)
Duane Clarke, Save our Ferry (clark@capsantecourt.com)
Hon. Gary Lunn, M.P. (lunnmp@garylunn.com)
Hon. Murray Coell, M.L.A. (muray.coell.mla@leg.bc.ca)
Saanich Peninsula Chamber of Commerce (eleddy@peninsulachamber.ca)
Sidney Business Association (manager@sidneybusiness.ca)
Tourism Victoria (kelsi.woodward@ourismvictoria.com)

# TOURISM VICTORIA

January 20, 2009

Washington State Ferries
Attention: Mr. David Moseley
moseled@wsdot.wa.gov

Dear Mr. Moseley:

**Re: Washington State Ferries Long-Range Plan**

Tourism Victoria strongly opposes the proposed elimination of the international ferry service between Anacortes, Washington and Sidney, British Columbia with the Washington State Ferries company.

With the 2010 Olympic and Paralympic Winter Games approaching, WSF would do better to consider *expanding* ferry service to Sidney, a key transfer point to Vancouver, or even permanently restoring the service.

Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

Losing the Anacortes/Sidney Ferry run will have a huge economic impact on Anacortes and the surrounding counties (Skagit, Whatcom, Island, San Juan, Snohomish, and Sidney, BC). The annual impact is $1.3 million in local taxes, 1470 jobs, $30 million in payroll, and $126 million in spending. *(See Independent Hovee Report)*

Mr. Moseley, I am aware that you have received a number of letters outlining the economic and other relevant impacts of eliminating this service and therefore will not re-state them here. However, our uncertain economic times are indeed the worst time to make "superficial" budget line item cuts. The short-term potential gain will certainly have much graver consequences to the mid and long term future of our regions. I urge you to reconsider the unnecessary and potential negative effects this cancellation will have on Anacortes and the surrounding communities as well as Sidney and Greater Victoria, British Columbia. With the information contained in the Hovee Report, the fiscal gain for the State of Washington is evident.

2009 is a year for leadership and courage. This is an opportunity to display vision and work together and Tourism Victoria sincerely hopes that all parties involved in this decision embrace this and do what is right.

We therefore strongly support the retention and enhancement of the Anacortes/Sidney ferry service for now, and long into the future.

Thank you for your consideration.

Sincerely,

Rob Gialloreto
President & CEO, Tourism Victoria

cc: 10th Legislative District
Senator & Representatives
40th Legislative District
Senator & Representatives
1st, 21st, 38th, 39th, 44th Legislative Districts
Senators & Representatives
Paula Hammond, WSDOT
Mitch Everton, Anacortes Chamber of Commerce
Don Wick, EDASC
Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Hon. Gary Lunn, M.P.
Hon. Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Mayor Larry Cross, City of Sidney, BC
Sidney Business Association
Bob Hyde, Port of Anacortes
Tourism Victoria Board of Directors

District of Sooke
*Incorporated December 7, 1999*

2205 Otter Point Road, Sooke, British Columbia, Canada V9Z 1J2

Phone: (250) 642-1634 • Fax: (250) 642-0541 • Email: info@sooke.ca • Website: www.sooke.ca

January 19, 2009

File No. 0470

VIA EMAIL: moseled@wsdot.wa.gov

Mr. David Moseley
Washington State Ferries

Dear Sir:

Re: Washington State Ferries Long-Range Plan, December 2008

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007);

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District;

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service;

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes/Sidney ferry service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes/Sidney ferry service be retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Sheila Beech

Sheila Beech
Acting Mayor

cc. Mayor Larry Cross, Sidney
Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Sidney Business Association
Hon. Gary Lunn, M.P.
Hon. Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Tourism Victoria

Community Development Office

*Visit the LARGEST summer street market in British Columbia.*

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**The Peninsula Celebrations Society**

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***...by the sea***
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Sidney, BC, V8L 5J6
Phone: 250-655-6417
Fax: 250-656-4368
info@sidneybusiness.ca
www.sidneybusiness.ca

# Sidney BY THE SEA BUSINESS ASSOCIATION

January 19, 2009

Mr. David Moseley,
Washington State Ferries

Re: Closure of the Anacortes/Sidney ferry run.

Dear Mr. Moseley,

The members of the Sidney Business Association wish to convey our gravest concern regarding the plan to consider eliminating the Anacortes/Sidney ferry run as of September, 2009.

This run has been in effect since 1951 and provides a valuable transportation link between the two countries. While we can understand the tight financial situation the WSF finds itself in, there are several economic factors that would escalate the financial decline in that area. We note that there would be a overall job loss of 1.470 jobs relating to the elimination of the ferry operation and this would have a serious economic impact on the Puget Sound area. The retail sales and service segment would be seriously impacted as a negative result of the loss of tourist dollars thereby causing more unemployment and a tremendous loss of tax revenue. We understand that a recent survey has shown that 91% of all residents in the region have used the ferries and 95% of Puget Sound residents responded that the ferries are very important with voter support at 70% in favor of continuing the ferry run.

It would certainly curtail if not totally eliminate the ongoing cultural relationship that has developed between Anacortes and the Sidney sister city committees.

We feel strongly that the elimination of the Anacortes/Sidney run will have a long term devastating economical and cultural effect on the two cities and we formerly request that you implement Plan A of your Draft Long –Range Plan whereby the WSF continues to operate and maintain the current service level of the Anacortes/Sidney ferry run. There are many economic, cultural and international reasons to keep this run operating and we urge you to consider those factors when considering your plan of action

We thank you for your consideration of this appeal.

Marie Rosko, President
Sidney Business Association.

***Generating new business for your Business***

PENINSULA Gallery

January 20, 2009

Mr David Moseley
Assistant Secretary for the Ferries Division
Washington State Department of Transportation
PO Box 47300
Olympia WA 98504-7300

Dear Mr Mosley,

Re: Anacortes- Sidney ferry

It was a shock to hear that Governor Gregoire has proposed eliminating the Anacortes-Sidney ferry route in the 2009-2011 biennium budget. I appeal to you to do all in your power to ensure that this important international ferry route continues to operate. This route provides approximately 1,470 jobs within the Northern Puget Sound region (Island, San Juan, Skagit, Snohomish, and Whatcom counties.)

There is over $30 million in annual payroll and nearly $126 million in annual spending that is directly and indirectly associated with this ferry service. In these uncertain economic times, every effort must be made to support the jobs that already exist. The spiraling negative effects of the job losses cannot be calculated.

In 2006, approximately 131,600 passengers rode the Anacortes to Sidney, BC ferry. Excluding the 17% of riders within the inter-islands, fully 83% (109,000 net passengers) traveled the full distance.

The State of Washington receives $4.6 million a year in taxes related to the ferry run. Local jurisdictions collect $1.3 million in tax receipts annually. This means approximately $45 in tax revenue per rider.

As well, the friendly cultural link between the USA & Canada and the sister city relationship between Anacortes & Sidney has been nurtured by this link. Our own business has enjoyed the visits of many ferry passengers over the years. With the approach of the 2010 Olympics, we hope many more visitors will include a trip to Vancouver Island via the Anacortes ferry. There are numerous positive effects from this ferry service

Please do all you can to keep this ferry route running. Many, many people (& their families) who depend on it for their living will be grateful voters in the years ahead.

Sincerely,

Larry & Gillian Hanlon

100 - 2506 Beacon Avenue Sidney, B.C. Canada V8L 1Y2
**Phone: (250) 655-1722 Fax: (250) 655-1232**

SENATE DEMOCRATS

WASHINGTON STATE

## Sen-Elect Kevin Ranker
## Statement in support of the Anacortes/Sidney Ferry

It is critical that we maintain the Anacortes/Sydney Ferry run because of the very serious economic impacts and job loss that would result from this cut. Ferries play a vital role in our regional economy as part of our state highway system.

A recent study conducted by E.D. Hovee & Company on behalf of the Economic Development Association of Skagit County found that ferries are vital to the economies of the communities that they serve, and the Sidney route is particularly important for tourism access both to Vancouver Island, B.C. and the Northern Puget Sound region, including Skagit County. Even a partial elimination of ferry service on the Anacortes-Sidney route would threaten thousands of jobs in the five counties of the Northern Puget Sound Region, impact up to $30 million in payrolls and as much as $126 million in related spending, and reduce state and local revenues that are generated by related economic activity. Further, the elimination of this run one year before the 2010 Olympics in BC is unrealistic as we expect an upwards of tens of thousands of visitors generating millions of dollars in revenue in the coming year.

As a member of the Senate Transportation Committee, one of my priorities will be to clarify that ferries are essential to the economic and community health of our region and that they deserve the full support of the Legislature. And, as someone with first-hand knowledge of how important these ferry runs are to the communities that rely on them, I will be doing everything I can to support the Anacortes/Sidney Ferry and ensure its continued presence as a valuable economic stimulus to our region.

# RESOLUTION NO. 04 – 2009

**A RESOLUTION EXPRESSING THE CITY'S SUPPORT FOR THE CONTINUED OPERATION OF THE INTERNATIONAL FERRY RUN.**

**WHEREAS**, the international ferry run between Anacortes and Sidney, B.C. has been in existence for many years providing this key transportation route which is a convenient and vital linkage between Vancouver Island and Washington State. In a recently published study by E. D. Hovee and Company, LLC, the analysis indicated that the following economic and fiscal benefits can be attributed to the international run:

- In 2006, approximately 131,600 passengers rode the Anacortes to Sidney, BC ferry. Excluding the 17% of riders within the inter-islands, fully 83% (109,000 net passengers) traveled the full distance.

- Approximately 1,470 jobs with over $30 million in annual payroll and nearly $126 million in annual spending are directly and indirectly associated with this ferry service within the Northern Puget Sound region (Island, San Juan, Skagit, Snohomish, and Whatcom counties.)

- The State of Washington receives $4.6 million a year in taxes related to the ferry run. Local jurisdictions collect $1.3 million in tax receipts annually. This equates to approximately $45 per rider; and

**WHEREAS**, The international run generated $126 million to the economies of Skagit, Island, San Juan, Whatcom and Snohomish counties in 2006, according to a study commissioned by the Economic Development Association of Skagit County; and

**WHEREAS**, the Governor, in her 2009-2011 biennium budget, has proposed eliminating the international ferry run, for a projected savings of $9.2 million; and

**WHEREAS**, the international ferry run facilitates tourism in Skagit County, benefitting the residents and businesses of Burlington and the entire community;

**NOW, THERFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BURLINGTON, WASHINGTON AS FOLLOWS:**

That the City Council of the City of Burlington strongly encourages the state legislature and the Washington State Ferries to continue operation of the international ferry run.

Adopted this 22nd day of January, 2009

Edward J. Brunz, Mayor

Testimony from Bainbridge

Comments regarding WSF Long Range Draft Plan A & B

ESHB 2358 stated that WSF shall develop fare and pricing policies that: "consider the impacts on users, capacity, and local communities". Without data from the economic analysis impact study, WSF cannot make sound decisions about the fate and subsequent impacts.

Presenting Plan B on the same day that Ferry Policy Committee was disbanded was pretty much pulling the voicebox out of the throats of our representatives who were there to speak and advocate on the behalf of ferry-served communities. They were disbanded before they could review, question, and comment on it. WSF did not speak with Ferry Advisory Committees or local officials and representatives in developing or reviewing of Plan B. Plan B is a non starter and should be flat out rejected by every ferry-served community.

## Let's focus on creating a Plan C – Citizen's Common Cents

### 1. First, make a commitment to fund the system after all efforts for efficiencies have been implemented.

This biannual scramble for funding has got to stop. Do the mountain passes have to scramble for funding of snow plows to keep the mountain passes clear each budget cycle? Is 520 looking at closing down two lanes to reduce its highway costs? Stop treating the marine highway & mass transit system as oddity of WSDOT. Put funding in the budget.

create "cost savings"

### 2. Look for cuts in the system.

WSF overhead should be immediately cut before the legislature even thinks about reaching into our wallets again.

The system has not changed drastically the number of crew, service, and boats in over 30 years. What has changed drastically is the amount of WSF administration - 5 times what it was! So at a minimum, we should be asking for 25% reduction in WSF headquarters. Use the money saved to build more flexible fleet of ferries.

Regrettably the legislature sent WSF on a path of having to find its own money to float the system - thus 80% fare increases in 6 years and the rush to figure out how to raise more money - become landlords, collect rents from franchise (Starbucks, MacDonalds, etc), sell advertisement, get more money out of users! Legislature should take responsibility of restoring funding in the budget.

### 3. Build boats not terminals.

Stop the nonsense of the expensive terminal expansions and improvements!

Terminals should be nothing more than glorified bus stops - shelter and spaces to pass through on the way to your destination. We don't want high end shops, hotels, and

restaurant/coffee franchises at the ferry terminals...we want people to go to our towns to visit, shop, and buy from our mom and pop locally owned stores. Build boats not Terminals! The old terminal's were built like bomb shelters – built to last.

**4. Have contracts for the life cycle of the vessels.**

All new vessels should have build/maintain bidding contracts.

Now that we don't have steel electrics that needed hand-crafted parts and wood shop repairs - downsize the maintenance yard or better get rid of it and contract out maintenance as the majority is now already being done elsewhere – Todd Shipyard currently Dakota, Edmonds.

How is it that WSDOT spends $21 million a year maintaining 946 buildings and WSF is going to spend $22 million for one maintenance yard operation in Eagle Harbor? And why is Eagle Harbor Maintenance yard budgeted into the future up to $90 million dollars? That money could build two new boats! Is there something outrageous about this sort of spending? Is there room for cutting expenses?

**5. Change law requiring ferries to be built only in Washington.**

Common sense would say - repeal the law that requires ferries be built in Washington only. Previous ferries were built at $220 K per vehicle space. The recent ONE BID ONLY came in at $1.5 million per vehicle space – 7 TIMES THE COST! With the new US administration talking about creating jobs for infrastructure - with the build only in Washington law we will not qualify for those federal funds.

**6. Finally, increase the WSF portion of the gas tax from 1/2 a cent to 1.5 cents.**

Citizens' Common Cents.

Debbi Lester
Ferry Community Partnership
Bainrbidge Island member

J07

**These are Doug Rauh's comments on the WSF 2009 Long Range Plan.**

The WSF 2009 Long Range Plan does not meet the goals of the WSF customers or the financial goals of th Legislature.
I will address the things I believe need to be changed in order to meet the Legislature and customer goals.

The very first step that is needed is for WSF to change WSF policies that will improve the systems efficiency, reduce its expenses and make the commute easier for the customers.

- **(no fee) Reservation System accessible by phone or computer.**
  Page 53 current vehicle queuing process is inefficient and would cost about $1,000,000,000 to upgrade all the holding areas.
  A reservation system would accomplish the same thing for approximately $42,000,000.
  Page 54 "How do customers deal with the loss of spontaneity?" Use the Tacoma Narrows Bridge or Walk on.

- **Charge vehicles per linear foot of deck space used**. The Appendix on Strategies did not indorse this idea. The reason given was no benefit to WSF and to hard for the customer to change to shorter vehicles. The US Census indicates that a large portion of West Sound residents have 2, 3 or more vehicles. I have assumed the vehicles vary in length. If WSF provided the incentive the customers would provide the shorter vehicles thus providing additional deck space on each run that can be sold to other customers and reduce the potential for an over load where vehicles must be left at the dock.
  Page 61 "a small car discount would target a very small portion of total riders."
  Bad assumption. Look at the US Census. Most West Sound residents have 2+ vehicles. All it would take to get someone to use the shortest vehicle is for WSF to charge by the linear deck space used.
  The current **WSF policy** actually gives a discount to the longer vehicle because all vehicles under 20 feet pay exactly the same price.
  Page 62 "

- **All variations on vehicle fares should be eliminated for all vehicles with more than 2 wheels.**
  Charge strictly by the per foot length of deck space used.

- **Remove the vehicle over height charge.**
  A vehicle with a bicycle on it's roof will be charged a double vehicle fare per WSF pricing policy.
  A bicycle rack on the back of vehicle use 3 or more feet of deck space and save 50% on the vehicle fare.
  A MarkII has approximately 4,400 linear feet of vehicle deck space.
  The MarkII's final cost to the state was well over $100,000,000 each for the current 208 (20') vehicle capacity.
  Therefore each foot of deck space cost the tax payers of Washington about $24,000.
  During route overload periods please maximize the use of deck space.

- **Implement a fuel surcharge** to help mitigate the volatility in fuel prices.

Note: When WSF purchased the MarkII's Caterpillar Marine won the Life Cycle Cost bid. Then the Legislature change the bidding process to Low Cost bid. The only other bidder Siemens Marine than won the bid. The Life Cycle Cost bid analysis indicated the Siemens engines would use $48,000,000 more fuel over the 40 year life analysis period than the Caterpillar Marine engines. The Legislature moved a Capital Cost to an Operation Cost. Operational costs are paid for by fare box recovery. W should do a lot more to educate the Legislature on how to lower WSF customer expenses. The bid analysis did not consider $140 per barrel oil, so the fuel difference may be much larger due to the recent Diesel fuel increases.

- **State publicly how the vehicle boats are to be categorized.**
  Are ferries highways, mass transit, floating bridges or some combination.
  Treat the ferries equally financially according to their categorization.
  If a land bus gets a subsidy than a marine bus should get the same subsidy.
  If a bridge (floating or suspension) gets a certain percentage of funds than a floating bridge (aka ferry) should get the same funding.
  As a highway of Statewide significance ferries highways should be in line for the same money as highways built on land.

- **Put one MarkII on Bremerton, Bainbridge, and Kingston routes.**
  Assign any additional capacity as needed on those 3 routes.

- **Change the current WSF model of two ferries per route to 3 or more ferries per route.**
  This will reduce the land side infrastructure problems caused by the 10 to 1 compression of the demand caused by WSF offloading 60 minutes of vehicles in about 6 minutes on to the land side transportation system.
  This also reduces the impact of a breakdown from the current 50% lose of capacity to a 33% lose of capacity with 3 boats.
  A side benefit of shutting a boat down during light demand periods.
  The time between boats is reduced by at least one third or 20 minutes on the Bremerton run.

- **Build lighter boats by using aluminum instead of steel.**
  The MarkII boats were built with 900 tons more steel than the Jumbo's.
  If the average vehicle weighted 3,000 pounds than 900 tons is equal to approximately 600 vehicles.
  Thus when a Mark II with a empty car deck is heavier than a Jumbo with 3 loads of vehicles.
  Every MarkII must push the empty weight of a Jumbo + 3 additional loads of cars every time it crosses the Sound.
  Let's change ferry boat construction from steel to aluminum.

- **SR-305 needs the Red Light Runner program installed on all the Traffic Signals on Bainbridge Island because of the traffic surges caused by WSF.**

- **Foss Tug built a Green Tug.** I would like to see WSF review the Foss Tug design for possible ideas that could benefit WSF. See Foss Maritime Company Hybrid Tug Boat 10:20am presentation at the Washington State Transportation Commission Jan 13, 2009.

- **Stop using Bremerton as the operational relieve boat for the other routes.**

When a route loses a boat that route takes the hit.

- **Collect passenger tolls only on one side of a route.** Appendix indicated manual toll process was a restriction to rapid boat turn around. Suggested hiring addition toll collectors, putting two toll booths in a row, and stop selling tickets at the toll booth to speed the tolling process.

- **Round round-trip passenger fares to the nearest dollar for faster cash transactions.**

- **Integrate intelligent automation throughout the WSF system.**

- **Work with WSDOT to mitigate the traffic compression caused by using Ferries as cross Sound Highway Bridges by implementing an Intelligent Transportation System on SR-305.**
  Sensors should be used to monitor SR-305 and the local cross traffic for load changes. When the ferry offload occurs SR-305 should be treated like a railroad track and the offloading vehicles like a train. The first mile of more of vehicles should get a solid green until the first major break in traffic. If there is no waiting cross traffic than the traffic signals should stay green until all the ferry vehicles have passed as determined by real time sensors.

- **The new traffic signal on SR-305 at the Bainbridge Island WSF Toll slows down the offload of the ferry.**
  Currently WSF directs all passengers to the North side of SR-305 than WSDOT directs them to the South side of SR-305 using a new $300,000 traffic signal. A better option would have been to allow WSF passengers to unload to the South side of SR-305.

- **The Coleman Dock turnstiles are to close together to allow passage of wheeled bags** which are used extensively on the Bainbridge route.
  The turnstiles are to close to the access point to the gangway .
  This does not allow any pre-ticketing until after the completion of the unload.
  Thus only allowing less then 10 minutes to process up to 2,000 customers.
  This puts undue stress on the customers.
  The barcode readers with the wider separation and plastic doors that open sideways works better than the three pronged people pokers.

- **The Coleman Dock turnstiles would work more efficiently if they were located back closer to the manned ticket booth.**
  There are two sets of turnstiles at Coleman, one for Bremerton and one for Bainbridge.
  If the turnstiles were located by the ticket booth only one set of turnstiles would have been necessary to process both
  Bremerton and Bainbridge.

- **Put bar code above an below fold line on on-line passenger tickets.**
  This would allow WSF passenger customers to insert the folded bar coded 8x11 paper either way and still get a successful read. The current single barcode is an inefficient way to process that form and effects tourist, senior citizens and anyone familiar with the system but not paying attention thus slowing down the bar code reading process.

- **Use an email Bar Code sent to a Cell Phone as the WSF Boarding pass.**

**Telecommunication bandwidth** is increasing to a point where audio anywhere is expected. Video display, conferencing and even holographic displays are possible. As the mobile and conferencing becomes faster and easier telecommunication will replace some cross Sound ferry trips.

The **volatility of fuel prices** will affect home buying decisions. In the near term the lower prices of hon in the West Sound has been canceled out by the higher ferry fares coupled with the uncertainty of future route schedules and reliability.

Per January 5, 2009 Aviation Week & Space Technology "In the next two decades, almost 80 million Americans will become eligible for Social Security **retirement** benefits at a rate of more than 10,000 a day – seven Boomers every minute." This will change the WSF customer base.

The **business model** has changed from the post World War II model of (8 to 5) 5 days a week at one location to a much more flexible work environment. The biggest impediment to the change has been the upper and middle managers. This recession has flushed most of them right out of the work. Expect more business models like American, Jet Blue and Southwest Airlines. All have used data processing to reduce the actual cost of operating an airline. American allows customers to use their cell phone to display a barcode as the boarding pass (no paper). How long before WSF would try this. Are the WSF bar code readers capable of process cell phone bar codes? Jet Blue has the reservation workers working from home. All of them all the time. Southwest made history by staying in the black by hedging future fuel purchases.

Many of WSF customers use the system to get to **medical treatment** that is only available on the East Side. As the West Sound grows more medical treatment is being offered on the West Sound. Within less than the time frame of this Long Range Plan the West Sound will have most of the treatments the East Sound has.

Many of WSF customers use the system to access **Aviation Infrastructure** or **SeaTac**. If the next Regional Airport is built on the West Sound many of those customers will no longer cross the Sound only to access aviation infrastructure.

Many of WSF customers are going to **Cultural events**. With the reduced schedule the number of individuals who can afford to stay overnight in Seattle or drive around after the event will be greatly reduced.

With the sale of Puget Sound **Energy** to Macquarie the price of electrical energy will be going up substantially. This will affect business type and location. Fewer businesses locating or staying in the Puget Sound means fewer WSF trips.

Originally people worried that WSF would take business from the **Tacoma Narrow Bridge**. Who would have predicted the substantial increase in fare would force those that can to drive around using the TNB.

**Tourism** is a growing segment of the Washington economy. If WSF cuts the links like Port Townsend to Keystone and Sydney to Anacortes fewer tourist will want to use the system.

The lack of awareness as to what was available made me very upset with WSF.
It appeared to me that WSF and Kitsap Transit did not care about Bainbridge Island. Their only concern was could they get grant money from the feds. That is why you see New Jersey barrier along SR-305 across the Ravine. Those are the only New Jersey barriers on the Island and it appears to be just a WSDOT finger in your eye type of statement.

Repeatedly WSF and Kitsap Transit consultants have proposed routing bus uphill to East Winslow Way, turn left toward SR-305 then turn right on SR-305. Where do you get these designers? A much better solution would be to route all traffic down hill from the bus holding and parking garages. Hold all SR-305 access until the ferry is offloaded. Then let the buses access SR-305 followed by the cars from the parking lot. Keep all traffic signals green on SR-305 while the offloading traffic is clearing. Use ITS (Intelligent Traffic System) sensors to identify when the ferry traffic needs the green. Then hold the green until the traffic has cleared. This could take 6-8 minutes, but would ensure that the regional highway (SR-305) actually worked like a regional highway.
WSF should never propose to put truck access across the Ravine and next to the Bainbridge Island Water Front Park. Parks are sacred on Bainbridge.

WSF proposed building a 600 vehicle holding area next to the WSF Terminal on Bainbridge. Any vehicle that has to wait 3 or more boats is better off driving around. It would be cheaper and faster. WSF would have had to cut the trees between the WSF Maintenance Yard and the WSF Terminal. Next to parks, trees are Islanders most sacred objects. WSF should think long and hard before cutting trees.

- The 2009 WSF Long Range Plan proposes to put the largest share of its capacity at the only terminal you have to cross a bridge to get to and that bridge sits on top of the Seattle Fault Line (**earth quake**). The Puget Sound does have earth quakes so lets plan for them in the planning stage. Earthquakes can destroy anything so the best solution is to disperse the ferry capacity to multiple terminals. I like the idea of one MarkII at Bremerton, Bainbridge, and Kingston.

- Page 8 WSF Long Range Plan revenue for plan "A" $5,638,000,000.
  revenue for plan "B" $5,243,000,000.
  Difference **$ 395,000,000.**
  On a reasonableness factor this would rate as **not believable.**

- Page ES-9 "With a dedicated tax subsidies of almost $900 million over the 22 years, there would be an estimated tax subsidy **surplus in the operating account** of approximately $719 million, which would be available to."

  How do you convert Operational Funds into Capital Funds? Is this what other Mass Transit systems do? I do not like this mixing up of the funds. I get nervous that some of the money may get lost in the shuffle.
  It looks like the West Sound is paying an additional transportation tax so Seattle will be able to use more state funds for large Seattle projects.

- Page 30 WSF Long Range Plan Seattle-Bainbridge 2030 Vehicles 2,909,767.

MarkII max vehicles 202, 46 runs (23 each direction), 9,292 daily vehicle capacity, 3,391,580 annual vehicle capacity.
2,909,767 / 3,391,580 = **90% full all runs all year.**
This load factor is **not believable.**

- Page 32 WSF Long Range Plan **Westbound PM** Arrival Terminal **Bainbridge** Vehicles **Peak Hour** Year **2030= 604.**
With two(2) MarkII's working this route each having a maximum Vehicle capacity of 202 and a 35 minute crossing time.
You would need to dock 3 times in 60 minutes. If that is currently not possible how can it be possible in 2030?
The 604 number is **not believable.**

- Page 33 **"Mukilteo-Clinton...a significant portion of its ridership is commuter-based."**
Boeing moved their headquarters to Chicago. Boeing moved the 787 wing manufacturing to Japan. Boeing excess Renton facilities have been sold for condo's. Labor has struck Boeing the last two contracts. Boeing is preparing to build new assembly facilities outside of the Puget Sound Region, State, Country. The move will occur with the next launch the 797. The Mukilteo-Clinton route will see the commuter numbers shrink over the next 20 years.

- **Page 34 WSF Long Range Plan "The ridership projections used in this planning effort assume that recreational ridership will increase at the same rate as other ridership."**
As the Baby Boomers retire the commuter ridership will reduce faster than other segments and the recreational ridership will increase faster than other segments.
**Bad assumption by WSF.**

- **Page 38 WSF Long Range Plan "Seattle-Bainbridge was given a 2-boat-wait standard in order to equalize its overall average trip time with Seattle- Bremerton."**
A regular uses of the Bainbridge and Bremerton route know it takes one hour to drive from Bremerton to Bainbridge. The total trip time from Bremerton thru Bainbridge to Seattle takes about 2 hours.
The reason every one doe it is because the first boat of a two boat wait is always missing in Bremerton whereas you just might get on the first boat at Bainbridge. This is because Bainbridge has 23 departures compared to Bremerton's 14.
The logic goes like this Bainbridge (~20,000) is half the size of Bremerton(~40,000) and the Bremerton boats(~100) are half the size of the Bainbridge boats(~200) plus the Bremerton boats run half(14) as often as Bainbridge(23).
The result is the Bremerton area get less vehicle space per 1000 population than Bainbridge.
For Bainbridge's 20,000+ population WSF provides 4,646 vehicle departure and arrival spaces.
Bremerton's 40,000+ population gets (~2,000) vehicle departure and arrival spaces.
The rule of thumb is Bremerton will only get one quarter of the service Bainbridge gets.
WSF keeps switching boats on the Bremerton route so it is difficult to analyze the actual capacity.
This uncertainty at Bremerton is another reason the West Sound population favors the Bainbridge route.

- **Page 41 WSF Long Range Plan "Exhibit 10 shows actual volume-to-capacity ratios - the percentage of vehicle space (capacity) on a vessel that is taken up by paying vehicles (volume)...".**
How many non-paying vehicles are on the deck?

- **Page 47 WSF Long Range Plan "For all jurisdictions, except Whidbey Island, the ferry LOS standards do not have an impact on local growth management concurrency plans."**
  Why wouldn't the Growth Management Board review the lack of capacity on a state highway the same as lack of capacity on a county/city road.
  The Growth Management Board should review the WSF Long Range Plan for compliance.
  Bremerton has a new four lane divided highway to the WSF terminal, new terminal, new parking garage, new ferry exit tunnel, one quarter the capacity of Bainbridge and WSF is proposing cutting the capacity in half.
  Bainbridge will have a congested SR-305 from ferry traffic due to the boat size being mismatch with the land side vehicle capacity, old terminal, limited holding, no reservation system, mass transit cutting buses and service, WSF funneling Bremerton vehicles to Bainbridge while not using the new facilities in Bremerton, plus Bainbridge is the only West Sound terminal you have to use a bridge to get to and that bridge is on top of the Seattle Earthquake fault. WSF should just hope no one in either Bremerton or Bainbridge pushes the concurrency issue to the Growth Management Board.

- **Page 73 Where is the WSF Maintenance Yard preservation costs?**

- **Page 80 "The interlocking reasons for the declines in ridership from 2000 through 2006 (fare increases, increased telecommuting, rising gasoline prices, economic conditions, etc.)"**

  Baby Boomer retirement needs to be added to this list.

- **Page 83 "The most promising cross-sound candidate routes are:"**
  Bainbridge to Seattle was not listed yet that is probably one of the very best routes for passenger only service.
  Large base of customers with money that want to go to Seattle and do go to Seattle for business and pleasure.
  The trip would be around 12-15 minutes each way making a 30 minute round trip possible.
  3 passenger only boats could provide 10 to 15 minute departure time.
  WSF needs to save fuel cost one Mark II could removed from this route.
  Passenger only vessels could leave as soon as they are loaded or every 15 minutes which ever came first.
  Passenger only vessels could be shut down during low demand periods.
  Buses could pick up Island residents all day long on an on-demand versus routed service.
  During the 10-15 year Viaduct construction period Seattle would want WSF to deliver fewer vehicles to downtown Seattle.

- Page 91 **"a complimentary passenger-only system that would be funded at the regional level."**
  Sounds like an unfunded mandate to me. What will the state and regional level costs look like when combined.
  The constituents of the state and the constituents of the region are the same tax payers. Just setting up another set of books and building another layer of government does not reduce transportation expenses which should be our primary goal.

- Appendix D page 12 Bainbridge (2006) 2,950 (2030) 3,880

Bremerton (2006) 1,500 (2030) 1,740

Bainbridge increases 1,000 and Bremerton a quarter of that.

How many on the Bainbridge route would have used the Bremerton route if WSF had provided the service?

- Appendix D page 14 **Bremerton headway 75 minutes**
  24 hours times 60 minutes = 1,440 minutes.
  14 departures in 1,440 minutes = 103 minutes between departures in a day, not 75 minutes.

- Appendix D page 19 **30%** growth seems high. Did the peer review team include the Baby Boomer retirement, additional telecommunications, increased band width.

- Appendix D page 25 **The Bremerton Sunday peak period is 3-7pm while Bainbridge is 6:30-10:30pm.**
  Why not route some of the Bainbridge 7-10:30pm traffic to Bremerton?
  This would spread the load and reduce the wait time.

- Appendix D page 26 **"Recreational travel may not be as closely related to future land use as other discretionary and maintenance (or non-discretionary) trip purposes,"**

  Bad assumption. How did you confirm land use and WSF trips are related?

- Appendix E-4 Page **Increase Parking Capacity at Terminals** this strategy should not continue.
- Appendix E-4 Page 14 **Optimize Use of Electronic Fare Sytem (EFS)** yes continue.
- Appendix E-4 Page 20 **Fare Card Coordination - ferries and parking** WSF customers need real time on-line access to reserved parking before arriving at a terminal. If all parking is full the customer needs to know so they can drive on or park and take a bus.
- Appendix E-4 Page 26 **Round Trip Ticketing** yes continue.
- Appendix E-4 Page 29 **Tandem Ticketing** NO use automation correctly no more manual ticket processing.
- Appendix E-4 Page 32 **Link employee reviews to ticketing processing times** No the slow processing is in the application design not the toll booth operator. Fix the design. Do not eliminate auto level ticketing sales at terminals.
- Appendix E-4 Page 35 **Extended ferry schedule** yes continue
- Appendix E-4 Page 40 **Remote Ticketing** yes continue
- Appendix E-4 Page 43 **Re-orient Basic System Design** Yes Yes & Yes
- Appendix E-4 Page 49 **Reservation System** Yes and do not make it complicated, if you use license plates than allow a driver to enter multiple plates.
- Appendix E-4 Page 53 **Shared Parking** Yes WSF could make the **Eagle Harbor Maintenance Yard Parking Lot** available for a couple hundred vehicles.

# Passenger

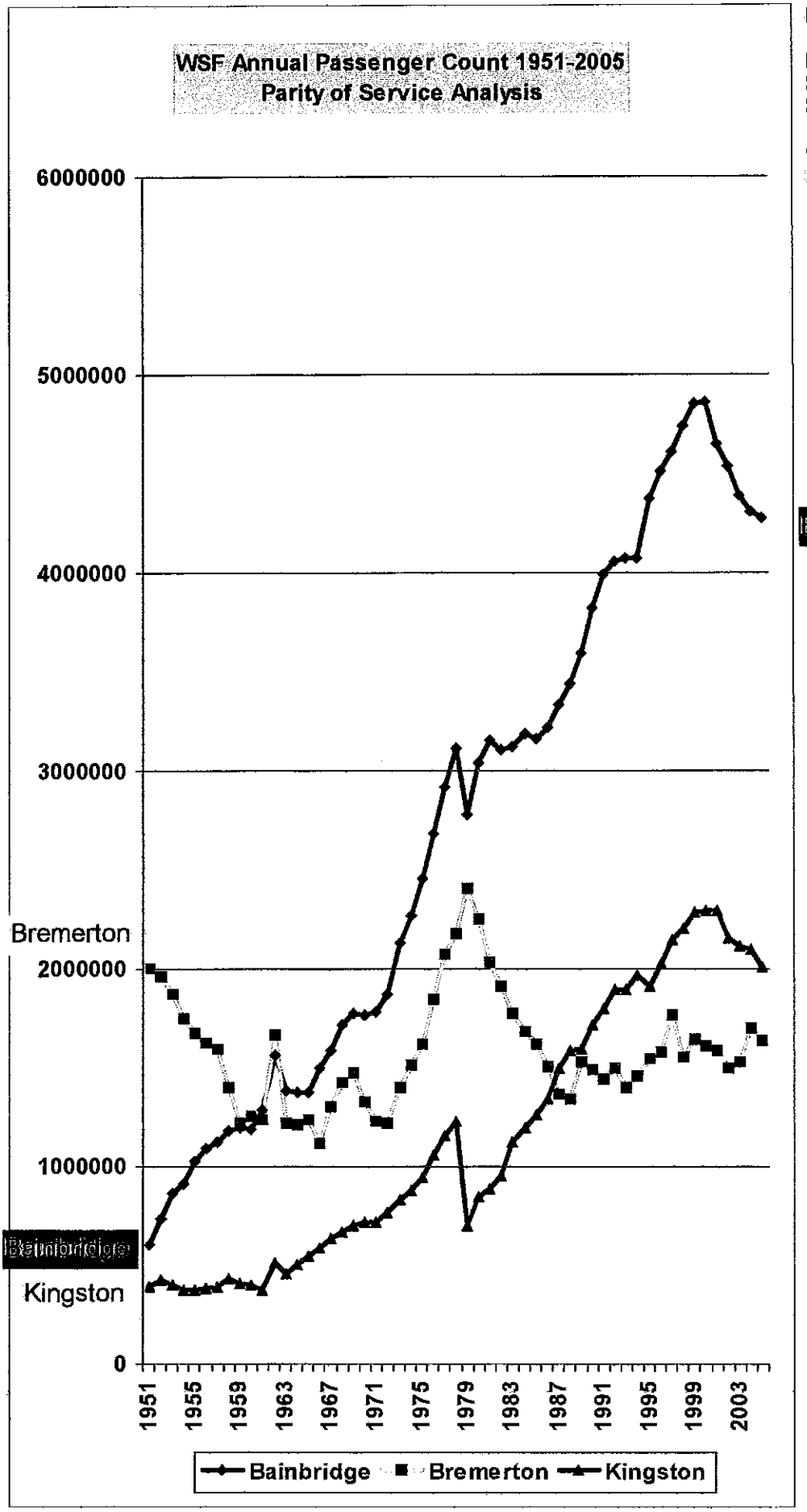
Puget Sound Regional Council
WSF Passenger Counts

PSRC Excel (wsf05.xls)

PSRC Contact
Kris Overby
KOverby@psrc.org

Charted by
Doug Rauh
rauh01@msn.com

Oct 13, 2006



# Vehicle

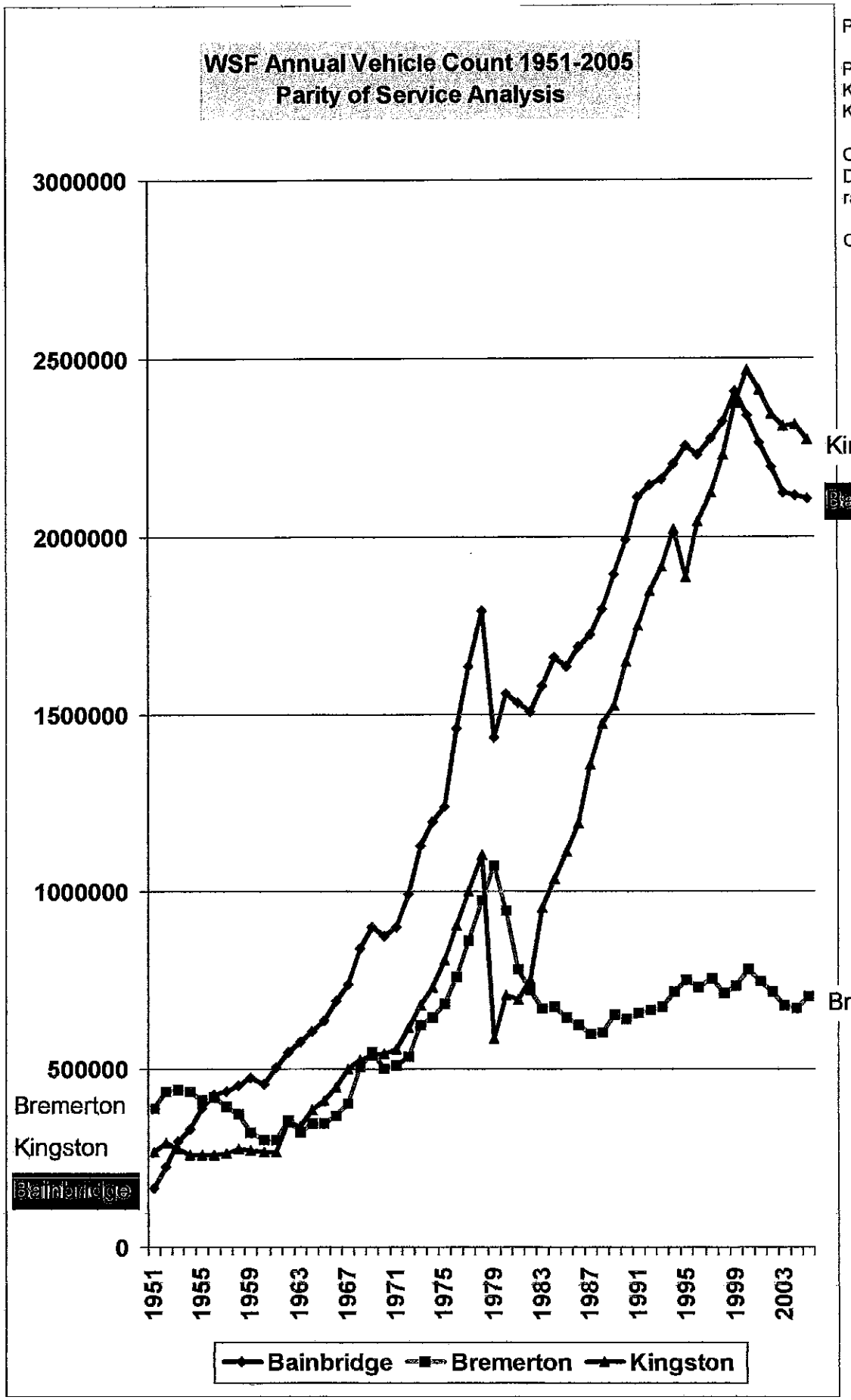
Puget Sound Regional Council
WSF Vehicle Counts

PSRC Excel (wsf05.xls)

PSRC Contact
Kris Overby
KOverby@psrc.org

Charted by
Doug Rauh
rauh01@msn.com

Oct 13, 2006



January 21, 2008
Written Comment on Draft Long-Range Plan

My name is Jane Crum, I live at 803 Merrill Pl W., Bremerton, WA 98312. I work for the City of Seattle and commute Monday through Friday. Thank you for the opportunity to comment on the WSF Draft Long-range Draft Plan.

Proposal B recommending one ferry on the Bremerton run and cutting night service; and reducing service to two ferries on the Southworth/Fauntleroy/Vashon run is incredibly unbelievable. These reductions in service would have devastating consequences on individuals, families, the community, environment, and economy of Kitsap County. The following bullets contain highlights of some of my thoughts:

- I moved to Bremerton in 2001 from Seattle to help my mother who had developed Alzheimer's disease. From personal experience, I know if you cut service to Bremerton the people who have responsibilities caring for young children, elderly parents, or ill loved ones will be in serious trouble. If this proposed cut had happened when Mom was living, I would have had to quit my job, or move my mother to Seattle, selling my house in Bremerton and relocating also.

- The ferry is a highway, another form of transportation. With all the transportation problems in Western Washington, taking away another form of transportation doesn't make sense. The volume of traffic will increase dramatically with people driving to Seattle, or driving to Bainbridge to try to catch a ferry there. And of course there is the return trip as well. This is counter to the state's commute trip reduction program. The Bremerton and Southworth runs cut down on use of congested roads.

- I'm reading the Title VI statement on WA State Depart. Of Transportation Ferries Division Draft Long-Range Plan: "...(WSDOT) assures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination based on race, color, national origin and sex in the provision of benefits and services...." I think that the plan B discriminates against lower income communities. I don't see that plan B reduces service to Bainbridge, which is good, but why to the communities of Bremerton and Port Orchard, Southworth, Vashon? It is common opinion that our communities don't have as much clout or power as residents of Bainbridge.

- As service is reduced, the ridership will continue to decrease. It has decreased as your plan states over the past years because with less service, getting on the ferry is risky. The proposed reservation system again speaks to a class system, and those who ride the ferry less, or may need it for emergencies, or do not have a regular schedule may not be able to get on with their vehicle. If commuting on the ferry becomes too difficult, by foot, or by car, I may have to move to Seattle, or quit my job.

- As more people drive to Seattle because of the proposed poor ferry service, more goods and services will be purchased in Pierce and King Counties. Less revenue and less taxes for Kitsap County.

- How can the planners of Plan B be serious about Kitsap County supplying 2 or 3 foot ferries when Kitsap County is cutting bus service due to budget? The 9:50 p.m. bus meeting the 8:50 p.m. Bremerton ferry arrival will be

discontinued sometime in 2009 (I can't get the exact date, I've asked twice). Sunday bus service on Kitsap Transit will be discontinued, and the Access bus meeting the 4:50 a.m. ferry from Bremerton also. These are just the services in Bremerton that I know about. I often use Southworth ferry and Kitsap Transit, but I haven't zeroed in on those proposed reductions. If they can't keep adequate bus service, I don't see that they would have the money to operate a foot ferry system to Seattle

- Please consider all the times the Bremerton ferry is down due to maintenance problems, personnel scheduling mistakes, or ferry/dock collisions. What will we do without a second ferry to serve as transportation? And to top it off, there wouldn't be any extra capacity to pull ferries from other runs, and no back-up ferry.

- Is it lawful to cut off a community from viable transportation? It doesn't seem like it could be.

- I don't understand how Governor Gregoire or the Washington Department of Transportation Ferries Division could consider dismantling the ferry system that is the state's largest tourist attraction, and also the second largest transit system in Washington and the largest ferry system in the United States. "No matter how you look at it, a ferry is a beautiful way to go." It is, but for commuters, it is not a cruise. It is a practical, viable means of transportation that enables us to earn a living and return home to spend money on goods and services in Kitsap County, increasing tax revenue. For Washington residents and tourists from across the United States and other countries, it is a beautiful trip and access to the Kitsap and Olympic Peninsula. Again, is grievously weakening the ferry system the legacy Governor Gregoire and the JTC and Ferry Policy Subcommittee want?

- I have friends that ride the ferry just to have lunch at the beautiful Bremerton waterfront, and return to Seattle via the ferry. They will not be doing this if they can not be assured to return to Seattle on a convenient schedule. Bremerton and Kitsap County will go into a serious recession and will not be allowed to thrive if you cut off access to Kitsap Peninsula and surrounding counties.

- Has the Ferry Division re-fit the ferries with more fuel efficient engines? Has that been considered to save costs and make the older ferries more efficient?

- Has sharing a smaller ferry between Bremerton and Vashon/Southworth or Bainbridge runs at night or mid-day when car volume goes down been considered; keeping runs available, but smaller boats when there are less cars?

Thank you for considering these thoughts. I plead with you to take another look at your proposal B, and take into consideration the lives that would be negatively impacted or destroyed by your decision.

Sincerely,

Jane Crum

January 21, 2009



**Marine Transportation Association of Kitsap**
**Comments on Washington State Ferries' Long Range Plan**

The Marine Transportation Association of Kitsap (MTAK), formerly known as Sinclair Landing Association, is a not-for-profit corporation that is involved in the research and development of an environmentally-sensitive, high speed-low wake boat designed to successfully navigate Rich Passage. MTAK is also committed to pursuing passenger ferry service between Kitsap and King Counties. In existence for over a decade, MTAK served as a partner and funding conduit in the very successful public/private partnership for the Bremerton Transportation Center, now the best ferry terminal in the State of Washington.

MTAK is pleased to see the inclusion of passenger ferry service as part of WSF's vision for transporting Kitsap residents to their jobs, schools, health care, and recreation in Seattle and King County. The MTAK Board of Directors has long believed that higb-speed, energy efficient passenger ferry service will be an integral part of connecting Puget Sound in the future and shaping the Kitsap economy. We encourage state, local and regional government to collaborate in the development of an integrated marine transportation solution, including the provision of a viable funding mechanism for the Puget Sound region.

Our concerns regarding this new long-range plan include:

1. The plan proposed by WSF substitutes passenger ferries for 50% of the commuter service from Bremerton to Seattle. The plan MTAK has been envisioning in recent years includes service that supplements WSF's service during the commute time, rather than replacing it. Passenger ferry service could provide service during off-peak hours, potentially providing operational savings to WSF.

2. MTAK is concerned about the timetable proposed for the implementation of passenger ferry service and the reduction of service in Plan B. History has demonstrated that there will be a need for some public funding for successful uninterrupted passenger service, and there is no funding plan for WSF's proposed model. The plan also calls for the local transit agencies to provide passenger ferry service, yet many operational details remain unclear, i.e., private sector involvement and governance of inter-county service. In order for passenger ferry service to be successfully implemented, a plan for an orderly transition will need to be developed.

MTAK stands ready to serve in any appropriate role, including assistance with the development of the fleet of boats that will be needed to provide service. In addition, we would welcome the opportunity to replicate a funding and planning model similar to that which we used in the development of the Bremerton Transportation Center.

Contact information:

| | |
|---|---|
| Beverly Kincaid, President | (360) 895-1321 |
| Carla Sawyer, Board Coordinator | (253) 756-1180 |
| Joan Dingfield, Communication Chair | (360) 990-0475 |

**Marine Transportation Association of Kitsap**
P.O. Box 29 ~ Bremerton, Washington 98337
Website: www.MTAK.org

Mayor Cary Bozeman

January 21, 2009

David Moseley, Assistant Secretary
WSDOT Ferries Division
2901 3rd Avenue, Suite 500
Seattle WA 98121

Dear Mr. Moseley:

Below are my comments regarding the WSF Draft Long Range Plan that was released in December 2008.

Plan B is clearly unacceptable and the focus needs to be on improving Plan A or considering Plan C. Plan B is an abdication of a critical state role that has served as the life blood of the citizens and the economy of the West Sound and a vital support to the economy of King, Pierce and Snohomish Counties and their Cities for their employers and businesses. We need to be more creative and aggressive about finding ways to save money within the ferry system. We should focus on boats not terminals and reform some of our approaches around ferry design and purchasing to reduce the costs that are driving much of the project ferry capital shortfall. Rather than viewing passenger-only ferry service as a complement to the existing auto service and a means to improve the financial viability of the system, both Plans A and B assume that POF service should be a substitute for the auto ferries.

WSF is part of our State Highway system and must be funded as such: "WSF is an essential part of the highway network in western Washington. Its 200 miles of marine highway provide links between urban areas on the east side of Puget Sound, growing communities on the Kitsap Peninsula, and the more rural destinations on the Olympic Peninsula and the San Juan Islands" (Pg. 3). Ferries are our bridges and our roads and have always been considered by state law as a legitimate part of the highway system. However, this draft plan repeatedly makes a case to reduce the ferry system in order to protect funding for highways. A stated goal of "The Ferry Bill" ESHB 2358 was to keep costs as low as possible while continuously improving the quality and timeliness of services, the proposed Plan B dramatically decreases the quality of service. Our ferry system serves 23 million passengers annually and provides vital cross sound links between eight counties and Canada. Our state should not sacrifice one portion of Washington's highway system by abdicating state responsibility by shifting the responsibility to local jurisdictions, primarily Kitsap County. 95% of Puget Sound residents believe the ferry system is important. Cutting service is akin to closing down highways or only keeping our vital highway passes open during peak seasons.

I urge you to maintain the current level of service in our ferry system and begin a serious process of deciding how to adequately fund the system in the future.

Sincerely,

Cary Bozeman
Mayor

Amanda Callison
7312 N.E. North Shore Rd., Belfair, WA 98528

January 11, 2009

Ms. Joy Goldenberg
Washington State Ferries
2901 Third Avenue
Seattle, WA 98121

Dear Ms. Goldenberg,

Please improve the Washington State Ferry system's Draft Long-Range Plan (Plan B).

I have been a regular commuter on the Bremerton/Seattle ferry run for the past 2.5 years. As a daily commuter, I **depend on the current level of service** on this run to get to and from my job in Seattle. Due to my work schedule, I have no flexibility to take ferries other than 6:20 a.m. from Bremerton to Seattle and 5:30 p.m. from Seattle to Bremerton. A reduction of service on this run would force me to find alternative transportation.

At least 30 percent of your ferry riders are commuters, like myself. I believe commuters are the majority of those unable to adjust their schedules. A reduction of service could dramatically reduce ridership on this run, thus escalating the problem of low ridership.

I am skeptical of the proposal to rely on the counties to provide supplemental passenger-only ferries. Kitsap County attempted to assume responsibility for the Bremerton/Seattle passenger-only boats when the State cut that service. However, the county tax-payers refused. I don't believe those tax-payers have changed their minds.

**We need more service, not less.** Ferry ridership is expected to increase by 36 percent by 2030 (assuming current service levels). Therefore, it is unreasonable to cut service on our marine highway system. The Washington State Ferries are a lifeline connecting the communities on each side of the Puget Sound. The ferry system is as important as other highways and should be provided the same respect, funding, and level of service as the rest of Washington State's transportation system.

I believe the new Presidential administration provides an opportunity to increase funding. President-elect Obama wants to help stimulate the economy by improving the nation's transportation infrastructure. I urge you to take action to secure additional funding to expand and improve Puget Sound ferry service rather than to cut back.

If you make the mistake of reducing service now, it will become difficult to recover when more service is needed. Plan B is out of phase with reality.

Thank you for your consideration,

Amanda L. Callison

Amanda Callison
Daily Ferry Commuter

# Response to Washington State Ferries Long-Range Plan
# Written Comments from Joan Dingfield
# Bremerton resident and commuter
# January 8, 2009

In previous testimony during this process as a member of the Ferry Advisory Committee Executive Council, I stated that I was looking for courage. Today as a Bremerton commuter, I am returning to say that I am still looking for that courage.

This draft long-range plan put forth by Washington State Ferries is the last key milestone in the two-year ferry financing study. There has been a great deal of distrust expressed about the process, and I am not at all certain anything is going to come from the two years of work. I am concerned that the State will continue to cobble together some sort of program and that Plan A and Plan B somehow will get institutionalized for future action without more dialogue in a community-oriented public process.

So I again call for leadership and courage from Washington State Ferries management, labor, the Transportation Commission, the State Legislature, and the Governor and Transportation leadership. Each carries a role in orchestrating the final steps of this work, and the same public that supported change at the national level is looking for change at the state level.

## Washington State Ferries management

I was dismayed at the definition of the core marine highway system. By taking the position of keeping some service on every existing route, you thwarted any creative approach to the design of transportation service and committed to spending hundreds of millions of dollars in your capital program on a plan that may not be the best choice.

It takes courage to reform an organization so deeply entrenched in labor rules and bureaucracy. In choosing someone who is not a maritime industry person to lead the organization, you have chosen to pursue systems reform and innovation. You need to go beyond simple budget cuts and service reductions. There has been no report-out on operational efficiencies, other than mention of the elimination of 25 budgeted positions, which certainly does not represent the actual number of reductions; the plan is silent on efficiencies recommended by the consultant through this two-year process. This is the window of opportunity for fundamental operational shifts, and more importantly, a change from an employee-oriented system to a customer-oriented one. Your customers will support you if you take on the transformational work necessary to get the ferry system operating soundly, with expenditures under control and revenues to support it.

## Labor Leadership

As stated earlier, I find that WSF is an employee-oriented system, not a customer-oriented system. There is a pervasive sense of entitlement that I struggle with day-to-day as I ride. I know there are employees who earn six-figure salaries when overtime is included, and yet I hear multiple conversations about the need for new chairs and about not being willing to visit

Bremerton because of the obligation to pay for parking. I don't want to trip over brooms and plungers when I know you are being asked to keep boats cleaner - I would much rather encounter people who take pride in their work. We are all working harder and not gaining ground. In these economic times and as a fellow state employee, I feel very fortunate that I have the benefits I have.

I am looking for courage from you in epic proportions. Bremerton is facing a 50% reduction in service from a system that is tangled in complex, burdensome work rules and lifetime benefits. As I look at other public agencies doing transformational work, I have seen no evidence of labor being at the table during this last two years, expressing a willingness to take on the reform work necessary to save this transportation system. I would invite you to come to a Ferry Advisory Executive Council meeting and hear from the communities you serve. There are many opportunities for better and more efficient service that are thwarted by a system that cannot change.

## Transportation Commission

I am looking for courage from you to advocate for increased revenue from the State for ferries. Do not fall into the trap of the State Auditors Office mentality of getting revenue from customers either way – by driving the Narrows Bridge or through ferry fares. I have been clear in my belief that ferry customers should pay more. But farebox recovery cannot be the sole source of new revenue; it already carries a disproportionate burden compared to other transportation systems. WSF needs some intense support right now with the Legislature - you need to use your own studies and fight for new sources of revenue.

## State Legislature

The courage I am looking for in the Legislature is to face your own Growth Management mandates, recognize the ferry system as an integral part of the state's transportation system, do the hard work of defining the core system, then properly fund it. That's all. I do not believe it is productive to take the punitive approach of not providing more money because of voter support for I-695 and funding. If this conversation continues, I can assure you that ferry communities will organize and focus on equitable reductions of funding from other communities in the state that supported I-695, also looking at tax dollars paid vs. tax dollars returned. Please do not pass on these reform efforts for yet another decade or two while patching together some scheme to pay for a system that is deteriorating rather than improving.

Other issues to consider:

- Look at the trade-off your Build in Washington policy brings vs. the loss of access to federal dollars because of it.
- Eliminate the retire-rehire law as part of your own economic stimulus package. When the state and other agencies are laying people off, retire-rehire allows double-dipping in the state system. It also does not develop a new workforce and encourages the status quo rather than looking at new ways of doing business.
- Putting more cars on the roads by reducing ferry service flies in the face of the work you are trying to accomplish with the restoration of Puget Sound. As a commuter, if my options are reduced by 50%, I will reluctantly shift to driving.

**Governor Gregoire, Secretary Hammond, and senior policy staffs**

Courage will be most important here. We need long-term sustainable leadership that will leave a ferry and transportation legacy that future generations will benefit from. Do not let this reform opportunity go by. Do not let the Legislature and the ferry system take a pass on the difficult decisions that lay ahead. Ferry customers and communities will help with the work. We need leadership, however, that is willing to confront the old system, create a new one, and commit to its future.

## Other:

My remaining comments deal with specific issues raised in the plan.

## Bremerton-specific issues:

- Plan B shifts the entire focus of ferry service north, reducing service in central and south Puget Sound. That is not where the population is currently or where growth projections are in the future.
- I will not belabor the point too much about the 50% reduction in service from the only run that has shown an increase in use. WSF's approach to Bremerton service is one of capacity and numbers, not access to service. Dropping one boat from this run will shift the burden to Bainbridge and put more traffic on Hwy. 305.
- The super-class ferries are the best design for Rich Passage and can be sped up to achieve a 45-minute run. If you do that, you will dramatically change the ridership for both Bainbridge and Bremerton.

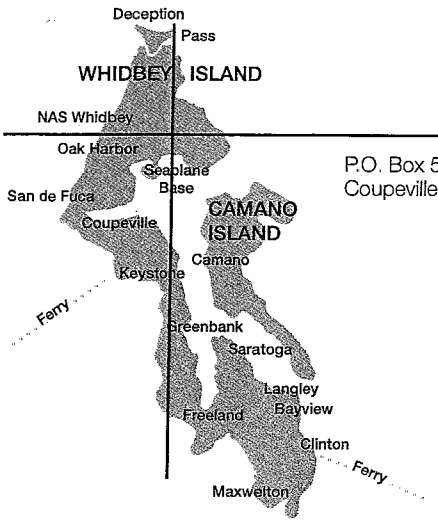
## Passenger ferry service:

I have long been a proponent of passenger ferry service connecting communities around Puget Sound and believe that it is not just our past but our future in transportation. The nature of the Bremerton commuter runs supports a water transit system. However, rather than just arbitrarily handing the responsibility off to local agencies in three years, Washington State Ferries needs to be at the table, actively participating in the design of the Puget Sound transportation system. And the local agencies will need a ten-year transition period with some state funding included to get the service up and viable.

## Information technology:

- I am delighted with the move toward better systems through better information technology and would encourage an even quicker move in this direction. A reservation system and expansion of electronic ticketing is more efficient and is the norm in all other transportation systems. Providing a way to purchase tickets with cash via a machine of some kind will also support more efficiency.
- Should the State pursue passenger ferry service as a local-only option, we will need WSF to ticket their walk-on passengers on both sides of the run; maintaining the current system will undermine the success of passenger ferry service. This should not be a negotiated item for WSF, as they are abdicating their responsibility for providing service.

Dayside




# Island County Board of Commissioners

P.O. Box 5000
Coupeville, Washington 98239-5000

Phone: (360) 679-7354
From Camano: (360) 629-4522
From S. Whidbey: (360) 321-5111
Fax (360) 679-7381
www.islandcounty.net

January 23, 2009

Washington State Ferries
Attn: Joy Goldenberg
2901 3rd Avenue Suite 500
Seattle WA 98121-1042

Dear Ms. Goldenberg:

Whidbey Island depends upon the ferry system for its access. The future of our marine transportation system is of great importance to us. The ferry system provides two-thirds of the Island's ingress and egress connections. Deception Pass Bridge, located on the northern tip, provides the only other access point. Both ferry routes are important to our communities. The proposed severe cutbacks to the Keystone run are most disturbing.

The two most critical transportation needs of our community are reliability and accessibility. Reliability of service is necessary for our businesses, our Navy Base and for our visitors. For this reason, whatever plan you adopt **must** include the funding for two Island Home Ferries. The current passenger-only service on the Keystone run is disruptive, inadequate and unacceptable into the future. Lacking vehicle transport to the peninsula has impacted us economically and has reduced our ability for emergency evacuation by one-third.

Understand that we support expanding public transportation opportunities regionally and nationally. There exists great potential for passenger-only service throughout many parts of Puget Sound as we shift our culture away from being so dependent upon the automobile. It is also important to recognize the unique demands of each ferry run to meet the needs of our travelers. Just as the demands are different from the Narrows Bridge to Deception Pass Bridge, so are there contrasts between each ferry route. The commuters to the urban docks have taxi, vanpool, transit, and airport shuttle service as well as rail options. Military commuters, commercial users and tourists on this route are very automobile dependent because of our rural area. Increased dependence on passenger-only service for Keystone or Clinton will not provide the reliability and

accessibility we need to sustain our economy, adequately meet our emergency preparedness needs, nor meet the needs of our Navy base.

Our Naval Air Station with approximately 50 frequent users of the Keystone ferry service, has been significantly impacted. Also there is a need to transport equipment and goods via this route.

This transport of supplies and personnel to Bangor or Bremerton, now must travel north to Skagit County, then south through Edmonds because the service is so limited at Keystone, adding costs and congestion.

We understand the severe financial constraints facing Washington State. For this reason efficiency and effectiveness should be of highest priority. The Keystone run must be made more reliable with sturdy vessels which are not as subject to weather related cancellations and sufficient trips each day to accommodate the demand. Commercial and Navy traffic should be encouraged during early morning and evening runs to reduce competition with tourism. The reservation system must be refined so that every boat is filled to capacity. Please correct your signs so they do not say "Reservations are required". This is a deterrent to potential ridership. Currently vehicles without reservations are discouraged from taking a chance at getting across.

It is unfortunate the upheavals to service have created distrust so ridership is declining at a time when revenue generation is most needed. Reliability and accessibility are needed for our community which is dependent upon the Keystone ferry service. We urge you to include two Island Home ferries into your plan, explore ways to enhance the reservation system to improve efficiency, and to maximize ridership and thus revenues. This approach will best begin to meet the needs of our community and sustain our economy.

We look forward to working with your agency to meet the transportation needs of our county.

Board of County Commissioners
Island County, Washington

John Dean, Chairman

Helen Price Johnson, Member

Angie Homola, Member

# CITY OF MUKILTEO

11930 CYRUS WAY • MUKILTEO, WASHINGTON 98275

January 13, 2009

Mr. Ray Deardorf
Planning Director
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121

**RE: Mukilteo City Council Input on Draft Long Range Plan**

Dear Mr. Deardorf:

On behalf of the Mukilteo City Council and Mayor Marine, I am providing documentation of their input related to the Draft Long Range Plan Update and operation strategies as part of the formal public input process.

**Funding Shortfalls Needs to be Addressed:**
The City Council is supportive of the legislature addressing the operating and capital shortfalls that presently exist and will continue into the future for the ferry system. The shortfall in funding is both for capital improvements (terminals and vessels) and for escalation in fuel prices. Adequate funding for the existing system is not in place and thus operating the system over time under the current funding scenario creates an on-going deficit that will only grow larger. The City Council recognizes that even if fares were required to meet 80% or more of the operating expenditures that fares can not cover all operation costs as there are off-peak hours and seasons when ferries are not operated at capacity, but must sail to maintain service as envisioned to be a part of the state-wide marine highway system. Capital improvements are a burden that must be shared on a state-wide level and deferring terminal improvements and vessel maintenance and replacement is clearly no longer an option.

**Draft Plan's Option A Preferred:**
The Draft Plan – Option A addresses both operating and capital shortfalls. Both the Mukilteo and Clinton terminals require capital improvements to maximize operational strategies proposed in the Draft Plan to contain demand that otherwise would require additional more costly capital facilities. The City Council supports expanding the reservation system to runs such as Mukilteo-Clinton, as well as pedestrian and transit improvements that will assist with mode shifts at both the Mukilteo and Clinton terminals.

**Draft Plan's Option B May Only Be Workable with Local Transportation Funding for Passenger Ferries:**
Plan B applies operational strategies that will assist with current and future demand, but assumes that there will be reduction in the number of ferries on any given run as well as eliminating runs. In addition, Plan B does not adequately meet capital improvement needs that are required now for safety, in times of emergency, nor does it address community impacts that already exist. Plan B is less than the existing ferry system or a 17% reduction and does not appear to be adequate to operate our state ferry system into the future. It does address the terminal relocation that is needed for the Mukilteo-Clinton run. With the potential for counties to provide passenger service on central Puget Sound runs and with alternative land routes, then maybe Option B will work. But without having studied these whether they are capable of generating the revenues necessary to operate passenger ferries, then this scenario may not be realistic. In addition, because further financing may be required in the future and capital improvements take such a long lead time it will be very difficult to restructure this decision in five years and thus a cautionary note is needed for the decisions made by legislators in 2009.

This Plan represents an extensive amount of work by many. The process was very inclusive and we want to thank Assistant Secretary David Mosley for his oversight and emphasis on working with so many interests. This is a very important decision and a dramatic change of course for the ferry system, impact to the users, and as the iconic symbol of our state and many cities, as well as being critical to our transportation system.

Thank you again for providing an opportunity for the Mukilteo City Council to provide input.

Sincerely,

Joe Marine

Joe Marine
Mayor
City of Mukilteo
(425) 263-8000

Pc: Christine Gregoire, Governor of Washington State
Paula Hammond, Secretary of Washington State Department of Transportation
David Moseley, WSF Division Assistant Secretary
City staff

# Additional Information on the Mukilteo Terminal and Comments on Specific Operational Strategies that would Work

## Mukilteo's Unique Attributes as a Host Ferry City

1) The Mukilteo route **does not have off-peak vehicle capacity during the summer**
2) There is typically a **four (4) boat wait (2 hours)** Late Spring – Mid Fall, Wednesday, Thursday, Friday evenings and Saturday mornings.
3) There is typically a two (2) boat wait (1 hour) (even Mid May, Mid-week that is used for LOS).
4) A 20% increase in vehicles to 2030 is forecast by WSF.
5) A larger **increase in pedestrians** over a longer period is forecast by WSF.
6) The Mukilteo route does **have capacity for pedestrians** during the summer.
7) There have **not been any major capacity improvements** at the Mukilteo terminal since the 1930's – while the demand continues to grow – making the terminal and one slip obsolete.
8) Soils and wave action at the existing Mukilteo terminal make it problematic and expensive to continue it as a terminal site.
9) Deficit of availability of parking with parking garage and off-site park & ride lot(s) will occur in 2009 with city projects eliminating commuter parking due to redevelopment

## Operating Strategies that Could be Applied at Mukilteo

- **Reservations:**
  - Reservations look to be promising and Mukilteo would like to be accessed for the next site for reservation implementation,
  - Implement as soon as possible using a phased strategy
  - Implementing reservations on week-ends or for recreational users needs to include Thursday and Friday afternoon and nights
  - If more than one queue lane is required for the reservation system, then SR 525 Bridge has constraints that could limit its application.
  - Enhance fare collection system
- **Transit and Parking Enhancements:**
  - Work cooperatively towards a parking garage and off site park and ride lot(s)
  - Transit Access Enhancements are needed and to help change demand and will help to improve capacity and operations
  - There will be no parking on the waterfront for commuters in the near future – ferry commuters need to be using transit to make connections.
  - Enhance User Information for transfers to bus and ST commuter rail and for off-site remote parking availability
  - Enhance bike and pedestrian connections along SR 525 and 5th Street
  - Capacity use created with12:00 PM Boeing shift (Transit schedules and TDM coordination is needed)
  -

- **Mode Shift Encouraged:**
  - Increase fares at peak times year-around to shift - time of day use and to encourage pedestrian usage.
- **Traffic Management:**
  - Enhance traffic management (metering off-loading vehicles to create less of an impact on the community)

Gregory J. Nickels
Mayor of Seattle

January 21, 2009

David Moseley, Assistant Director
Ferries Division, Washington State Department of Transportation
2901 Third Avenue, Suite 500
Seattle, Washington 98121

**RE: Washington State Ferries Draft Long-Range Strategic Plan, December 2008**

Dear Mr. Moseley:

Thank you for providing the City of Seattle the opportunity to comment on Washington State Department of Transportation's Ferries Division Draft Long Range Strategic Plan, 2008-2030. The recently released plan represents a change in direction from past draft plans. To address constrained financial resources, the new plan's two options, "Plan A" and "Plan B", include significantly reduced service and capital programs than presented in previous plans. With a greater focus on financial sustainability, both plan options identify significant funding gaps over the plan's 22-year planning horizon.

Still, we are pleased to see several strategies and recommendations in both Plan options that the City of Seattle supports:

- Colman Dock is prioritized and funded as a preservation project. Colman Dock is the busiest terminal in the system and a gateway to Seattle. This is an aging facility that is in need of significant upgrades to address the terminal building and the wooden dock trestle on which it sits.

- Use of adaptive management to: reduce the need for large facilities; ensure better use of the system throughout the day (not just peak hours); and, maximize walk-on use. This includes use of reservations, transit enhancements and pricing. These strategies are appropriate in the context of Seattle's dense, urban environment.

However, addressing growth demands from South Kitsap and existing concerns with the current Southworth-Vashon-Fauntleroy service triangle are key issues to resolve in this plan. Draft "Plan A" includes an option that had not been previously discussed with City of Seattle representatives or community members. This plan option presents no service changes (except for phased vessel replacement with

slightly larger vessels), the expansion of Fauntleroy's overwater dock and the addition of overhead passenger loading. *The City of Seattle does not support this recommendation.*

Past letters from the City (July 21, 2006, from myself and September 27, 2005, from SDOT Director Crunican) have stated that Fauntleroy has limited capacity to accommodate vehicular demand and the *City would not support expansion of Fauntleroy*. I request that Washington Ferry System (WSF) staff work closely with City of Seattle staff to evaluate this alternative and look for other options to include in a final plan.

Washington State Ferries has worked without a long-range plan for many years; we support your efforts to finalize a plan. As the plan is revised for approval, we look forward to working closely with WSF and the legislature. If you have any questions regarding the city's comments, please feel free to contact my office or Seattle Department of Transportation Director Grace Crunican at 684-5000.

Sincerely,

GREG NICKELS
Mayor of Seattle

CC: Tim Ceis, City of Seattle Deputy Mayor
Grace Crunican, Seattle Department of Transportation Director
Kevin Desmond, King County/Metro General Manager
Kristine Lund, King County Ferry District Executive Director

FAUNTLEROY
WATERSHED
COUNCIL

## ABOUT FAUNTLEROY CREEK

Fauntleroy Creek discharges into Puget Sound due south of the ferry pier. It provides habitat for juvenile coho salmon, both "home hatch" and fry released by schoolchildren through the state's Salmon in the Classroom program. We have documented spawning in the lower creek since 1994. The number of spawners varies widely, depending on saltwater conditions.

Two environmental studies, both reported just three years ago, speak to your proposed investment of $100 million in the present ferry pier at Fauntleroy.

## TERMINAL SHADING

Your own agency's examination of the effects of ferry terminals on juvenile salmon documented their behavior around 10 terminals, including Fauntleroy. It sought to answer the question, "Do these over-water structures alter the behavior of migrating juvenile salmon?" The answer was yes. Shading caused by ferry terminals can deter or delay juvenile salmonid movement - movement that, for example, enables them to find food and see predators. Light must get through. As documented by King County in 2004, Fauntleroy Cove is teeming in late spring with juvenile salmon, including endangered chinook and many that take a sharp left out of the Duwamish River and head for Fauntleroy. More shading will be more bad news for all of them.

## BEACH ASSESSMENT

In conjunction with restoration of the reach to the beach, the Fauntleroy Watershed Council engaged Jim Johannessen, one of the region's most respected coastal geologists, to assess beach dynamics, paying particular attention to the buildup of logs and sand that threatens spawner to the creek. His conclusion: The ferry pier has likely had a substantial effect on beach accretion experienced by homeowners to the south, especially after the pier was widened. The pier's closely spaced piles trap drift logs, causing jams that hold the sand, redirect creek flow, and create a formidable obstacle course for spawners. Because of this dynamic out of our control, we did not attempt any beach modifications at the creek mouth. More piles under a wider pier will be more bad news for Fauntleroy Creek spawners, as well as for homeowners south of the pier.

## PROJECTION

If the state adopts the long-range plan as drafted and then attempts to implement it at Fauntleroy, we will challenge you on solid environmental grounds at every turn. If the state, instead, adopts a plan that reflects creative, science-based thinking that reduces traffic through Fauntleroy, we will be honored to work with you.

### REFERENCES


Southard, S.L., et al, 2006. Impacts of Ferry Terminals on Juvenile Salmon Movement Along Puget Sound Shorelines. Washington State Department of Transportation, Project No. 46820.

Brennan, Jim, et al, 2004. Juvenile Salmon Composition, Timing, Distribution, and Diet in Marine Nearshore Waters of Central Puget Sound in 2001-2002, King County Department of Natural Resources and Park.

Johannessen, Jim, et al, 2006. Fauntleroy Creek Mouth Beach Assessment and Recommendations. Fauntleroy Watershed Council.



1/21/09 testimony by Judy Pickens 206-938-4203 / judy_pickens@msn.com

SAN JUAN ISLANDS
VISITORS BUREAU

January 21, 2009

Mr. David Moseley
Assistant Secretary of Transportation
Washington State Dept. of Transportation
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121-3014

Re: WSF's Draft Long-Range Plan

Dear Mr. Moseley,
The San Juan Islands Visitors Bureau (SJIVB) supports the San Juan County Council, San Juan County Ferry Advisory Committee and San Juan County residents in rejecting Plan B.

The SJIVB represents over 350 tourism-related businesses in the San Juan Islands, primarily on Lopez, Orcas and San Juan Islands. As you are likely aware, tourism is the economic driver for our islands, and approximately half of the residents here depend on the direct income from or the "trickle down" effect of "new" tourism dollars left behind by visitors. The Washington State Ferries bring most of these visitors to our islands – visitors who contributed over $127 million to our economy in 2007, according to the latest Washington State Tourism research. Our new designation as the State's newest Scenic Byway, including the WSF marine route from Anacortes to our islands, will bring even more visitors to this beautiful area.

Tourism is Washington State's fourth largest industry, and the ferries are as iconic to Washington State as the Space Needle is to Seattle. These iconic ferries should be properly funded in order to exceed our visitors' expectations when they visit our unique corner of the world. The 2010 Winter Olympics in Vancouver B.C. will put an even larger spotlight on our State, and we need to be prepared with a first-class transportation infrastructure. In addition, the Anacortes/San Juans/Sidney run will become even more viable during and after the Olympics. There seems to be a disconnect between Washington State Tourism and the Washington State Ferries.

Ferries are our residents' and visitors' lifeline, just as roads and bridges are on the mainland. The WSF system must remain affordable to island residents, small business owners and visitors. Please listen to your customers and formulate a long-range plan that will work for Washington's island residents and tourism-dependent economy.

Sincerely,
*Deborah Hopkins*
Executive Director
San Juan Islands Visitors Bureau

# San Juan County Council

350 Court Street No. 1
Friday Harbor, WA 98250
(360) 378 - 2898

District 1, Lovel Pratt
District 2, Rich Peterson
District 3, Howard Rosenfeld
District 4, Richard Fralick
District 5, Gene Knapp
District 6, Bob Myhr

January 13, 2009

Mr. David Moseley, Assistant Secretary of Transportation
Washington State Department of Transportation
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121-3014

Dear David:

RE: WSF's Draft Long-Range Plan

The San Juan County Council and Ferry Advisory Committee have jointly reviewed the December 19, 2008 Draft Long-Range Plan and ***reject the option of Plan B*** as an unrealistic representation of state ferry service.

- By eliminating the Anacortes/San Juans/Sidney vessel, over 80% of the domestic service capacity on that vessel is eliminated for seven months of the year, which is a 20% reduction in daily service capacity during this period.
- Plan B does not meet current or future service demands.
- There is insufficient information and time on both plans to allow the legislative bodies and communities to participate in a meaningful review.
- Lack of a financing component, as required by ESHB 2358, makes qualitative decisions impossible.
- Plan B removes one vessel from a totally ferry-dependent community.

We have entered the tenth year of difficult state decisions on state ferry funding in the post-I 695 transportation funding environment. We are entering the first year of what everyone hopes is a temporary economic downturn, particularly in elastic revenues received by state and local governments that necessarily slow during these economic conditions. Our first fear is that short-term finances will drive long-term funding decisions. ***Balancing the state budget for the 2009-11 biennium should not be the justification for a long-term state service mistake.***

The passage of time and the change in economic and government revenue fortunes have positioned WSF to be considered the ugly step-child of the state budget. Addressing the funding gap is the answer, not divestiture. Select what is right over what is easy. If the Plan A gap of $3.5 billion is divided by the 22-year planning horizon, it is a difference of $160 million per year. The loss of MVET in strict 1999 dollars was larger than this by many times. The legislature found a way to replace a good deal of the highway funding as a result of public pressure to fix and improve the roads. Over time (not necessarily all in this session), the legislature must do the same for the ferry system. It is clearly the east/west highway system over the waters of the Puget Sound.

The WSF Long Range Plan presents the ferry-served communities and, to a lesser extent, the citizens of this state with the age-old comparison of price versus value. While it was a conscious point of

demarcation not to include economic analysis as part of the study, that decision required the highlighting of cost centers in the WSF budget, while large portions of the overall value disappear into the general funds of the state and local governments in the form of sales tax and lodging tax.

San Juan County is a ferry-dependent community (as compared with a ferry-advantaged community) and is composed of a complex set of users representing four distinct groups: full-time residents, part-time residents, tourists and commercial users, including those that provide essential supplies. The Anacortes/San Juans route is an extension of State Highway 20 and has been identified as one of the highlights and most scenic elements of Washington State's most recently designated Scenic Byway. Maintenance and continued development of a functioning ferry system is critical to the economic viability of the San Juan community.

**Generally, Plan A meets the needs of the San Juan County community by providing reasonable transportation options for the multiple-user groups in the San Juan Islands.** However, it is not as specific as it should be when considering how the adaptive management strategies, particularly reservations, will appropriately balance the needs of those distinct user groups. It in itself is the minimum to which WSF should peg the level of service, and other targeted improvements; emergency back-up and passenger efficiencies should also be considered.

**Plan B will set in motion a divestiture approach that would make it very difficult to re-build the ferry system to the level of service provided today; it does not provide sufficient ferry capacity to meet current or future requirements.** The Plan decreases the number of runs within the San Juan Islands by eliminating the Anacortes/San Juans/Sidney boat and decreases the overall number of new vessels, which will also have a significant economic impact on San Juan Island communities. It also requires passenger-only ferries to be developed and managed by locally-funded entities. It forces mode and travel choices in adaptive management strategies rather than providing them by way of incentive.

The following comments apply primarily to Plan B:

1. **Economic Analysis - ESHB 2358 stated that WSF shall develop fare and pricing policies that: "consider the impacts on users, capacity and local communities"; however a long term economic analysis is conspicuously missing.** The decrease of any ferry service to the San Juan Islands will have a negative impact to the economic viability and health of this ferry-dependent community. For the past three legislative sessions, San Juan County has requested that such an analysis be undertaken. Without data from the economic analysis impact study, WSF cannot make sound decisions about the fate and subsequent impacts of eliminating the Anacortes/San Juans/Sidney route, as well as the loss of non-WSF tourism revenue to the state by diminishing service to the San Juans.

2. **Vessel Replacement – Ridership forecasts tell you to increase capacity; Plan A allows for that in a marginal manner over time without increasing the number of vessels, but Plan B, with no capacity increase, represents poor planning in the midst of the largest comprehensive ferry planning effort to date.** According to WSF planning staff, Plan A retires vessels early partially in the name of keeping shipyards happy in the hope they will give you better bids. The public should not make all the compromise. Explore lengthening by a year some of the later replacements to take vessels to their full life expectancy and to spread capital costs. Also, ***the bidding advantage given to the private shipyards which have no out-of-state competition must be explored for an equitable solution and to provide qualification for federal funding.***

The nickel gas tax provided some dedicated funding to vessel replacement. **A movement toward Plan B appears to be a second abdication of the promise made by that prior legislature.** A ferry-dependent community with no state highways can view that financial redirection with only a profound sense of loss.

The lack of an emergency backup vessel for more than the next five years is tantamount to driving a vehicle without insurance for that period. Emergency back-up vessels have been needed numerous times in just the past two years – there is no reason to expect the likelihood of that need to be any different over the next five years; therefore the situation should be included in any plan, not ignored.

Elimination of the Anacortes/San Juans/Sidney route has a significant impact on the mainland capacity of island traffic. Over 80% of the capacity in the off-season is assigned to domestic service.

3. **Transit – Regardless of the Plan, better coordination with local transit agencies is required to ensure that this mode shift is a realistic option** The Skagit/San Juan routes are the most difficult coordination opportunity due to the obvious need of residents, weekenders and tourists to move more materials than can be carried by an individual. As a result, it was ignored in either plan without even a footnote of the need to study it. Transit improvements were ignored because of an apparent default to commuters in the vision of the study. Mode shift can be achieved, but Skagit Transit, the County and WSF must work together to make it happen. Appendix F does not include any specific transit improvements for the Anacortes terminal, let alone any of the other terminals within the San Juan Islands. This is an item which has generated extensive comments in a number of community forums, most recently during WSF's inter-island information meeting last fall. Provisions for transit improvements at both ends of the Anacortes/San Juan route are necessary to coordinate with ferry service if any decrease in vehicle traffic is to be supported. Any effort to encourage walk-on traffic must also address parking fees. As long as the costs of parking a car at the Anacortes terminal approximate the cost of driving a car onto the islands, patrons will choose to drive their cars as it is more convenient.

4. **Reservations – This is a key component in both Plans and one which San Juan County supports, provided that no reservation fee is imposed.** As stated in Appendix G, development of a workable system must be developed with "Island agents". This is interpreted to mean representatives of San Juan County in order to ensure meaningful involvement in developing such a strategy, including the possibility of piloting the reservation strategy at one of the San Juan Island terminals this summer. The San Juan's have four distinct user groups: islanders, weekenders, tourists, and commercial. A poorly designed system based on indiscriminately filling vessels runs the risk of leaving groups at a disadvantage. In particular, island residents are still dependent on professional services and certain retail services available on the mainland. Being ferry dependent, and subject to the hours of those businesses, islanders cannot drive around the problem as those using other routes can. The last fare increase proposal engendered militant attitudes of islanders, who showed grass roots power. That attitude will be dwarfed by a reservation system that is not sensitive to ferry-dependent communities.

5. **Level of Service (LOS) –The current LOS is acceptable; however, the reduced LOS in Plan B is not acceptable when considering the long waits that currently exist between vessels to and from certain islands.** Additional information and analysis are required to determine the triggers for the two proposed levels and the subsequent impacts on ferry riders. Hidden in the alteration of the LOS standard is the previous trigger point for increase of vessel capacity. That has been exchanged for adaptive management strategies that could ultimately drive housing choice decisions and change the ridership growth assumptions.

6. **Foot passenger fare increases – It is very important to the San Juan County community that the existing no-charge for walk-ons on the interisland ferry continues.** It is unquestionably the best mode-shift policy employed by WSF on any route, although it currently creates externalities outside the terminal area in the form of parking and transit. It is understood and accepted that passenger fares from the Anacortes terminal could increase. However, additional parking and transit are essential to encourage increased foot traffic at the terminals at both ends of the route to maximize mode shift in this most unique run among ferry routes.

7. **Passenger-only ferries (POF) – A primary premise of Plan B is that current and future passenger-only ferries will be operated and maintained by locally funded entities; without the certainty, readiness or willingness of the affected counties to step in, Plan B begins to look like an exit strategy that creates a service gap and points to self-taxing enabling legislation as the response.** Before giving any consideration to Plan B, this is a major assumption that needs to be explored further with prospective providers to determine the realistic likelihood of such a change in funding, ownership and management. The legislature must also take a broader view of the natural perception that this is an abdication of a 56-year responsibility. That broader view will engender a move toward partnership, which may cause re-thinking that such an abandonment equals no participation in local provider public subsidy. *There is no guarantee of mode shift (and its positive attributes) in placing POF responsibilities on counties – it is only a guarantee of cost shift.*

This comment letter has been signed by the full San Juan County Council and Ferry Advisory Committee to signify our commitment to working with WSF to develop a logical and manageable plan to maintain the Anacortes/San Juan Island ferry route.

Sincerely,

**COUNTY COUNCIL**
**SAN JUAN COUNTY, WASHINGTON**

Lovel Pratt, Member
District No. 1, San Juan South
San Juan County Council

Richard Peterson, Chair
District No. 2, San Juan North
San Juan County Council

Howard Rosenfeld, Member
District No. 3, Friday Harbor
San Juan County Council

Richard Fralick, Vice Chair
District No. 4, Orcas West
San Juan County Council

Gene Knapp, Member
District No. 5, Orcas East
San Juan County Council

Bob Myhr, Member
District No. 6, Lopez/Shaw
San Juan County Council

Ed Sutton, Chair
Orcas Island
Ferry Advisory Committee

Robert de Gavre, Member
San Juan Island
Ferry Advisory Committee

John T. Whetten, Member
Lopez Island
Ferry Advisory Committee

EXCUSED ABSENT

John Brantigan, Member
Shaw Island
Ferry Advisory Committee

Patricia McKay, Member
San Juan Island, Alternate
Ferry Advisory Committee

Lance Evans, Member
Alternate
Ferry Advisory Committee

# KITSAP COUNTY BOARD OF COMMISSIONERS

*Efficient, accessible and effective county services*

**Steve Bauer**
DISTRICT 1

**Charlotte Garrido**
DISTRICT 2

**Josh Brown**
DISTRICT 3

**Nancy Buonanno Grennan**
County Administrator


January 22, 2009

David Moseley
Washington State Ferries
2901 Third Avenue
Seattle, WA 98121

Dear David:

RE: WSF's Draft Long-Range Plan

The Kitsap County Board of Commissioners reviewed the WSF 2008 Draft Long-Range Plan. All levels of government are facing difficult budget times due to the national recession and financial impacts affect our communities. We are very concerned that the long-range options, particularly Plan B's dramatic reductions, are being made without regard to statewide and regional policies or the impacts to the broader transportation system of the Puget Sound.

Plan A appears to be a workable beginning to discuss the future of Washington State Ferries, but needs additional work before adoption. However, Plan B would irreversibly damage the quality of life for our County's 250,000 residents and severely impact the entire Puget Sound region. The Kitsap County Board of Commissioners rejects Plan B and we look forward to working with your agency to refine an alternative for implementation. Some points we consider vital for the alternative plan are that it be a systems plan, reward innovations, work with jurisdictions about their future needs, and examine funding and service concerns.

The capital funding gap is an important element for consideration, but it cannot be the sole factor for decision making. We ask for a regional examination of the entire transportation system in the Puget Sound area. Simply put, it is contradictory for the State to push for long range improvements in the areas of carbon emissions reduction, managing congestion and infrastructure costs by linking land use with transportation investments, and building livable communities while at the same time it dismantles a WSF system which is critical component to meet those goals. The long-range plan should be developed with these regional and statewide goals in mind.

**Plan for a System**
It is critical that the long-range plan eventually adopted provides a system that is consistent with regional and statewide policy objectives.

**Work with User Jurisdictions**
Our jurisdiction is responsible to plan for transportation within Kitsap County and to partner with others in the Puget Sound region. Yet we were not consulted about input into the draft plan. This, despite the fact that Kitsap County hosts four State highways that end at Puget Sound.


614 Division Street, MS-4 • Port Orchard, Washington 98366-4676 • (360) 337-7146 • FAX (360) 337-4632
From: Olalla (253) 851-4147 • Bainbridge Island (206) 842-2061

**Reward Innovations**
The Governor and Legislature have committed to important reductions in carbon emissions and VMT. Kitsap County is a State leader in realizing results. Our single-commuter occupancy rate is second best in the State of Washington (second to densely populated King County). Ferries contribute significantly to this success.

**Examine Service Concerns**
WSF moved 5.65 million vehicles and 14 million total riders from ferry routes that reached the Kitsap Peninsula. These figures represent 52% and 59% of the system wide totals respectively. Kitsap County is planning to accommodate an additional 100,000 residents over the WSF planning horizon and WSF estimates riders on these Kitsap routes will increase 32% between now and 2030. Growth to the Puget Sound region is inevitable. The Puget Sound Regional Council projects 1.7 million new residents and 1.2 new jobs by 2040.

With the bulk of new jobs projected to be created in the east Puget Sound, it is clear that Plan B's reductions in service levels will dramatically force more commuters onto our region's highways. The escalation in ferry fares over recent years has had an impact on reducing ridership. Dramatic pullback in service levels will have an even stronger effect. We ask WSF to work with state agencies, the Puget Sound Regional Council, and local governments to provide analysis of the impacts to the environment and congested corridors of these plan alternatives.

**Consider Diverse Funding Issues**
In this legislative session, the State will likely examine severely bills that seek to create a regional taxing mechanism for programs such as the Puget Sound Partnership. Yet, while Kitsap and other Puget Sound jurisdictions will be sought to support these endeavors, our regional transportation network based on WSF will be eroded. We cannot support State efforts to tax us for new programs, while basic needs of our communities are ignored. A reexamination of State priorities is desperately needed.

Kitsap County has twice tried and twice failed to pass measures supporting passenger-only ferries (POF). We continue to examine how POF's can be brought to our region through the work of the Port of Kingston and critical wake-research being spearheaded by Kitsap Transit. However, the concept of POF service on Kitsap County has always been viewed as service enhancement---not replacement---of WSF's system. Simply put, we view the Plan B's goal of replacing WSF with POF's as a substantial unfunded mandate.

The Plan A funding gap of $3.5 billion dollars amounts to $160 million per year over the 22-year planning horizon. We believe a number of cost saving measures have not been suggested for review in the alternatives. While $3.4 billion is planned for vessel investments, the nearly $2 billion of capital monies for terminal costs needs to be closely scrutinized. The overwhelming preference for system users is to invest in boats, not terminals. In addition, we are disturbed by the fact that in no part of the long-range plan is there discussion about vessel procurement policies. Recent vessel purchases have been mired by exorbitant bids due to local builder requirements. While a noble goal, we believe the costs and benefits of these state policies need to be examined.

Finally, it is our understanding that due to these procurement policies, WSF is prevented from competing for Federal Economic recovery funds. While WSF is in need of vessel investments, the fact that not one boat has been requested as part of the Federal stimulus

package is unacceptable. We acknowledge Governor Gregoire's leadership on prioritizing investments in public infrastructure. Promoting the painting of boats and unnecessary terminal improvements over vessel procurement is a disastrous oversight. We implore you to seek vessel procurement monies.

**Look Forward**

Again, Kitsap County looks forward to working with WSF to adopt a long-range plan that meets the needs of the Puget Sound region, while implementing State policies. We know that Kitsap residents and legislators are working on a "Plan C", with focus groups examining issues such as fleet size and ferry construction, a ferry business plan and revenues, and schedules and service. Ultimately, the common goal shared by Kitsap County residents and government, and presumably WSF, is for workable solutions. By working together, we can surely shape future options that make sense.

Thank you for the opportunity to formally offer this comment letter.

Commissioner Charlotte Garrido, Chair

Commissioner Steve Bauer

Commissioner Josh Brown

January 20, 2009

Dear Mr. Moseley,

Thank you for coming to Vashon Island to hear about my community's concerns regarding the Washington State Ferries Division Draft Long Range Plan. I would like to thank you for opening up the Ferry Division to more sunshine after many decades of darkness. I am the Vashon Island School District's representative to the WSF Ferry Advisory Committee, appointed by the Vashon-Maury Island Community Council.

On behalf of the Vashon Island School District, I would like to say that any reduction in ferry service or rescheduling that doesn't coordinate with our school schedule would be harmful to our mission of providing the best education possible to our children. Previous service reduction at Tahlequah has been harmful and incurred additional costs to our District. Previous rescheduling of the Vashon-Fauntleroy run has also had negative impacts to our District. Additional reductions in service or uncoordinated schedule changes at either end of the Island will cause further hardship, pain and financial costs to our School District, our students and our employees. The VISD has about 135 students that commute from Fauntleroy, Pt. Defiance and Southworth via the WSF system. These students are an integral part of our business model that allows us to be fiscally sound. We also have about 25 teachers, administrators and other staff that commute via the ferry to get to work. This number will be increasing as teacher's and other staff's wages don't keep up with the rise in the cost of living and fewer of our new teachers can afford housing prices on the Island.

Furthermore, any reduction in ferry service or rescheduling that doesn't coordinate with our school schedule would be harmful to our interscholastic co-curricular activities and field trips that enrich our students education. The other schools that we compete with in debate, band, athletics and math Olympiad, to name a few, are on the mainland and require taking a ferry as it is our only means of getting off the Island. Just as important is the fact that these other schools are also stressed when the difficulty level of travel to Vashon Island is made more difficult and costly.

In the late 1990's, as President of the Vashon-Maury Island Community Council, I worked with WSF in the formulation of the 1999 20-year Long Range Plan. That 1999 20-year Long Range Plan called for a second boat on the Tahlequah-Pt. Defiance run in the year 2012. The 2009 "Plan A" now calls for only one boat still in 2012 and beyond and a smaller capacity boat at that. In the 1999 20-year Long Range Plan the Vashon-

Fauntleroy run was to have larger boats as well. Now the 2009 "Plan A" doesn't call for capacity upgrades until 2017 or 2019. This major shift in policy after 10 years of a 20-year plan strains my faith in your understanding of the issues. The 1999 20-year Long Range Plan understood those issues. It took the bold, politically incorrect but accurate position that Vashon Island and the San Juan Islands have no other transportation options than the Washington State Ferries and that it is the responsibility of the State to address those needs. The document that expresses this is the "Plan C" alternative of the WSF 1999 20-year Long Range Plan that similar to the 2009 "Plan B" explores the what if of minimal funding. "Plan C" of the 1999 20-year Long Range Plan recognizes the fact that Vashon Island and the San Juan Islands are the number one priority for ferry service as they have no other options. It recognizes this by providing service only for Vashon Island and the San Juan Islands in the worst case scenario of minimal WSF funding from the State. You must accept this underlying principle also. The solely ferry-dependent communities of Vashon Island and the San Juan Islands should not have to share the pain equally with those communities that have other transportation connectivity options such as bridges and state highways.

Another cause for concern is that despite repeated requests for WSF to communicate and collaborate with the Vashon Island School District on changes in service levels or scheduling, it does not seem to happen as no one at VISD was contacted in formulation of this plan. I asked you myself at the last Island meeting that you attended if you would do this and you seemed to nod in agreement. Therefore, I ask again that you please keep in touch with us because ferry changes can have severe adverse impacts on the education that we provide our students. As we both know, the State's paramount duty is the education of our children.

Jake Jacobovitch
WSF Ferry Advisory Committee member representing the Vashon Island School District
P.O. Box 1624
Vashon Island, WA 98070
email: VashonOne@aol.com
phone: 206.650.5253

Ferry Advisory Committee
Vashon Public Comment on WSF Long Range Plan
January 7, 2009

To Whom it May Concern

Vashon Island is a ferry-dependent community. Yes, we are also ferry served, but let us be very clear about the choices we have: without ferry service, we do not leave or come home.

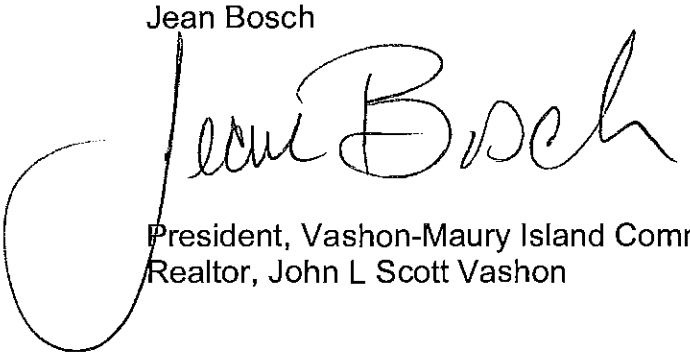
I invite the decision-makers at Washington State Ferries to walk a mile in our shoes. This is a real community with the nitty gritty needs of any town. Imagine the day you receive a letter saying that, due to budget constraints, traffic in and out of ***your*** community will only be allowed at very particular times of day and in limited numbers. Oh, and by the way, no one can leave or arrive after midnight. Some roads will close at 10. And did I mention that big trucks serving a newly-opened gravel mine will be taking up much of the allotment? It will cost you $20 every time you make the trip too.

It's your own fault, really, for living there.

You can no longer get to your medical appointment or your college classes. You must line up very early so you can compete with your anxious neighbors go to your job and your property values are declining. Your community is constantly embroiled in political campaigns, fighting for the simple right to come and go in a reasonable manner.

Vashon Islanders have already made painful adjustments to ferry service reductions and ferry fare increases. To implement the service cuts proposed will turn Vashon from a thriving community based largely on the commuter opportunities in Seattle and Tacoma to a place where only those who don't have to work and those who serve them will live. This prospect is unacceptable.

Jean Bosch



President, Vashon-Maury Island Community Council
Realtor, John L Scott Vashon

Website: www.vmfr.org
Email: admin@vmfr.org

# Vashon-Maury Fire & Rescue

Post Office Box 1150 Vashon, Washington 98070-1150
Telephone (206) 463-2405 Fax (206) 463-6494

January 7, 2008

WSDOT Ferries Division
Attn: Joy Goldenberg
2901 3rd Ave.
Seattle, WA 98121

Subject: Position Statement on Vashon Island Ferry Service

To the Division:

As Fire Chief of Vashon Island, I am vehemently opposed to any reduction of ferry service to or from Vashon Island, as increases in patient transportation time will be a certainty.

In 2008, Vashon Fire & Rescue responded to 1,058 emergency medical calls requiring immediate patient care and transportation to regional hospitals in Seattle, Burien, and Tacoma as Vashon has no critical care facilities. Further delays in ferry transportation may further impair the health and well-being of Vashon residents, visitors, and ferry passengers in time of medical need. Furthermore, on occasion, we have the need to contact ferry operations to request a boat diversion due to the rapid decline of a patient's condition. My speculation is that less ferry service will result in more special requests by our personnel, thus resulting in further delays and variations of your schedules.

In summary, I consider the Washington State Ferry Division and Vashon Island Fire & Rescue partners in transportation services for individuals in medical distress. As a professional in emergency care, implementing a change in service that equates to less transportation availability for EMS transports is not advised.

Sincerely,

Hank Lipe
Fire Chief

**TOWN OF COUPEVILLE**
4 NE Seventh
PO Box 725
Coupeville WA 98239
360.678.4461 FAX 360.678.3299



January 14, 2009

WA State Ferries
Attn Joy Goldenberg
2901 3rd Ave
Seattle WA 98121

Re: WSF Draft Long Range Plan

The Coupeville Town Council has discussed the proposed WSF Long Range Plan and the options in both Plan A and B. We have also conferred with representatives from Pt. Townsend, and both communities concur in our input. The consensus of our opinions is stated below:

We reluctantly accept the economic realities that indicate a version of the proposed Plan B is likely to be approved by the legislature. However, we request a modification to Plan B. Service between Keystone and Port Townsend must be reliable and predictable. A single vessel in the fleet will not guarantee that. A second Island Home must be built, and in the short term. Other studies commissioned by WSF indicate the Island Home can be useful on other runs and is efficient to run.

We strongly support several of the operational strategies proposed:

Reservations: The pilot reservation program on the PT/Keystone Ferry was a good start. We are glad the plan calls for a reservation system that allows for flexibility for each route. The needs are different in each community. The reservation system provides predictability and also helps ensure that each run is full, which increases economic efficiency.

Demand Management: Obviously we cannot afford to continue to build for peak hours use. Incentives for traveling at less busy times, for smaller vehicles, to encourage pedestrian/transit connections, are all important targets.

Operational Changes: Again, the needs are different in each community. We need to work together to be certain our local priorities are met. In our case, with one boat, we need to make sure every boat is full. In addition to reservations and incentives, prioritized boarding should be considered when needed to provide appropriate service to critical users.

When planning for individual routes, please be certain to include the rest of the Dept. of Transportation and also the local RTPOs. While we don't support shifting any financial burden to the local cities and counties, we do think it is possible to identify projects that may qualify for funding available to the local entities that serve more global purposes. We need to be certain the highways, ferries, transit and elected officials are all together on decisions being made in each community. The partnership meetings held the last two years with Coupeville and Keystone should be continued.

Our final request is for predictability, and should probably be directed to the legislature. If we have to accept changes and reductions in service as a result of economic shortfalls, give us a plan and funding mechanism that will endure. If we can plan with some certainty, we are better able to adjust to change.

Reliable ferry service is essential for commuters, tourism, commerce, and the military and for the quality of life of our residents. Ferries should be considered part of the transportation infrastructure. Thank you for your consideration.

Sincerely,

Dianne Binder, Councilmember

Bob Clay, Councilmember

Ann Dannhauer, Councilmember

Molly Hughes, Councilmember

Jim Phay, Councilmember

c: Senator Mary Margaret Haugen
Representative Norma Smith
Representative Barbara Bailey

# City of Port Townsend

250 Madison St, Port Townsend, WA 98368
(360) 379-5047 FAX (360) 385-4290
citycouncil@cityofpt.us


January 15, 2009

Washington State Ferries
Attn: Joy Goldenberg
2901 3rd Ave.
Seattle WA 98121

Re: WSF Draft Long Range Plan

The City Council has discussed the proposed WSF Long Range Plan and the options in both Plan A and B. The consensus of our opinions is stated below:

We reluctantly accept the economic realities that indicate a version of the proposed Plan B is likely to be approved by the legislature. However, we request a modification to Plan B. Service between Keystone and Port Townsend must be reliable and predictable. A single vessel in the fleet will not guarantee that. A second Island Home must be built, and in the short term. Other studies commissioned by WSF indicate the Island Home can be useful on other runs and is efficient to run.

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Our final request is for predictability, and should probably be directed to the legislature. If we have to accept changes and reductions in service as a result of economic shortfalls, give us a plan and funding mechanism that will endure. If we can plan with some certainty, we are better able to adjust to change.

Reliable ferry service is essential for commuters, tourism, commerce, the military and for the quality of life of our residents. Ferries should be considered part of the transportation infrastructure. Thank you for your consideration.

Sincerely,

Michelle Sandoval, Mayor

George Randels, Deputy Mayor

Brent Butler, Councilmember

David King, Councilmember

Laurie Medlicott, Councilmember

Catharine Robinson, Councilmember

Mark Welch, Councilmember

c: Senator Mary Margaret Haugen
Senator Jim Hargrove
Representative Norma Smith
Representative Lynn Kessler
Representative Barbara Bailey
Representative Kevin Van De Wege

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX E
## AGENCY AND STAKEHOLDER COMMENTS ON DRAFT PLAN

**TOWN OF VIEW ROYAL**
45 View Royal Avenue, Victoria, B.C., Canada V9B 1A6
Tel: (250) 479-6800 • Fax: (250) 727-9551
e-mail: info@town.viewroyal.bc.ca

Washington State Ferries
Attention: Mr. David Moseley (moseled@wsdot.wa.gov)

January 21, 2009

Dear Sir,

**RE: Washington State Ferries Long-Range Plan, December 2008**

I am writing on behalf of the Council of the Town of View Royal to appeal to Washington State Ferries and the Washington State Legislature not to follow through with the cancellation of the international ferry service between Anacortes Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view, there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local government business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry

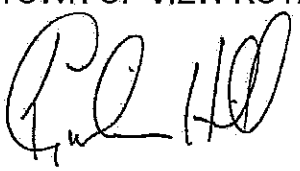
system in this regard. However, it is our strong belief that the Anacortes/Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes/Sidney ferry service is retained, for now, and long into the future.

Thank you for you consideration.

Sincerely,

TOWN OF VIEW ROYAL



Graham Hill, Mayor

**Saanich Peninsula Chamber of Commerce**
*The Voice of Business*

#201 - 2453 Beacon Avenue
Sidney, British Columbia V8L 1X7
Phone: 250-656-3616
Fax: 250-656-7111
Email: eleddy@peninsulachamber.ca
Web: www.peninsulachamber.ca

January 20, 2009

Mr. David Moseley
Washington State Ferries

Dear Mr. Moseley,

**Re: Washington State Ferries Long Range Plan, December 2008**

We are writing to appeal, on behalf of the Saanich Peninsula Chamber of Commerce and the business community of the Saanich Peninsula and Southern Vancouver Island, that Washington State Ferries set aside the proposed cancellation of the Sidney-Anacortes run at the end of the 2009 season.

The Sidney-Anacortes run is a vital link between Vancouver Island and Washington State. Visitors arriving from Anacortes inject millions of dollars, directly and indirectly, into the local, regional and Southern Vancouver Island economies annually. The implications of losing this revenue are staggering for business here.

In the summer of 2007, chamber executives from Skagit County, including Anacortes, converged on Sidney for a day of touring and information exchange. High on the agenda was the need to cross-promote between our two regions, with the goal of boosting both economies. Without the ferry run, opportunities for revenue generating cross-promotion disappear.

The arrival of the Anacortes ferry in Sidney every spring, marks the official beginning of the tourist season here and is cause for hope and celebration on this side of the border, owing to the economic benefits it brings to stakeholders in the town and the region. The highly active and visible Sidney Sister Cities association organizes a welcoming party to mark the occasion.

Cutting the ferry run would mean a significant loss in tourism revenue for Sidney, the Saanich Peninsula and Southern Vancouver Island. It would also interrupt the close cultural bond that has formed between our two complementary regions.

We believe that retaining the Sidney-Anacortes run is in the best interests of Washington State, as well as our region, for now and for the future. Observers on this side will attest to the vehicle line-ups, city blocks long, twice daily, at the ferry terminal: destination the San Juans and Anacortes. A recent ridership forecast for the ferry run estimated a net gain for Sidney of 78% over the next 20 years. We are hopeful that, for all of these good reasons, including the information contained in the Hovee Report, that the Sidney-Anacortes run can be retained.

Thank you.

Sincerely,

Eileen Leddy
Executive Director

# CITY OF COLWOOD

3300 Wishart Road, Colwood, B.C. V9C 1R1
www.colwood.ca

(250) 478-5541 – Administration/ CAO
(250) 478-5999 – Bylaw Enforcement/Building
(250) 478-5999 – Engineering
(250) 478-5530 – Finance & Property Taxes
(250) 478-8321 – Fire Department
(250) 478-5590 – Planning & Zoning
(250) 474-4133 – Public Works Yard
(250) 478-7516 – Facsimile
mayorsaunders@telus.net mayor@colwood.ca


January 21, 2009

Washington State Ferries:

**Sent Via Email: moseled@wsdot.wa.gov**

Attention: Mr. David Moseley

**Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to the Washington State Ferries and the Washington State Legislature to not follow through with cancellation of the international ferry service between Anacortes Washington and Sidney, British Columbia. The City of Colwood would like to add its voice to the vigorous campaign to preserve this important marine link between our countries.

We support the position of the Town of Sidney, and many other agencies, in their view that a number of compelling reasons exist to defend retention of the service:

1. There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (Hovee Report of July 2007).

2. A detailed analysis has not been undertaken on the Canadian side, yet it would be logical to assume that similar economic benefits from the service apply to Sidney and the entire Capital Regional District.

3. Ridership could be significantly improved by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. A coordinated marketing program through a consortium of stakeholders on both sides of the service would accomplish this.

4. An assessment of departure and arrival times for all terminals could vastly improve ridership. A schedule that requires travellers to leave a terminal late one day, stay overnight, and return first thing the next morning is not attractive to travellers – they are left with little time to enjoy their destination.

5. The significant value to the connection between Anacortes and Sidney is difficult to quantify. In a cultural, historical and social context it is nothing less

than priceless. The Sister City relationship is a clear expression of the importance of the relationship between these communities. In these times, living in a world facing significant hardship and unrest, we should do all we can to encourage and strengthen our relationships.

We are all in the local governance business and we are keenly aware of the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard, but it is still our belief that this service is a net fiscal gain for the State of Washington. We also believe there are value to this important connection that cannot be measured by dollars and cents. When considering any of the services we provide, and the costs associated with operating those services, we must also consider the *desires* of the community as well. The ferry system is a community service that allows communities from different countries establish and build friendship and business relationships that strengthen both our economies and provide immeasurable benefits to the personal well-being of all our citizens.

It is our sincere wish that the Anacortes / Sidney ferry service be retained for the valuable service and important link it provides to the people of the United States of America and Canada – and it should remain in service long into the future.

Thank you for your consideration.

Sincerely,

Corporate Officer

for David Saunders,
Mayor, City of Colwood

cc: Mayor Dean Maxwell, City of Anacortes – dean@cityofanacortes.org
Mr. Duane Clark, Save Our Ferry - dclark@capsantecourt.com
Honourable Gary Lunn, MP - lunnmp@garylunn.com
Honourable Murray Coell, MLA - murray.coell.mla@leg.bc.ca
Saanich Peninsula Chamber of Commerce – eleddy@peninsulachamber.ca
Sidney Business Association - manager@sidneybusiness.ca
Tourism Victoria - kelsi.woodward@tourismvictoria.com

21 January, 2009

TO: Washington State Ferries Planning Division
FROM: Preston Schiller, preston.schiller@wwu.edu, Transit Coordinator, North Sound Connecting Communities Project (NSCCP or "Farmhouse Gang")
ATTN: Joy Goldenberg, Ray Deardorf (wsfplanning@wsdot.wa.gov)
RE: Comments on transit-related matters in the Washington State Department of Transportation Ferries Division Draft Long-Range Plan, December 2008
cc/Bruce Agnew (Cascadia Center), Liz Illg (Town of Friday Harbor), Bill Watson (SJI-EDC), Shannon Wilbur (San Juan Co. Public Works)

There is considerable attention in this plan to the need and prospects for improving the linkages between WSF and local transit services as well as making terminal improvements to facilitate better transit and pedestrian access and rider information about transportation options at terminals.

The purpose of this brief communication is to make you aware of the interest of the NSCCP in these and related matters, especially in regards to the Anacortes WSF Terminal and the potential for improved connections between it and the Amtrak services at Skagit Station in Mount Vernon. Part of the mission of the NSCCP is to promote public transportation, improved traveler information, and improved intermodal connections in the North Sound region.

We note that although there are many references to improving transit connections to WSF services, and improving some WSF facilities in order to better accommodate transit and walk-ons, there are no specific plans for improving either at Anacortes WSF or the San Juan Islands terminals. We believe that more attention should be given to the specifics of improving these matters in regards to the latter-mentioned facilities.

The NSCCP has worked with WSF, Skagit Transit, Whatcom Transportation Authority, Island Transit, Everett Station, and the Whatcom Council of Governments in the development of improved traveler information and displays at key regional intermodal facilities. (see http://wcog.org/Completed-Projects/Kiosk-Project/266.aspx) A facility-by-facility description of our installations and remaining issues is available from me at my e-mail address above.

We have also been engaged over several years in discussions about improved transit connections at both ends of the Anacortes-San Juan Islands ferry services. At present, and partly as a result of the San Juan Transportation Summit of September 2008, there is renewed interest in this matter.

We are also exploring ideas about how a service connecting Skagit Station and Anacortes-WSF might better connect these facilities. At present there are several services, public and private, between these facilities, although none is direct or seamless or integrated with the schedule of the other. There are many challenges in offering a direct and seamless connection and we shall analyze these as well as offer suggestions in a forthcoming white paper. We will also be discussing these matters at an upcoming NSCCP Rail-Transit committee and San Juan Islands sub-committee meeting in early March. We shall keep you informed of the details of the report and the meetings in the hope that representatives from the WSF will participate and that our efforts will hopefully help your planning efforts.

# The Corporation of the District of Central Saanich

January 21, 2009 File No. 0220-01

Washington State Ferries

Attention: Mr. David Moseley
moseled@wsdot.wa.gov

Dear Mr. Moseley:

**Re: Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical, and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

.../2

1903 Mount Newton Cross Road, Saanichton, B.C. V8M 2A9
Phone: (250) 652-4444 Fax: (250) 652-0135

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Yours truly,

Jack Mar
Mayor

C: Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Honourable Gary Lunn, M.P.
Honourable Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Sidney Business Association
Tourism Victoria
Town of Sidney

DISTRICT OF HIGHLANDS

January 20, 2009

File: 1415 - 20

*VIA EMAIL: (moseled@wsdot.wa.gov)*

Transportation Building
Washington State Department of Transportation
310 Maple Park Avenue SE, PO Box 47300
Olympia WA 98504-7300

Attention: Mr. David Moseley

Dear Sir:

***Re: Washington State Ferries Long-Range Plan, December 2008***

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes Washington and Sidney British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

This ferry service provides tangible net mutual benefits to the communities it serves, fiscally and otherwise. Surely it will be more difficult to re-establish this important and valued service in the future should it be discontinued now.

It is our sincere wish that this service be retained for now and long into the future.

Sincerely,

DISTRICT OF HIGHLANDS

Jane Mendum,
Mayor

c: Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Honourable Gary Lunn, M.P.
Murray Coell, MLA
Saanich Peninsula Chamber of Commerce
Sidney Business Association
Tourism Victoria

1980 Millstream Road, Victoria, British Columbia V9B 6H1
Tel: (250) 474-1773 Fax: (250) 474-3677 Web: www.highlands.ca

# TOWN OF SIDNEY

2440 Sidney Avenue, Sidney, British Columbia V8L 1Y7
Phone: (250) 656-1184 Fax: (250) 655-4508
email: townhall@sidney.ca Website: www.sidney.ca

**Office of the Mayor Tel: (250) 656-1139 Fax: (250) 656-7056**

January 9, 2009

Washington State Ferries
Attention: Mr. David Moseley (moseled@wsdot.wa.gov)

Dear Sir:

**Re: Washington State Ferries Long-Range Plan – December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Larry Cross
MAYOR

c: Mayor Dean Maxwell, City of Anacortes
Honourable Gary Lunn, M.P.
Honourable Murray Coell, M.L.A.
Tourism Victoria
Duane Clark, Save Our Ferry
Saanich Peninsula Chamber of Commerce
Sidney Business Association

*MAYOR'S OFFICE*
*CITY OF LANGFORD*
*2nd Floor, 877 Goldstream Ave*
*Langford, BC*
*V9B 2X8*

*City of Langford*

***Administration & Finance***
***Tel: (250) 478-7882***
***Fax: (250) 478-7864***
***Website: cityoflangford.ca***

January 20, 2009

File No. 0400-50/SID

Washington State Ferries
Attention: Mr. David Moseley
VIA E-MAIL: moseled@wsdot.wa.gov

Dear Sir:

**Re: Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes Washington and Sidney British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local government business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is

our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Stewart Young
Mayor

cc: Mayor Dean Maxwell, City of Anacortes (dean@cityofanacortes.org)
Duane Clarke, Save our Ferry (clark@capsantecourt.com)
Hon. Gary Lunn, M.P. (lunnmp@garylunn.com)
Hon. Murray Coell, M.L.A. (muray.coell.mla@leg.bc.ca)
Saanich Peninsula Chamber of Commerce (eleddy@peninsulachamber.ca)
Sidney Business Association (manager@sidneybusiness.ca)
Tourism Victoria (kelsi.woodward@ourismvictoria.com)

# TOURISM VICTORIA

January 20, 2009

Washington State Ferries
Attention: Mr. David Moseley
moseled@wsdot.wa.gov

Dear Mr. Moseley:

**Re: Washington State Ferries Long-Range Plan**

Tourism Victoria strongly opposes the proposed elimination of the international ferry service between Anacortes, Washington and Sidney, British Columbia with the Washington State Ferries company.

With the 2010 Olympic and Paralympic Winter Games approaching, WSF would do better to consider *expanding* ferry service to Sidney, a key transfer point to Vancouver, or even permanently restoring the service.

Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

Losing the Anacortes/Sidney Ferry run will have a huge economic impact on Anacortes and the surrounding counties (Skagit, Whatcom, Island, San Juan, Snohomish, and Sidney, BC). The annual impact is $1.3 million in local taxes, 1470 jobs, $30 million in payroll, and $126 million in spending. *(See Independent Hovee Report)*

Mr. Moseley, I am aware that you have received a number of letters outlining the economic and other relevant impacts of eliminating this service and therefore will not re-state them here. However, our uncertain economic times are indeed the worst time to make "superficial" budget line item cuts. The short-term potential gain will certainly have much graver consequences to the mid and long term future of our regions. I urge you to reconsider the unnecessary and potential negative effects this cancellation will have on Anacortes and the surrounding communities as well as Sidney and Greater Victoria, British Columbia. With the information contained in the Hovee Report, the fiscal gain for the State of Washington is evident.

2009 is a year for leadership and courage. This is an opportunity to display vision and work together and Tourism Victoria sincerely hopes that all parties involved in this decision embrace this and do what is right.

We therefore strongly support the retention and enhancement of the Anacortes/Sidney ferry service for now, and long into the future.

Thank you for your consideration.

Sincerely,

Rob Gialloreto
President & CEO, Tourism Victoria

cc: 10th Legislative District
Senator & Representatives
40th Legislative District
Senator & Representatives
1st, 21st, 38th, 39th, 44th Legislative Districts
Senators & Representatives
Paula Hammond, WSDOT
Mitch Everton, Anacortes Chamber of Commerce
Don Wick, EDASC
Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Hon. Gary Lunn, M.P.
Hon. Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Mayor Larry Cross, City of Sidney, BC
Sidney Business Association
Bob Hyde, Port of Anacortes
Tourism Victoria Board of Directors

District of Sooke
*Incorporated December 7, 1999*

2205 Otter Point Road, Sooke, British Columbia, Canada V9Z 1J2

Phone: (250) 642-1634 • Fax: (250) 642-0541 • Email: info@sooke.ca • Website: www.sooke.ca

January 19, 2009

File No. 0470

VIA EMAIL: moseled@wsdot.wa.gov

Mr. David Moseley
Washington State Ferries

Dear Sir:

Re: Washington State Ferries Long-Range Plan, December 2008

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007);

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District;

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service;

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes/Sidney ferry service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes/Sidney ferry service be retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Sheila Beech

Sheila Beech
Acting Mayor

cc. Mayor Larry Cross, Sidney
Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Sidney Business Association
Hon. Gary Lunn, M.P.
Hon. Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Tourism Victoria

Community Development Office

*Visit the LARGEST summer street market in British Columbia.*

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**Sister Cities Association**

Community Arts Council of the Saanich Peninsula
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**Community Safety Policing**

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Sidney, BC, V8L 5J6
Phone: 250-655-6417
Fax: 250-656-4368
info@sidneybusiness.ca
www.sidneybusiness.ca

# Sidney BY THE SEA BUSINESS ASSOCIATION

January 19, 2009

Mr. David Moseley,
Washington State Ferries

Re: Closure of the Anacortes/Sidney ferry run.

Dear Mr. Moseley,

The members of the Sidney Business Association wish to convey our gravest concern regarding the plan to consider eliminating the Anacortes/Sidney ferry run as of September, 2009.

This run has been in effect since 1951 and provides a valuable transportation link between the two countries. While we can understand the tight financial situation the WSF finds itself in, there are several economic factors that would escalate the financial decline in that area. We note that there would be a overall job loss of 1.470 jobs relating to the elimination of the ferry operation and this would have a serious economic impact on the Puget Sound area. The retail sales and service segment would be seriously impacted as a negative result of the loss of tourist dollars thereby causing more unemployment and a tremendous loss of tax revenue. We understand that a recent survey has shown that 91% of all residents in the region have used the ferries and 95% of Puget Sound residents responded that the ferries are very important with voter support at 70% in favor of continuing the ferry run.

It would certainly curtail if not totally eliminate the ongoing cultural relationship that has developed between Anacortes and the Sidney sister city committees.

We feel strongly that the elimination of the Anacortes/Sidney run will have a long term devastating economical and cultural effect on the two cities and we formerly request that you implement Plan A of your Draft Long –Range Plan whereby the WSF continues to operate and maintain the current service level of the Anacortes/Sidney ferry run. There are many economic, cultural and international reasons to keep this run operating and we urge you to consider those factors when considering your plan of action

We thank you for your consideration of this appeal.

Marie Rosko, President
Sidney Business Association.

***Generating new business for your Business***

PENINSULA Gallery

January 20, 2009

Mr David Moseley
Assistant Secretary for the Ferries Division
Washington State Department of Transportation
PO Box 47300
Olympia WA 98504-7300

Dear Mr Mosley,

Re: Anacortes- Sidney ferry

It was a shock to hear that Governor Gregoire has proposed eliminating the Anacortes-Sidney ferry route in the 2009-2011 biennium budget. I appeal to you to do all in your power to ensure that this important international ferry route continues to operate. This route provides approximately 1,470 jobs within the Northern Puget Sound region (Island, San Juan, Skagit, Snohomish, and Whatcom counties.)

There is over $30 million in annual payroll and nearly $126 million in annual spending that is directly and indirectly associated with this ferry service. In these uncertain economic times, every effort must be made to support the jobs that already exist. The spiraling negative effects of the job losses cannot be calculated.

In 2006, approximately 131,600 passengers rode the Anacortes to Sidney, BC ferry. Excluding the 17% of riders within the inter-islands, fully 83% (109,000 net passengers) traveled the full distance.

The State of Washington receives $4.6 million a year in taxes related to the ferry run. Local jurisdictions collect $1.3 million in tax receipts annually. This means approximately $45 in tax revenue per rider.

As well, the friendly cultural link between the USA & Canada and the sister city relationship between Anacortes & Sidney has been nurtured by this link. Our own business has enjoyed the visits of many ferry passengers over the years. With the approach of the 2010 Olympics, we hope many more visitors will include a trip to Vancouver Island via the Anacortes ferry. There are numerous positive effects from this ferry service

Please do all you can to keep this ferry route running. Many, many people (& their families) who depend on it for their living will be grateful voters in the years ahead.

Sincerely,

Larry & Gillian Hanlon

100 - 2506 Beacon Avenue Sidney, B.C. Canada V8L 1Y2
**Phone: (250) 655-1722 Fax: (250) 655-1232**

SENATE DEMOCRATS

WASHINGTON STATE

## Sen-Elect Kevin Ranker
## Statement in support of the Anacortes/Sidney Ferry

It is critical that we maintain the Anacortes/Sydney Ferry run because of the very serious economic impacts and job loss that would result from this cut. Ferries play a vital role in our regional economy as part of our state highway system.

A recent study conducted by E.D. Hovee & Company on behalf of the Economic Development Association of Skagit County found that ferries are vital to the economies of the communities that they serve, and the Sidney route is particularly important for tourism access both to Vancouver Island, B.C. and the Northern Puget Sound region, including Skagit County. Even a partial elimination of ferry service on the Anacortes-Sidney route would threaten thousands of jobs in the five counties of the Northern Puget Sound Region, impact up to $30 million in payrolls and as much as $126 million in related spending, and reduce state and local revenues that are generated by related economic activity. Further, the elimination of this run one year before the 2010 Olympics in BC is unrealistic as we expect an upwards of tens of thousands of visitors generating millions of dollars in revenue in the coming year.

As a member of the Senate Transportation Committee, one of my priorities will be to clarify that ferries are essential to the economic and community health of our region and that they deserve the full support of the Legislature. And, as someone with first-hand knowledge of how important these ferry runs are to the communities that rely on them, I will be doing everything I can to support the Anacortes/Sidney Ferry and ensure its continued presence as a valuable economic stimulus to our region.

# RESOLUTION NO. 04 – 2009

**A RESOLUTION EXPRESSING THE CITY'S SUPPORT FOR THE CONTINUED OPERATION OF THE INTERNATIONAL FERRY RUN.**

**WHEREAS**, the international ferry run between Anacortes and Sidney, B.C. has been in existence for many years providing this key transportation route which is a convenient and vital linkage between Vancouver Island and Washington State. In a recently published study by E. D. Hovee and Company, LLC, the analysis indicated that the following economic and fiscal benefits can be attributed to the international run:

- In 2006, approximately 131,600 passengers rode the Anacortes to Sidney, BC ferry. Excluding the 17% of riders within the inter-islands, fully 83% (109,000 net passengers) traveled the full distance.

- Approximately 1,470 jobs with over $30 million in annual payroll and nearly $126 million in annual spending are directly and indirectly associated with this ferry service within the Northern Puget Sound region (Island, San Juan, Skagit, Snohomish, and Whatcom counties.)

- The State of Washington receives $4.6 million a year in taxes related to the ferry run. Local jurisdictions collect $1.3 million in tax receipts annually. This equates to approximately $45 per rider; and

**WHEREAS**, The international run generated $126 million to the economies of Skagit, Island, San Juan, Whatcom and Snohomish counties in 2006, according to a study commissioned by the Economic Development Association of Skagit County; and

**WHEREAS**, the Governor, in her 2009-2011 biennium budget, has proposed eliminating the international ferry run, for a projected savings of $9.2 million; and

**WHEREAS**, the international ferry run facilitates tourism in Skagit County, benefitting the residents and businesses of Burlington and the entire community;

**NOW, THERFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BURLINGTON, WASHINGTON AS FOLLOWS:**

That the City Council of the City of Burlington strongly encourages the state legislature and the Washington State Ferries to continue operation of the international ferry run.

Adopted this 22nd day of January, 2009

Edward J. Brunz, Mayor

Testimony from Bainbridge

Comments regarding WSF Long Range Draft Plan A & B

ESHB 2358 stated that WSF shall develop fare and pricing policies that: "consider the impacts on users, capacity, and local communities". Without data from the economic analysis impact study, WSF cannot make sound decisions about the fate and subsequent impacts.

Presenting Plan B on the same day that Ferry Policy Committee was disbanded was pretty much pulling the voicebox out of the throats of our representatives who were there to speak and advocate on the behalf of ferry-served communities. They were disbanded before they could review, question, and comment on it. WSF did not speak with Ferry Advisory Committees or local officials and representatives in developing or reviewing of Plan B. Plan B is a non starter and should be flat out rejected by every ferry-served community.

## Let's focus on creating a Plan C – Citizen's Common Cents

### 1. First, make a commitment to fund the system after all efforts for efficiencies have been implemented.

This biannual scramble for funding has got to stop. Do the mountain passes have to scramble for funding of snow plows to keep the mountain passes clear each budget cycle? Is 520 looking at closing down two lanes to reduce its highway costs? Stop treating the marine highway & mass transit system as oddity of WSDOT. Put funding in the budget.

create "cost savings"

### 2. Look for cuts in the system.

WSF overhead should be immediately cut before the legislature even thinks about reaching into our wallets again.

The system has not changed drastically the number of crew, service, and boats in over 30 years. What has changed drastically is the amount of WSF administration - 5 times what it was! So at a minimum, we should be asking for 25% reduction in WSF headquarters. Use the money saved to build more flexible fleet of ferries.

Regrettably the legislature sent WSF on a path of having to find its own money to float the system - thus 80% fare increases in 6 years and the rush to figure out how to raise more money - become landlords, collect rents from franchise (Starbucks, MacDonalds, etc), sell advertisement, get more money out of users! Legislature should take responsibility of restoring funding in the budget.

### 3. Build boats not terminals.

Stop the nonsense of the expensive terminal expansions and improvements!

Terminals should be nothing more than glorified bus stops - shelter and spaces to pass through on the way to your destination. We don't want high end shops, hotels, and

restaurant/coffee franchises at the ferry terminals...we want people to go to our towns to visit, shop, and buy from our mom and pop locally owned stores. Build boats not Terminals! The old terminal's were built like bomb shelters – built to last.

**4. Have contracts for the life cycle of the vessels.**

All new vessels should have build/maintain bidding contracts.

Now that we don't have steel electrics that needed hand-crafted parts and wood shop repairs - downsize the maintenance yard or better get rid of it and contract out maintenance as the majority is now already being done elsewhere – Todd Shipyard currently Dakota, Edmonds.

How is it that WSDOT spends $21 million a year maintaining 946 buildings and WSF is going to spend $22 million for one maintenance yard operation in Eagle Harbor? And why is Eagle Harbor Maintenance yard budgeted into the future up to $90 million dollars? That money could build two new boats! Is there something outrageous about this sort of spending? Is there room for cutting expenses?

**5. Change law requiring ferries to be built only in Washington.**

Common sense would say - repeal the law that requires ferries be built in Washington only. Previous ferries were built at $220 K per vehicle space. The recent ONE BID ONLY came in at $1.5 million per vehicle space – 7 TIMES THE COST! With the new US administration talking about creating jobs for infrastructure - with the build only in Washington law we will not qualify for those federal funds.

**6. Finally, increase the WSF portion of the gas tax from 1/2 a cent to 1.5 cents.**

Citizens' Common Cents.

Debbi Lester
Ferry Community Partnership
Bainrbidge Island member

J07

**These are Doug Rauh's comments on the WSF 2009 Long Range Plan.**

The WSF 2009 Long Range Plan does not meet the goals of the WSF customers or the financial goals of th Legislature.
I will address the things I believe need to be changed in order to meet the Legislature and customer goals.

The very first step that is needed is for WSF to change WSF policies that will improve the systems efficiency, reduce its expenses and make the commute easier for the customers.

- **(no fee) Reservation System accessible by phone or computer.**
  Page 53 current vehicle queuing process is inefficient and would cost about $1,000,000,000 to upgrade all the holding areas.
  A reservation system would accomplish the same thing for approximately $42,000,000.
  Page 54 "How do customers deal with the loss of spontaneity?" Use the Tacoma Narrows Bridge or Walk on.

- **Charge vehicles per linear foot of deck space used**. The Appendix on Strategies did not indorse this idea. The reason given was no benefit to WSF and to hard for the customer to change to shorter vehicles. The US Census indicates that a large portion of West Sound residents have 2, 3 or more vehicles. I have assumed the vehicles vary in length. If WSF provided the incentive the customers would provide the shorter vehicles thus providing additional deck space on each run that can be sold to other customers and reduce the potential for an over load where vehicles must be left at the dock.
  Page 61 "a small car discount would target a very small portion of total riders."
  Bad assumption. Look at the US Census. Most West Sound residents have 2+ vehicles. All it would take to get someone to use the shortest vehicle is for WSF to charge by the linear deck space used.
  The current **WSF policy** actually gives a discount to the longer vehicle because all vehicles under 20 feet pay exactly the same price.
  Page 62 "

- **All variations on vehicle fares should be eliminated for all vehicles with more than 2 wheels.**
  Charge strictly by the per foot length of deck space used.

- **Remove the vehicle over height charge.**
  A vehicle with a bicycle on it's roof will be charged a double vehicle fare per WSF pricing policy.
  A bicycle rack on the back of vehicle use 3 or more feet of deck space and save 50% on the vehicle fare.
  A MarkII has approximately 4,400 linear feet of vehicle deck space.
  The MarkII's final cost to the state was well over $100,000,000 each for the current 208 (20') vehicle capacity.
  Therefore each foot of deck space cost the tax payers of Washington about $24,000.
  During route overload periods please maximize the use of deck space.

- **Implement a fuel surcharge** to help mitigate the volatility in fuel prices.

Note: When WSF purchased the MarkII's Caterpillar Marine won the Life Cycle Cost bid. Then the Legislature change the bidding process to Low Cost bid. The only other bidder Siemens Marine than won the bid. The Life Cycle Cost bid analysis indicated the Siemens engines would use $48,000,000 more fuel over the 40 year life analysis period than the Caterpillar Marine engines. The Legislature moved a Capital Cost to an Operation Cost. Operational costs are paid for by fare box recovery. W should do a lot more to educate the Legislature on how to lower WSF customer expenses. The bid analysis did not consider $140 per barrel oil, so the fuel difference may be much larger due to the recent Diesel fuel increases.

- **State publicly how the vehicle boats are to be categorized.**
  Are ferries highways, mass transit, floating bridges or some combination.
  Treat the ferries equally financially according to their categorization.
  If a land bus gets a subsidy than a marine bus should get the same subsidy.
  If a bridge (floating or suspension) gets a certain percentage of funds than a floating bridge (aka ferry) should get the same funding.
  As a highway of Statewide significance ferries highways should be in line for the same money as highways built on land.

- **Put one MarkII on Bremerton, Bainbridge, and Kingston routes.**
  Assign any additional capacity as needed on those 3 routes.

- **Change the current WSF model of two ferries per route to 3 or more ferries per route.**
  This will reduce the land side infrastructure problems caused by the 10 to 1 compression of the demand caused by WSF offloading 60 minutes of vehicles in about 6 minutes on to the land side transportation system.
  This also reduces the impact of a breakdown from the current 50% lose of capacity to a 33% lose of capacity with 3 boats.
  A side benefit of shutting a boat down during light demand periods.
  The time between boats is reduced by at least one third or 20 minutes on the Bremerton run.

- **Build lighter boats by using aluminum instead of steel.**
  The MarkII boats were built with 900 tons more steel than the Jumbo's.
  If the average vehicle weighted 3,000 pounds than 900 tons is equal to approximately 600 vehicles.
  Thus when a Mark II with a empty car deck is heavier than a Jumbo with 3 loads of vehicles.
  Every MarkII must push the empty weight of a Jumbo + 3 additional loads of cars every time it crosses the Sound.
  Let's change ferry boat construction from steel to aluminum.

- **SR-305 needs the Red Light Runner program installed on all the Traffic Signals on Bainbridge Island because of the traffic surges caused by WSF.**

- **Foss Tug built a Green Tug.** I would like to see WSF review the Foss Tug design for possible ideas that could benefit WSF. See Foss Maritime Company Hybrid Tug Boat 10:20am presentation at the Washington State Transportation Commission Jan 13, 2009.

- **Stop using Bremerton as the operational relieve boat for the other routes.**

When a route loses a boat that route takes the hit.

- **Collect passenger tolls only on one side of a route.** Appendix indicated manual toll process was a restriction to rapid boat turn around. Suggested hiring addition toll collectors, putting two toll booths in a row, and stop selling tickets at the toll booth to speed the tolling process.

- **Round round-trip passenger fares to the nearest dollar for faster cash transactions.**

- **Integrate intelligent automation throughout the WSF system.**

- **Work with WSDOT to mitigate the traffic compression caused by using Ferries as cross Sound Highway Bridges by implementing an Intelligent Transportation System on SR-305.**
  Sensors should be used to monitor SR-305 and the local cross traffic for load changes. When the ferry offload occurs SR-305 should be treated like a railroad track and the offloading vehicles like a train. The first mile of more of vehicles should get a solid green until the first major break in traffic. If there is no waiting cross traffic than the traffic signals should stay green until all the ferry vehicles have passed as determined by real time sensors.

- **The new traffic signal on SR-305 at the Bainbridge Island WSF Toll slows down the offload of the ferry.**
  Currently WSF directs all passengers to the North side of SR-305 than WSDOT directs them to the South side of SR-305 using a new $300,000 traffic signal. A better option would have been to allow WSF passengers to unload to the South side of SR-305.

- **The Coleman Dock turnstiles are to close together to allow passage of wheeled bags** which are used extensively on the Bainbridge route.
  The turnstiles are to close to the access point to the gangway .
  This does not allow any pre-ticketing until after the completion of the unload.
  Thus only allowing less then 10 minutes to process up to 2,000 customers.
  This puts undue stress on the customers.
  The barcode readers with the wider separation and plastic doors that open sideways works better than the three pronged people pokers.

- **The Coleman Dock turnstiles would work more efficiently if they were located back closer to the manned ticket booth.**
  There are two sets of turnstiles at Coleman, one for Bremerton and one for Bainbridge.
  If the turnstiles were located by the ticket booth only one set of turnstiles would have been necessary to process both
  Bremerton and Bainbridge.

- **Put bar code above an below fold line on on-line passenger tickets.**
  This would allow WSF passenger customers to insert the folded bar coded 8x11 paper either way and still get a successful read. The current single barcode is an inefficient way to process that form and effects tourist, senior citizens and anyone familiar with the system but not paying attention thus slowing down the bar code reading process.

- **Use an email Bar Code sent to a Cell Phone as the WSF Boarding pass.**

**Telecommunication bandwidth** is increasing to a point where audio anywhere is expected. Video display, conferencing and even holographic displays are possible. As the mobile and conferencing becomes faster and easier telecommunication will replace some cross Sound ferry trips.

The **volatility of fuel prices** will affect home buying decisions. In the near term the lower prices of hon in the West Sound has been canceled out by the higher ferry fares coupled with the uncertainty of future route schedules and reliability.

Per January 5, 2009 Aviation Week & Space Technology "In the next two decades, almost 80 million Americans will become eligible for Social Security **retirement** benefits at a rate of more than 10,000 a day – seven Boomers every minute." This will change the WSF customer base.

The **business model** has changed from the post World War II model of (8 to 5) 5 days a week at one location to a much more flexible work environment. The biggest impediment to the change has been the upper and middle managers. This recession has flushed most of them right out of the work. Expect more business models like American, Jet Blue and Southwest Airlines. All have used data processing to reduce the actual cost of operating an airline. American allows customers to use their cell phone to display a barcode as the boarding pass (no paper). How long before WSF would try this. Are the WSF bar code readers capable of process cell phone bar codes? Jet Blue has the reservation workers working from home. All of them all the time. Southwest made history by staying in the black by hedging future fuel purchases.

Many of WSF customers use the system to get to **medical treatment** that is only available on the East Side. As the West Sound grows more medical treatment is being offered on the West Sound. Within less than the time frame of this Long Range Plan the West Sound will have most of the treatments the East Sound has.

Many of WSF customers use the system to access **Aviation Infrastructure** or **SeaTac**. If the next Regional Airport is built on the West Sound many of those customers will no longer cross the Sound only to access aviation infrastructure.

Many of WSF customers are going to **Cultural events**. With the reduced schedule the number of individuals who can afford to stay overnight in Seattle or drive around after the event will be greatly reduced.

With the sale of Puget Sound **Energy** to Macquarie the price of electrical energy will be going up substantially. This will affect business type and location. Fewer businesses locating or staying in the Puget Sound means fewer WSF trips.

Originally people worried that WSF would take business from the **Tacoma Narrow Bridge**. Who would have predicted the substantial increase in fare would force those that can to drive around using the TNB.

**Tourism** is a growing segment of the Washington economy. If WSF cuts the links like Port Townsend to Keystone and Sydney to Anacortes fewer tourist will want to use the system.

The lack of awareness as to what was available made me very upset with WSF.
It appeared to me that WSF and Kitsap Transit did not care about Bainbridge Island. Their only concern was could they get grant money from the feds. That is why you see New Jersey barrier along SR-305 across the Ravine. Those are the only New Jersey barriers on the Island and it appears to be just a WSDOT finger in your eye type of statement.

Repeatedly WSF and Kitsap Transit consultants have proposed routing bus uphill to East Winslow Way, turn left toward SR-305 then turn right on SR-305. Where do you get these designers? A much better solution would be to route all traffic down hill from the bus holding and parking garages. Hold all SR-305 access until the ferry is offloaded. Then let the buses access SR-305 followed by the cars from the parking lot. Keep all traffic signals green on SR-305 while the offloading traffic is clearing. Use ITS (Intelligent Traffic System) sensors to identify when the ferry traffic needs the green. Then hold the green until the traffic has cleared. This could take 6-8 minutes, but would ensure that the regional highway (SR-305) actually worked like a regional highway.
WSF should never propose to put truck access across the Ravine and next to the Bainbridge Island Water Front Park. Parks are sacred on Bainbridge.

WSF proposed building a 600 vehicle holding area next to the WSF Terminal on Bainbridge. Any vehicle that has to wait 3 or more boats is better off driving around. It would be cheaper and faster. WSF would have had to cut the trees between the WSF Maintenance Yard and the WSF Terminal. Next to parks, trees are Islanders most sacred objects. WSF should think long and hard before cutting trees.

- The 2009 WSF Long Range Plan proposes to put the largest share of its capacity at the only terminal you have to cross a bridge to get to and that bridge sits on top of the Seattle Fault Line (**earth quake**). The Puget Sound does have earth quakes so lets plan for them in the planning stage. Earthquakes can destroy anything so the best solution is to disperse the ferry capacity to multiple terminals. I like the idea of one MarkII at Bremerton, Bainbridge, and Kingston.

- Page 8 WSF Long Range Plan revenue for plan "A" $5,638,000,000.
  revenue for plan "B" $5,243,000,000.
  Difference **$ 395,000,000.**
  On a reasonableness factor this would rate as **not believable.**

- Page ES-9 "With a dedicated tax subsidies of almost $900 million over the 22 years, there would be an estimated tax subsidy **surplus in the operating account** of approximately $719 million, which would be available to."

  How do you convert Operational Funds into Capital Funds? Is this what other Mass Transit systems do? I do not like this mixing up of the funds. I get nervous that some of the money may get lost in the shuffle.
  It looks like the West Sound is paying an additional transportation tax so Seattle will be able to use more state funds for large Seattle projects.

- Page 30 WSF Long Range Plan Seattle-Bainbridge 2030 Vehicles 2,909,767.

MarkII max vehicles 202, 46 runs (23 each direction), 9,292 daily vehicle capacity, 3,391,580 annual vehicle capacity.
2,909,767 / 3,391,580 = **90% full all runs all year.**
This load factor is **not believable.**

- Page 32 WSF Long Range Plan **Westbound PM** Arrival Terminal **Bainbridge** Vehicles **Peak Hour** Year **2030= 604.**
With two(2) MarkII's working this route each having a maximum Vehicle capacity of 202 and a 35 minute crossing time.
You would need to dock 3 times in 60 minutes. If that is currently not possible how can it be possible in 2030?
The 604 number is **not believable.**

- Page 33 **"Mukilteo-Clinton...a significant portion of its ridership is commuter-based."**
Boeing moved their headquarters to Chicago. Boeing moved the 787 wing manufacturing to Japan. Boeing excess Renton facilities have been sold for condo's. Labor has struck Boeing the last two contracts. Boeing is preparing to build new assembly facilities outside of the Puget Sound Region, State, Country. The move will occur with the next launch the 797. The Mukilteo-Clinton route will see the commuter numbers shrink over the next 20 years.

- **Page 34 WSF Long Range Plan "The ridership projections used in this planning effort assume that recreational ridership will increase at the same rate as other ridership."**
As the Baby Boomers retire the commuter ridership will reduce faster than other segments and the recreational ridership will increase faster than other segments.
**Bad assumption by WSF.**

- **Page 38 WSF Long Range Plan "Seattle-Bainbridge was given a 2-boat-wait standard in order to equalize its overall average trip time with Seattle- Bremerton."**
A regular uses of the Bainbridge and Bremerton route know it takes one hour to drive from Bremerton to Bainbridge. The total trip time from Bremerton thru Bainbridge to Seattle takes about 2 hours.
The reason every one doe it is because the first boat of a two boat wait is always missing in Bremerton whereas you just might get on the first boat at Bainbridge. This is because Bainbridge has 23 departures compared to Bremerton's 14.
The logic goes like this Bainbridge (~20,000) is half the size of Bremerton(~40,000) and the Bremerton boats(~100) are half the size of the Bainbridge boats(~200) plus the Bremerton boats run half(14) as often as Bainbridge(23).
The result is the Bremerton area get less vehicle space per 1000 population than Bainbridge.
For Bainbridge's 20,000+ population WSF provides 4,646 vehicle departure and arrival spaces.
Bremerton's 40,000+ population gets (~2,000) vehicle departure and arrival spaces.
The rule of thumb is Bremerton will only get one quarter of the service Bainbridge gets.
WSF keeps switching boats on the Bremerton route so it is difficult to analyze the actual capacity.
This uncertainty at Bremerton is another reason the West Sound population favors the Bainbridge route.

- **Page 41 WSF Long Range Plan "Exhibit 10 shows actual volume-to-capacity ratios - the percentage of vehicle space (capacity) on a vessel that is taken up by paying vehicles (volume)...".**
How many non-paying vehicles are on the deck?

- **Page 47 WSF Long Range Plan "For all jurisdictions, except Whidbey Island, the ferry LOS standards do not have an impact on local growth management concurrency plans."**
  Why wouldn't the Growth Management Board review the lack of capacity on a state highway the same as lack of capacity on a county/city road.
  The Growth Management Board should review the WSF Long Range Plan for compliance.
  Bremerton has a new four lane divided highway to the WSF terminal, new terminal, new parking garage, new ferry exit tunnel, one quarter the capacity of Bainbridge and WSF is proposing cutting the capacity in half.
  Bainbridge will have a congested SR-305 from ferry traffic due to the boat size being mismatch with the land side vehicle capacity, old terminal, limited holding, no reservation system, mass transit cutting buses and service, WSF funneling Bremerton vehicles to Bainbridge while not using the new facilities in Bremerton, plus Bainbridge is the only West Sound terminal you have to use a bridge to get to and that bridge is on top of the Seattle Earthquake fault. WSF should just hope no one in either Bremerton or Bainbridge pushes the concurrency issue to the Growth Management Board.

- **Page 73 Where is the WSF Maintenance Yard preservation costs?**

- **Page 80 "The interlocking reasons for the declines in ridership from 2000 through 2006 (fare increases, increased telecommuting, rising gasoline prices, economic conditions, etc.)"**

  Baby Boomer retirement needs to be added to this list.

- **Page 83 "The most promising cross-sound candidate routes are:"**
  Bainbridge to Seattle was not listed yet that is probably one of the very best routes for passenger only service.
  Large base of customers with money that want to go to Seattle and do go to Seattle for business and pleasure.
  The trip would be around 12-15 minutes each way making a 30 minute round trip possible.
  3 passenger only boats could provide 10 to 15 minute departure time.
  WSF needs to save fuel cost one Mark II could removed from this route.
  Passenger only vessels could leave as soon as they are loaded or every 15 minutes which ever came first.
  Passenger only vessels could be shut down during low demand periods.
  Buses could pick up Island residents all day long on an on-demand versus routed service.
  During the 10-15 year Viaduct construction period Seattle would want WSF to deliver fewer vehicles to downtown Seattle.

- Page 91 **"a complimentary passenger-only system that would be funded at the regional level."**
  Sounds like an unfunded mandate to me. What will the state and regional level costs look like when combined.
  The constituents of the state and the constituents of the region are the same tax payers. Just setting up another set of books and building another layer of government does not reduce transportation expenses which should be our primary goal.

- Appendix D page 12 Bainbridge (2006) 2,950 (2030) 3,880

Bremerton (2006) 1,500 (2030) 1,740

Bainbridge increases 1,000 and Bremerton a quarter of that.

How many on the Bainbridge route would have used the Bremerton route if WSF had provided the service?

- Appendix D page 14 **Bremerton headway 75 minutes**
  24 hours times 60 minutes = 1,440 minutes.
  14 departures in 1,440 minutes = 103 minutes between departures in a day, not 75 minutes.

- Appendix D page 19 **30%** growth seems high. Did the peer review team include the Baby Boomer retirement, additional telecommunications, increased band width.

- Appendix D page 25 **The Bremerton Sunday peak period is 3-7pm while Bainbridge is 6:30-10:30pm.**
  Why not route some of the Bainbridge 7-10:30pm traffic to Bremerton?
  This would spread the load and reduce the wait time.

- Appendix D page 26 **"Recreational travel may not be as closely related to future land use as other discretionary and maintenance (or non-discretionary) trip purposes,"**

  Bad assumption. How did you confirm land use and WSF trips are related?

- Appendix E-4 Page **Increase Parking Capacity at Terminals** this strategy should not continue.
- Appendix E-4 Page 14 **Optimize Use of Electronic Fare Sytem (EFS)** yes continue.
- Appendix E-4 Page 20 **Fare Card Coordination - ferries and parking** WSF customers need real time on-line access to reserved parking before arriving at a terminal. If all parking is full the customer needs to know so they can drive on or park and take a bus.
- Appendix E-4 Page 26 **Round Trip Ticketing** yes continue.
- Appendix E-4 Page 29 **Tandem Ticketing** NO use automation correctly no more manual ticket processing.
- Appendix E-4 Page 32 **Link employee reviews to ticketing processing times** No the slow processing is in the application design not the toll booth operator. Fix the design. Do not eliminate auto level ticketing sales at terminals.
- Appendix E-4 Page 35 **Extended ferry schedule** yes continue
- Appendix E-4 Page 40 **Remote Ticketing** yes continue
- Appendix E-4 Page 43 **Re-orient Basic System Design** Yes Yes & Yes
- Appendix E-4 Page 49 **Reservation System** Yes and do not make it complicated, if you use license plates than allow a driver to enter multiple plates.
- Appendix E-4 Page 53 **Shared Parking** Yes WSF could make the **Eagle Harbor Maintenance Yard Parking Lot** available for a couple hundred vehicles.

# Passenger

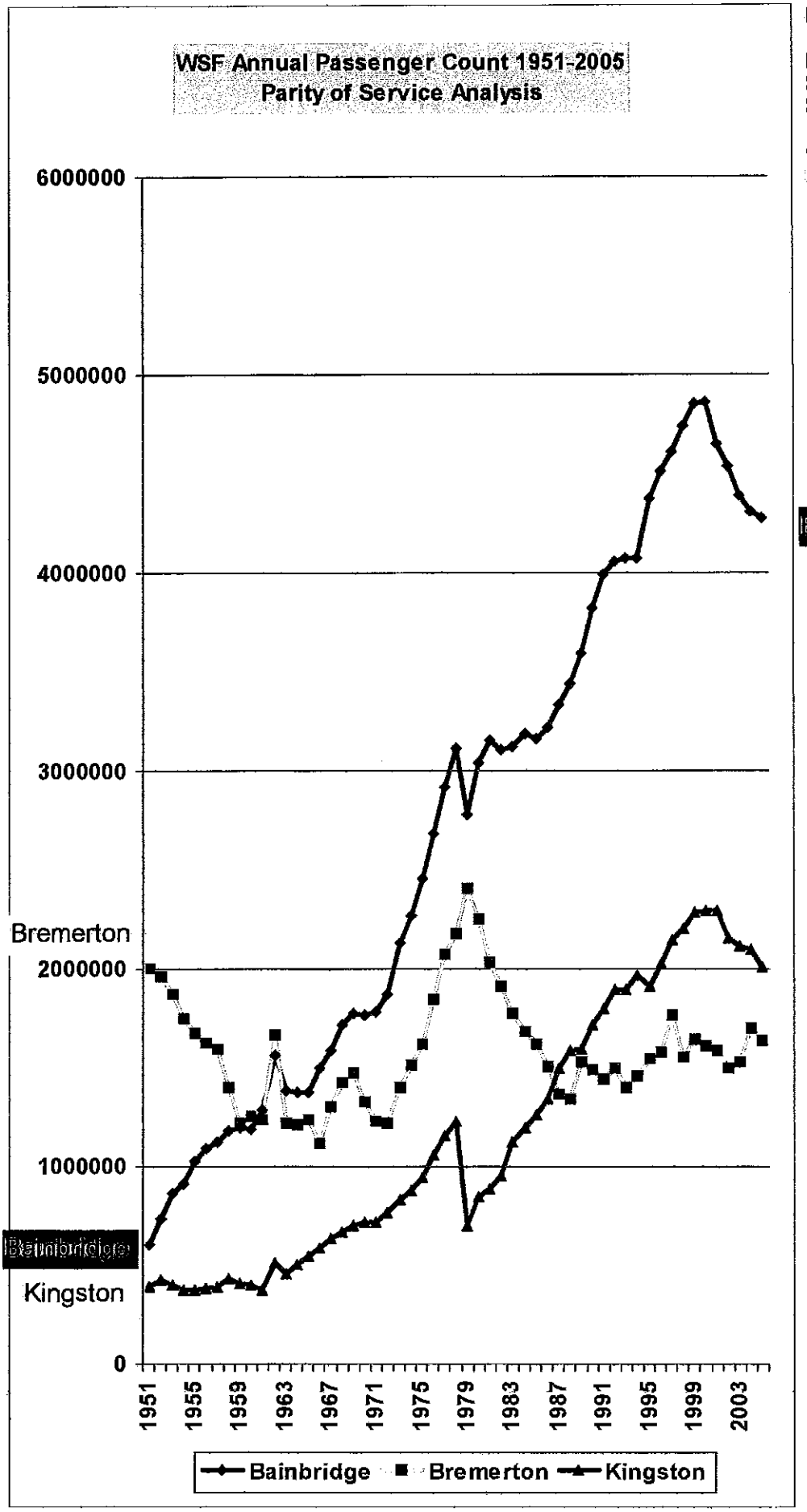
Puget Sound Regional Council
WSF Passenger Counts

PSRC Excel (wsf05.xls)

PSRC Contact
Kris Overby
KOverby@psrc.org

Charted by
Doug Rauh
rauh01@msn.com

Oct 13, 2006



# Vehicle

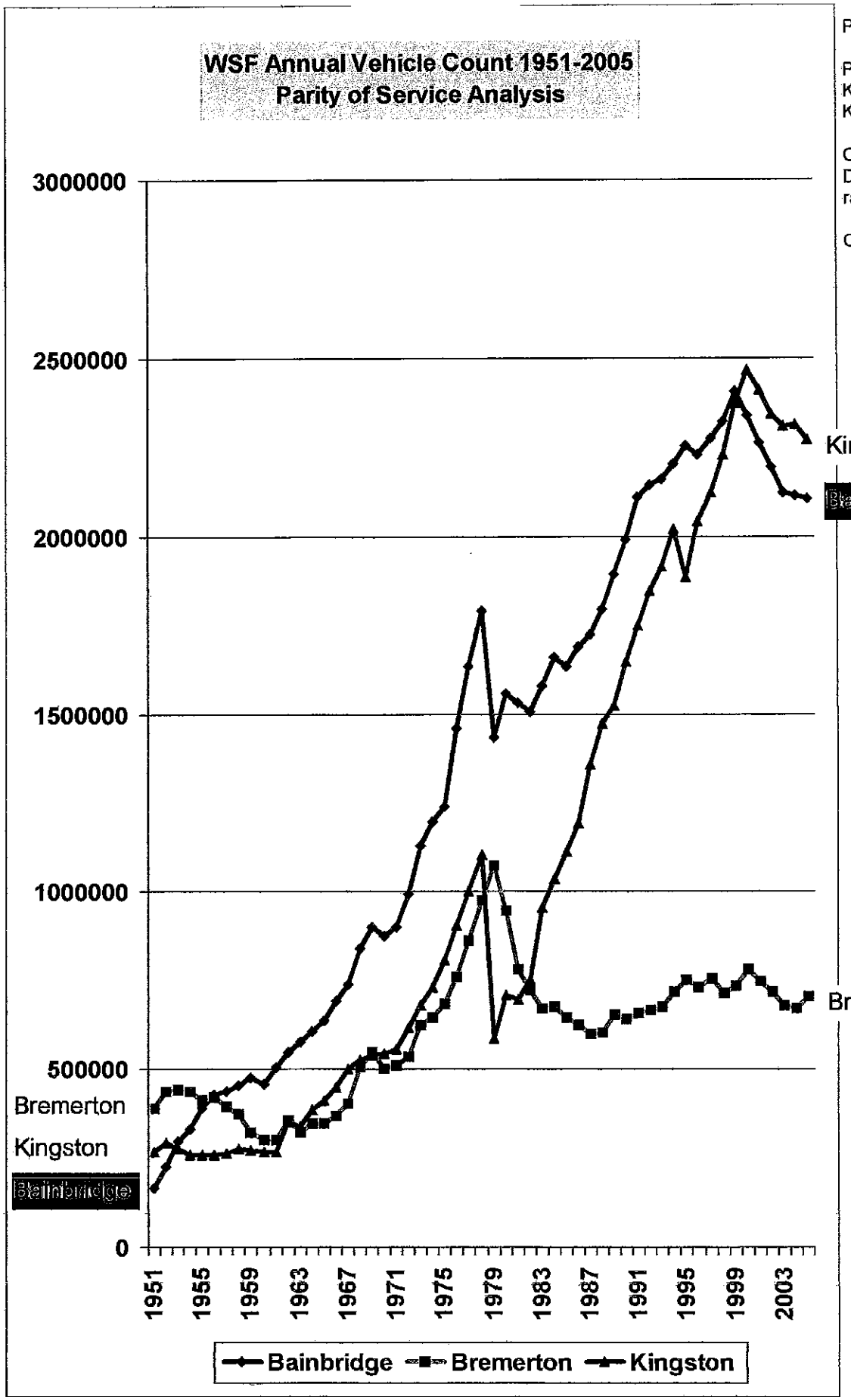
Puget Sound Regional Council
WSF Vehicle Counts

PSRC Excel (wsf05.xls)

PSRC Contact
Kris Overby
KOverby@psrc.org

Charted by
Doug Rauh
rauh01@msn.com

Oct 13, 2006



January 21, 2008
Written Comment on Draft Long-Range Plan

My name is Jane Crum, I live at 803 Merrill Pl W., Bremerton, WA 98312. I work for the City of Seattle and commute Monday through Friday. Thank you for the opportunity to comment on the WSF Draft Long-range Draft Plan.

Proposal B recommending one ferry on the Bremerton run and cutting night service; and reducing service to two ferries on the Southworth/Fauntleroy/Vashon run is incredibly unbelievable. These reductions in service would have devastating consequences on individuals, families, the community, environment, and economy of Kitsap County. The following bullets contain highlights of some of my thoughts:

- I moved to Bremerton in 2001 from Seattle to help my mother who had developed Alzheimer's disease. From personal experience, I know if you cut service to Bremerton the people who have responsibilities caring for young children, elderly parents, or ill loved ones will be in serious trouble. If this proposed cut had happened when Mom was living, I would have had to quit my job, or move my mother to Seattle, selling my house in Bremerton and relocating also.

- The ferry is a highway, another form of transportation. With all the transportation problems in Western Washington, taking away another form of transportation doesn't make sense. The volume of traffic will increase dramatically with people driving to Seattle, or driving to Bainbridge to try to catch a ferry there. And of course there is the return trip as well. This is counter to the state's commute trip reduction program. The Bremerton and Southworth runs cut down on use of congested roads.

- I'm reading the Title VI statement on WA State Depart. Of Transportation Ferries Division Draft Long-Range Plan: "...(WSDOT) assures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination based on race, color, national origin and sex in the provision of benefits and services...." I think that the plan B discriminates against lower income communities. I don't see that plan B reduces service to Bainbridge, which is good, but why to the communities of Bremerton and Port Orchard, Southworth, Vashon? It is common opinion that our communities don't have as much clout or power as residents of Bainbridge.

- As service is reduced, the ridership will continue to decrease. It has decreased as your plan states over the past years because with less service, getting on the ferry is risky. The proposed reservation system again speaks to a class system, and those who ride the ferry less, or may need it for emergencies, or do not have a regular schedule may not be able to get on with their vehicle. If commuting on the ferry becomes too difficult, by foot, or by car, I may have to move to Seattle, or quit my job.

- As more people drive to Seattle because of the proposed poor ferry service, more goods and services will be purchased in Pierce and King Counties. Less revenue and less taxes for Kitsap County.

- How can the planners of Plan B be serious about Kitsap County supplying 2 or 3 foot ferries when Kitsap County is cutting bus service due to budget? The 9:50 p.m. bus meeting the 8:50 p.m. Bremerton ferry arrival will be

discontinued sometime in 2009 (I can't get the exact date, I've asked twice). Sunday bus service on Kitsap Transit will be discontinued, and the Access bus meeting the 4:50 a.m. ferry from Bremerton also. These are just the services in Bremerton that I know about. I often use Southworth ferry and Kitsap Transit, but I haven't zeroed in on those proposed reductions. If they can't keep adequate bus service, I don't see that they would have the money to operate a foot ferry system to Seattle

- Please consider all the times the Bremerton ferry is down due to maintenance problems, personnel scheduling mistakes, or ferry/dock collisions. What will we do without a second ferry to serve as transportation? And to top it off, there wouldn't be any extra capacity to pull ferries from other runs, and no back-up ferry.

- Is it lawful to cut off a community from viable transportation? It doesn't seem like it could be.

- I don't understand how Governor Gregoire or the Washington Department of Transportation Ferries Division could consider dismantling the ferry system that is the state's largest tourist attraction, and also the second largest transit system in Washington and the largest ferry system in the United States. "No matter how you look at it, a ferry is a beautiful way to go." It is, but for commuters, it is not a cruise. It is a practical, viable means of transportation that enables us to earn a living and return home to spend money on goods and services in Kitsap County, increasing tax revenue. For Washington residents and tourists from across the United States and other countries, it is a beautiful trip and access to the Kitsap and Olympic Peninsula. Again, is grievously weakening the ferry system the legacy Governor Gregoire and the JTC and Ferry Policy Subcommittee want?

- I have friends that ride the ferry just to have lunch at the beautiful Bremerton waterfront, and return to Seattle via the ferry. They will not be doing this if they can not be assured to return to Seattle on a convenient schedule. Bremerton and Kitsap County will go into a serious recession and will not be allowed to thrive if you cut off access to Kitsap Peninsula and surrounding counties.

- Has the Ferry Division re-fit the ferries with more fuel efficient engines? Has that been considered to save costs and make the older ferries more efficient?

- Has sharing a smaller ferry between Bremerton and Vashon/Southworth or Bainbridge runs at night or mid-day when car volume goes down been considered; keeping runs available, but smaller boats when there are less cars?

Thank you for considering these thoughts. I plead with you to take another look at your proposal B, and take into consideration the lives that would be negatively impacted or destroyed by your decision.

Sincerely,

Jane Crum

January 21, 2009



**Marine Transportation Association of Kitsap**
**Comments on Washington State Ferries' Long Range Plan**

The Marine Transportation Association of Kitsap (MTAK), formerly known as Sinclair Landing Association, is a not-for-profit corporation that is involved in the research and development of an environmentally-sensitive, high speed-low wake boat designed to successfully navigate Rich Passage. MTAK is also committed to pursuing passenger ferry service between Kitsap and King Counties. In existence for over a decade, MTAK served as a partner and funding conduit in the very successful public/private partnership for the Bremerton Transportation Center, now the best ferry terminal in the State of Washington.

MTAK is pleased to see the inclusion of passenger ferry service as part of WSF's vision for transporting Kitsap residents to their jobs, schools, health care, and recreation in Seattle and King County. The MTAK Board of Directors has long believed that higb-speed, energy efficient passenger ferry service will be an integral part of connecting Puget Sound in the future and shaping the Kitsap economy. We encourage state, local and regional government to collaborate in the development of an integrated marine transportation solution, including the provision of a viable funding mechanism for the Puget Sound region.

Our concerns regarding this new long-range plan include:

1. The plan proposed by WSF substitutes passenger ferries for 50% of the commuter service from Bremerton to Seattle. The plan MTAK has been envisioning in recent years includes service that supplements WSF's service during the commute time, rather than replacing it. Passenger ferry service could provide service during off-peak hours, potentially providing operational savings to WSF.

2. MTAK is concerned about the timetable proposed for the implementation of passenger ferry service and the reduction of service in Plan B. History has demonstrated that there will be a need for some public funding for successful uninterrupted passenger service, and there is no funding plan for WSF's proposed model. The plan also calls for the local transit agencies to provide passenger ferry service, yet many operational details remain unclear, i.e., private sector involvement and governance of inter-county service. In order for passenger ferry service to be successfully implemented, a plan for an orderly transition will need to be developed.

MTAK stands ready to serve in any appropriate role, including assistance with the development of the fleet of boats that will be needed to provide service. In addition, we would welcome the opportunity to replicate a funding and planning model similar to that which we used in the development of the Bremerton Transportation Center.

Contact information:

| | |
|---|---|
| Beverly Kincaid, President | (360) 895-1321 |
| Carla Sawyer, Board Coordinator | (253) 756-1180 |
| Joan Dingfield, Communication Chair | (360) 990-0475 |

**Marine Transportation Association of Kitsap**
P.O. Box 29 ~ Bremerton, Washington 98337
Website: www.MTAK.org

Mayor Cary Bozeman

January 21, 2009

David Moseley, Assistant Secretary
WSDOT Ferries Division
2901 3rd Avenue, Suite 500
Seattle WA 98121

Dear Mr. Moseley:

Below are my comments regarding the WSF Draft Long Range Plan that was released in December 2008.

Plan B is clearly unacceptable and the focus needs to be on improving Plan A or considering Plan C. Plan B is an abdication of a critical state role that has served as the life blood of the citizens and the economy of the West Sound and a vital support to the economy of King, Pierce and Snohomish Counties and their Cities for their employers and businesses. We need to be more creative and aggressive about finding ways to save money within the ferry system. We should focus on boats not terminals and reform some of our approaches around ferry design and purchasing to reduce the costs that are driving much of the project ferry capital shortfall. Rather than viewing passenger-only ferry service as a complement to the existing auto service and a means to improve the financial viability of the system, both Plans A and B assume that POF service should be a substitute for the auto ferries.

WSF is part of our State Highway system and must be funded as such: "WSF is an essential part of the highway network in western Washington. Its 200 miles of marine highway provide links between urban areas on the east side of Puget Sound, growing communities on the Kitsap Peninsula, and the more rural destinations on the Olympic Peninsula and the San Juan Islands" (Pg. 3). Ferries are our bridges and our roads and have always been considered by state law as a legitimate part of the highway system. However, this draft plan repeatedly makes a case to reduce the ferry system in order to protect funding for highways. A stated goal of "The Ferry Bill" ESHB 2358 was to keep costs as low as possible while continuously improving the quality and timeliness of services, the proposed Plan B dramatically decreases the quality of service. Our ferry system serves 23 million passengers annually and provides vital cross sound links between eight counties and Canada. Our state should not sacrifice one portion of Washington's highway system by abdicating state responsibility by shifting the responsibility to local jurisdictions, primarily Kitsap County. 95% of Puget Sound residents believe the ferry system is important. Cutting service is akin to closing down highways or only keeping our vital highway passes open during peak seasons.

I urge you to maintain the current level of service in our ferry system and begin a serious process of deciding how to adequately fund the system in the future.

Sincerely,

Cary Bozeman
Mayor

Amanda Callison
7312 N.E. North Shore Rd., Belfair, WA 98528

January 11, 2009

Ms. Joy Goldenberg
Washington State Ferries
2901 Third Avenue
Seattle, WA 98121

Dear Ms. Goldenberg,

Please improve the Washington State Ferry system's Draft Long-Range Plan (Plan B).

I have been a regular commuter on the Bremerton/Seattle ferry run for the past 2.5 years. As a daily commuter, I **depend on the current level of service** on this run to get to and from my job in Seattle. Due to my work schedule, I have no flexibility to take ferries other than 6:20 a.m. from Bremerton to Seattle and 5:30 p.m. from Seattle to Bremerton. A reduction of service on this run would force me to find alternative transportation.

At least 30 percent of your ferry riders are commuters, like myself. I believe commuters are the majority of those unable to adjust their schedules. A reduction of service could dramatically reduce ridership on this run, thus escalating the problem of low ridership.

I am skeptical of the proposal to rely on the counties to provide supplemental passenger-only ferries. Kitsap County attempted to assume responsibility for the Bremerton/Seattle passenger-only boats when the State cut that service. However, the county tax-payers refused. I don't believe those tax-payers have changed their minds.

**We need more service, not less.** Ferry ridership is expected to increase by 36 percent by 2030 (assuming current service levels). Therefore, it is unreasonable to cut service on our marine highway system. The Washington State Ferries are a lifeline connecting the communities on each side of the Puget Sound. The ferry system is as important as other highways and should be provided the same respect, funding, and level of service as the rest of Washington State's transportation system.

I believe the new Presidential administration provides an opportunity to increase funding. President-elect Obama wants to help stimulate the economy by improving the nation's transportation infrastructure. I urge you to take action to secure additional funding to expand and improve Puget Sound ferry service rather than to cut back.

If you make the mistake of reducing service now, it will become difficult to recover when more service is needed. Plan B is out of phase with reality.

Thank you for your consideration,

Amanda L. Callison

Amanda Callison
Daily Ferry Commuter

# Response to Washington State Ferries Long-Range Plan
# Written Comments from Joan Dingfield
# Bremerton resident and commuter
# January 8, 2009

In previous testimony during this process as a member of the Ferry Advisory Committee Executive Council, I stated that I was looking for courage. Today as a Bremerton commuter, I am returning to say that I am still looking for that courage.

This draft long-range plan put forth by Washington State Ferries is the last key milestone in the two-year ferry financing study. There has been a great deal of distrust expressed about the process, and I am not at all certain anything is going to come from the two years of work. I am concerned that the State will continue to cobble together some sort of program and that Plan A and Plan B somehow will get institutionalized for future action without more dialogue in a community-oriented public process.

So I again call for leadership and courage from Washington State Ferries management, labor, the Transportation Commission, the State Legislature, and the Governor and Transportation leadership. Each carries a role in orchestrating the final steps of this work, and the same public that supported change at the national level is looking for change at the state level.

## Washington State Ferries management

I was dismayed at the definition of the core marine highway system. By taking the position of keeping some service on every existing route, you thwarted any creative approach to the design of transportation service and committed to spending hundreds of millions of dollars in your capital program on a plan that may not be the best choice.

It takes courage to reform an organization so deeply entrenched in labor rules and bureaucracy. In choosing someone who is not a maritime industry person to lead the organization, you have chosen to pursue systems reform and innovation. You need to go beyond simple budget cuts and service reductions. There has been no report-out on operational efficiencies, other than mention of the elimination of 25 budgeted positions, which certainly does not represent the actual number of reductions; the plan is silent on efficiencies recommended by the consultant through this two-year process. This is the window of opportunity for fundamental operational shifts, and more importantly, a change from an employee-oriented system to a customer-oriented one. Your customers will support you if you take on the transformational work necessary to get the ferry system operating soundly, with expenditures under control and revenues to support it.

## Labor Leadership

As stated earlier, I find that WSF is an employee-oriented system, not a customer-oriented system. There is a pervasive sense of entitlement that I struggle with day-to-day as I ride. I know there are employees who earn six-figure salaries when overtime is included, and yet I hear multiple conversations about the need for new chairs and about not being willing to visit

Bremerton because of the obligation to pay for parking. I don't want to trip over brooms and plungers when I know you are being asked to keep boats cleaner - I would much rather encounter people who take pride in their work. We are all working harder and not gaining ground. In these economic times and as a fellow state employee, I feel very fortunate that I have the benefits I have.

I am looking for courage from you in epic proportions. Bremerton is facing a 50% reduction in service from a system that is tangled in complex, burdensome work rules and lifetime benefits. As I look at other public agencies doing transformational work, I have seen no evidence of labor being at the table during this last two years, expressing a willingness to take on the reform work necessary to save this transportation system. I would invite you to come to a Ferry Advisory Executive Council meeting and hear from the communities you serve. There are many opportunities for better and more efficient service that are thwarted by a system that cannot change.

## Transportation Commission

I am looking for courage from you to advocate for increased revenue from the State for ferries. Do not fall into the trap of the State Auditors Office mentality of getting revenue from customers either way – by driving the Narrows Bridge or through ferry fares. I have been clear in my belief that ferry customers should pay more. But farebox recovery cannot be the sole source of new revenue; it already carries a disproportionate burden compared to other transportation systems. WSF needs some intense support right now with the Legislature - you need to use your own studies and fight for new sources of revenue.

## State Legislature

The courage I am looking for in the Legislature is to face your own Growth Management mandates, recognize the ferry system as an integral part of the state's transportation system, do the hard work of defining the core system, then properly fund it. That's all. I do not believe it is productive to take the punitive approach of not providing more money because of voter support for I-695 and funding. If this conversation continues, I can assure you that ferry communities will organize and focus on equitable reductions of funding from other communities in the state that supported I-695, also looking at tax dollars paid vs. tax dollars returned. Please do not pass on these reform efforts for yet another decade or two while patching together some scheme to pay for a system that is deteriorating rather than improving.

Other issues to consider:

- Look at the trade-off your Build in Washington policy brings vs. the loss of access to federal dollars because of it.
- Eliminate the retire-rehire law as part of your own economic stimulus package. When the state and other agencies are laying people off, retire-rehire allows double-dipping in the state system. It also does not develop a new workforce and encourages the status quo rather than looking at new ways of doing business.
- Putting more cars on the roads by reducing ferry service flies in the face of the work you are trying to accomplish with the restoration of Puget Sound. As a commuter, if my options are reduced by 50%, I will reluctantly shift to driving.

**Governor Gregoire, Secretary Hammond, and senior policy staffs**

Courage will be most important here. We need long-term sustainable leadership that will leave a ferry and transportation legacy that future generations will benefit from. Do not let this reform opportunity go by. Do not let the Legislature and the ferry system take a pass on the difficult decisions that lay ahead. Ferry customers and communities will help with the work. We need leadership, however, that is willing to confront the old system, create a new one, and commit to its future.

## Other:

My remaining comments deal with specific issues raised in the plan.

## Bremerton-specific issues:

- Plan B shifts the entire focus of ferry service north, reducing service in central and south Puget Sound. That is not where the population is currently or where growth projections are in the future.
- I will not belabor the point too much about the 50% reduction in service from the only run that has shown an increase in use. WSF's approach to Bremerton service is one of capacity and numbers, not access to service. Dropping one boat from this run will shift the burden to Bainbridge and put more traffic on Hwy. 305.
- The super-class ferries are the best design for Rich Passage and can be sped up to achieve a 45-minute run. If you do that, you will dramatically change the ridership for both Bainbridge and Bremerton.

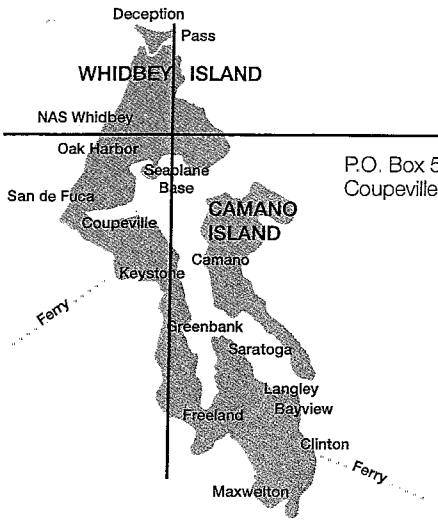
## Passenger ferry service:

I have long been a proponent of passenger ferry service connecting communities around Puget Sound and believe that it is not just our past but our future in transportation. The nature of the Bremerton commuter runs supports a water transit system. However, rather than just arbitrarily handing the responsibility off to local agencies in three years, Washington State Ferries needs to be at the table, actively participating in the design of the Puget Sound transportation system. And the local agencies will need a ten-year transition period with some state funding included to get the service up and viable.

## Information technology:

- I am delighted with the move toward better systems through better information technology and would encourage an even quicker move in this direction. A reservation system and expansion of electronic ticketing is more efficient and is the norm in all other transportation systems. Providing a way to purchase tickets with cash via a machine of some kind will also support more efficiency.
- Should the State pursue passenger ferry service as a local-only option, we will need WSF to ticket their walk-on passengers on both sides of the run; maintaining the current system will undermine the success of passenger ferry service. This should not be a negotiated item for WSF, as they are abdicating their responsibility for providing service.

Dayside




# Island County Board of Commissioners

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From S. Whidbey: (360) 321-5111
Fax (360) 679-7381
www.islandcounty.net

January 23, 2009

Washington State Ferries
Attn: Joy Goldenberg
2901 3rd Avenue Suite 500
Seattle WA 98121-1042

Dear Ms. Goldenberg:

Whidbey Island depends upon the ferry system for its access. The future of our marine transportation system is of great importance to us. The ferry system provides two-thirds of the Island's ingress and egress connections. Deception Pass Bridge, located on the northern tip, provides the only other access point. Both ferry routes are important to our communities. The proposed severe cutbacks to the Keystone run are most disturbing.

The two most critical transportation needs of our community are reliability and accessibility. Reliability of service is necessary for our businesses, our Navy Base and for our visitors. For this reason, whatever plan you adopt **must** include the funding for two Island Home Ferries. The current passenger-only service on the Keystone run is disruptive, inadequate and unacceptable into the future. Lacking vehicle transport to the peninsula has impacted us economically and has reduced our ability for emergency evacuation by one-third.

Understand that we support expanding public transportation opportunities regionally and nationally. There exists great potential for passenger-only service throughout many parts of Puget Sound as we shift our culture away from being so dependent upon the automobile. It is also important to recognize the unique demands of each ferry run to meet the needs of our travelers. Just as the demands are different from the Narrows Bridge to Deception Pass Bridge, so are there contrasts between each ferry route. The commuters to the urban docks have taxi, vanpool, transit, and airport shuttle service as well as rail options. Military commuters, commercial users and tourists on this route are very automobile dependent because of our rural area. Increased dependence on passenger-only service for Keystone or Clinton will not provide the reliability and

accessibility we need to sustain our economy, adequately meet our emergency preparedness needs, nor meet the needs of our Navy base.

Our Naval Air Station with approximately 50 frequent users of the Keystone ferry service, has been significantly impacted. Also there is a need to transport equipment and goods via this route.

This transport of supplies and personnel to Bangor or Bremerton, now must travel north to Skagit County, then south through Edmonds because the service is so limited at Keystone, adding costs and congestion.

We understand the severe financial constraints facing Washington State. For this reason efficiency and effectiveness should be of highest priority. The Keystone run must be made more reliable with sturdy vessels which are not as subject to weather related cancellations and sufficient trips each day to accommodate the demand. Commercial and Navy traffic should be encouraged during early morning and evening runs to reduce competition with tourism. The reservation system must be refined so that every boat is filled to capacity. Please correct your signs so they do not say "Reservations are required". This is a deterrent to potential ridership. Currently vehicles without reservations are discouraged from taking a chance at getting across.

It is unfortunate the upheavals to service have created distrust so ridership is declining at a time when revenue generation is most needed. Reliability and accessibility are needed for our community which is dependent upon the Keystone ferry service. We urge you to include two Island Home ferries into your plan, explore ways to enhance the reservation system to improve efficiency, and to maximize ridership and thus revenues. This approach will best begin to meet the needs of our community and sustain our economy.

We look forward to working with your agency to meet the transportation needs of our county.

Board of County Commissioners
Island County, Washington

John Dean, Chairman

Helen Price Johnson, Member

Angie Homola, Member

# CITY OF MUKILTEO

11930 CYRUS WAY • MUKILTEO, WASHINGTON 98275

January 13, 2009

Mr. Ray Deardorf
Planning Director
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121

**RE: Mukilteo City Council Input on Draft Long Range Plan**

Dear Mr. Deardorf:

On behalf of the Mukilteo City Council and Mayor Marine, I am providing documentation of their input related to the Draft Long Range Plan Update and operation strategies as part of the formal public input process.

**Funding Shortfalls Needs to be Addressed:**
The City Council is supportive of the legislature addressing the operating and capital shortfalls that presently exist and will continue into the future for the ferry system. The shortfall in funding is both for capital improvements (terminals and vessels) and for escalation in fuel prices. Adequate funding for the existing system is not in place and thus operating the system over time under the current funding scenario creates an on-going deficit that will only grow larger. The City Council recognizes that even if fares were required to meet 80% or more of the operating expenditures that fares can not cover all operation costs as there are off-peak hours and seasons when ferries are not operated at capacity, but must sail to maintain service as envisioned to be a part of the state-wide marine highway system. Capital improvements are a burden that must be shared on a state-wide level and deferring terminal improvements and vessel maintenance and replacement is clearly no longer an option.

**Draft Plan's Option A Preferred:**
The Draft Plan – Option A addresses both operating and capital shortfalls. Both the Mukilteo and Clinton terminals require capital improvements to maximize operational strategies proposed in the Draft Plan to contain demand that otherwise would require additional more costly capital facilities. The City Council supports expanding the reservation system to runs such as Mukilteo-Clinton, as well as pedestrian and transit improvements that will assist with mode shifts at both the Mukilteo and Clinton terminals.

**Draft Plan's Option B May Only Be Workable with Local Transportation Funding for Passenger Ferries:**
Plan B applies operational strategies that will assist with current and future demand, but assumes that there will be reduction in the number of ferries on any given run as well as eliminating runs. In addition, Plan B does not adequately meet capital improvement needs that are required now for safety, in times of emergency, nor does it address community impacts that already exist. Plan B is less than the existing ferry system or a 17% reduction and does not appear to be adequate to operate our state ferry system into the future. It does address the terminal relocation that is needed for the Mukilteo-Clinton run. With the potential for counties to provide passenger service on central Puget Sound runs and with alternative land routes, then maybe Option B will work. But without having studied these whether they are capable of generating the revenues necessary to operate passenger ferries, then this scenario may not be realistic. In addition, because further financing may be required in the future and capital improvements take such a long lead time it will be very difficult to restructure this decision in five years and thus a cautionary note is needed for the decisions made by legislators in 2009.

This Plan represents an extensive amount of work by many. The process was very inclusive and we want to thank Assistant Secretary David Mosley for his oversight and emphasis on working with so many interests. This is a very important decision and a dramatic change of course for the ferry system, impact to the users, and as the iconic symbol of our state and many cities, as well as being critical to our transportation system.

Thank you again for providing an opportunity for the Mukilteo City Council to provide input.

Sincerely,

Joe Marine

Joe Marine
Mayor
City of Mukilteo
(425) 263-8000

Pc: Christine Gregoire, Governor of Washington State
Paula Hammond, Secretary of Washington State Department of Transportation
David Moseley, WSF Division Assistant Secretary
City staff

# Additional Information on the Mukilteo Terminal and Comments on Specific Operational Strategies that would Work

## Mukilteo's Unique Attributes as a Host Ferry City

1) The Mukilteo route **does not have off-peak vehicle capacity during the summer**
2) There is typically a **four (4) boat wait (2 hours)** Late Spring – Mid Fall, Wednesday, Thursday, Friday evenings and Saturday mornings.
3) There is typically a two (2) boat wait (1 hour) (even Mid May, Mid-week that is used for LOS).
4) A 20% increase in vehicles to 2030 is forecast by WSF.
5) A larger **increase in pedestrians** over a longer period is forecast by WSF.
6) The Mukilteo route does **have capacity for pedestrians** during the summer.
7) There have **not been any major capacity improvements** at the Mukilteo terminal since the 1930's – while the demand continues to grow – making the terminal and one slip obsolete.
8) Soils and wave action at the existing Mukilteo terminal make it problematic and expensive to continue it as a terminal site.
9) Deficit of availability of parking with parking garage and off-site park & ride lot(s) will occur in 2009 with city projects eliminating commuter parking due to redevelopment

## Operating Strategies that Could be Applied at Mukilteo

- **Reservations:**
  - Reservations look to be promising and Mukilteo would like to be accessed for the next site for reservation implementation,
  - Implement as soon as possible using a phased strategy
  - Implementing reservations on week-ends or for recreational users needs to include Thursday and Friday afternoon and nights
  - If more than one queue lane is required for the reservation system, then SR 525 Bridge has constraints that could limit its application.
  - Enhance fare collection system
- **Transit and Parking Enhancements:**
  - Work cooperatively towards a parking garage and off site park and ride lot(s)
  - Transit Access Enhancements are needed and to help change demand and will help to improve capacity and operations
  - There will be no parking on the waterfront for commuters in the near future – ferry commuters need to be using transit to make connections.
  - Enhance User Information for transfers to bus and ST commuter rail and for off-site remote parking availability
  - Enhance bike and pedestrian connections along SR 525 and 5th Street
  - Capacity use created with12:00 PM Boeing shift (Transit schedules and TDM coordination is needed)
  -

- **Mode Shift Encouraged:**
  - Increase fares at peak times year-around to shift - time of day use and to encourage pedestrian usage.
- **Traffic Management:**
  - Enhance traffic management (metering off-loading vehicles to create less of an impact on the community)

Gregory J. Nickels
Mayor of Seattle

January 21, 2009

David Moseley, Assistant Director
Ferries Division, Washington State Department of Transportation
2901 Third Avenue, Suite 500
Seattle, Washington 98121

**RE: Washington State Ferries Draft Long-Range Strategic Plan, December 2008**

Dear Mr. Moseley:

Thank you for providing the City of Seattle the opportunity to comment on Washington State Department of Transportation's Ferries Division Draft Long Range Strategic Plan, 2008-2030. The recently released plan represents a change in direction from past draft plans. To address constrained financial resources, the new plan's two options, "Plan A" and "Plan B", include significantly reduced service and capital programs than presented in previous plans. With a greater focus on financial sustainability, both plan options identify significant funding gaps over the plan's 22-year planning horizon.

Still, we are pleased to see several strategies and recommendations in both Plan options that the City of Seattle supports:

- Colman Dock is prioritized and funded as a preservation project. Colman Dock is the busiest terminal in the system and a gateway to Seattle. This is an aging facility that is in need of significant upgrades to address the terminal building and the wooden dock trestle on which it sits.

- Use of adaptive management to: reduce the need for large facilities; ensure better use of the system throughout the day (not just peak hours); and, maximize walk-on use. This includes use of reservations, transit enhancements and pricing. These strategies are appropriate in the context of Seattle's dense, urban environment.

However, addressing growth demands from South Kitsap and existing concerns with the current Southworth-Vashon-Fauntleroy service triangle are key issues to resolve in this plan. Draft "Plan A" includes an option that had not been previously discussed with City of Seattle representatives or community members. This plan option presents no service changes (except for phased vessel replacement with

slightly larger vessels), the expansion of Fauntleroy's overwater dock and the addition of overhead passenger loading. *The City of Seattle does not support this recommendation.*

Past letters from the City (July 21, 2006, from myself and September 27, 2005, from SDOT Director Crunican) have stated that Fauntleroy has limited capacity to accommodate vehicular demand and the *City would not support expansion of Fauntleroy*. I request that Washington Ferry System (WSF) staff work closely with City of Seattle staff to evaluate this alternative and look for other options to include in a final plan.

Washington State Ferries has worked without a long-range plan for many years; we support your efforts to finalize a plan. As the plan is revised for approval, we look forward to working closely with WSF and the legislature. If you have any questions regarding the city's comments, please feel free to contact my office or Seattle Department of Transportation Director Grace Crunican at 684-5000.

Sincerely,

GREG NICKELS
Mayor of Seattle

CC: Tim Ceis, City of Seattle Deputy Mayor
Grace Crunican, Seattle Department of Transportation Director
Kevin Desmond, King County/Metro General Manager
Kristine Lund, King County Ferry District Executive Director

FAUNTLEROY
WATERSHED
COUNCIL

## ABOUT FAUNTLEROY CREEK

Fauntleroy Creek discharges into Puget Sound due south of the ferry pier. It provides habitat for juvenile coho salmon, both "home hatch" and fry released by schoolchildren through the state's Salmon in the Classroom program. We have documented spawning in the lower creek since 1994. The number of spawners varies widely, depending on saltwater conditions.

Two environmental studies, both reported just three years ago, speak to your proposed investment of $100 million in the present ferry pier at Fauntleroy.

## TERMINAL SHADING

Your own agency's examination of the effects of ferry terminals on juvenile salmon documented their behavior around 10 terminals, including Fauntleroy. It sought to answer the question, "Do these over-water structures alter the behavior of migrating juvenile salmon?" The answer was yes. Shading caused by ferry terminals can deter or delay juvenile salmonid movement - movement that, for example, enables them to find food and see predators. Light must get through. As documented by King County in 2004, Fauntleroy Cove is teeming in late spring with juvenile salmon, including endangered chinook and many that take a sharp left out of the Duwamish River and head for Fauntleroy. More shading will be more bad news for all of them.

## BEACH ASSESSMENT

In conjunction with restoration of the reach to the beach, the Fauntleroy Watershed Council engaged Jim Johannessen, one of the region's most respected coastal geologists, to assess beach dynamics, paying particular attention to the buildup of logs and sand that threatens spawner to the creek. His conclusion: The ferry pier has likely had a substantial effect on beach accretion experienced by homeowners to the south, especially after the pier was widened. The pier's closely spaced piles trap drift logs, causing jams that hold the sand, redirect creek flow, and create a formidable obstacle course for spawners. Because of this dynamic out of our control, we did not attempt any beach modifications at the creek mouth. More piles under a wider pier will be more bad news for Fauntleroy Creek spawners, as well as for homeowners south of the pier.

## PROJECTION

If the state adopts the long-range plan as drafted and then attempts to implement it at Fauntleroy, we will challenge you on solid environmental grounds at every turn. If the state, instead, adopts a plan that reflects creative, science-based thinking that reduces traffic through Fauntleroy, we will be honored to work with you.

### REFERENCES


Southard, S.L., et al, 2006. Impacts of Ferry Terminals on Juvenile Salmon Movement Along Puget Sound Shorelines. Washington State Department of Transportation, Project No. 46820.

Brennan, Jim, et al, 2004. Juvenile Salmon Composition, Timing, Distribution, and Diet in Marine Nearshore Waters of Central Puget Sound in 2001-2002, King County Department of Natural Resources and Park.

Johannessen, Jim, et al, 2006. Fauntleroy Creek Mouth Beach Assessment and Recommendations. Fauntleroy Watershed Council.



1/21/09 testimony by Judy Pickens 206-938-4203 / judy_pickens@msn.com

SAN JUAN ISLANDS
VISITORS BUREAU

January 21, 2009

Mr. David Moseley
Assistant Secretary of Transportation
Washington State Dept. of Transportation
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121-3014

Re: WSF's Draft Long-Range Plan

Dear Mr. Moseley,
The San Juan Islands Visitors Bureau (SJIVB) supports the San Juan County Council, San Juan County Ferry Advisory Committee and San Juan County residents in rejecting Plan B.

The SJIVB represents over 350 tourism-related businesses in the San Juan Islands, primarily on Lopez, Orcas and San Juan Islands. As you are likely aware, tourism is the economic driver for our islands, and approximately half of the residents here depend on the direct income from or the "trickle down" effect of "new" tourism dollars left behind by visitors. The Washington State Ferries bring most of these visitors to our islands – visitors who contributed over $127 million to our economy in 2007, according to the latest Washington State Tourism research. Our new designation as the State's newest Scenic Byway, including the WSF marine route from Anacortes to our islands, will bring even more visitors to this beautiful area.

Tourism is Washington State's fourth largest industry, and the ferries are as iconic to Washington State as the Space Needle is to Seattle. These iconic ferries should be properly funded in order to exceed our visitors' expectations when they visit our unique corner of the world. The 2010 Winter Olympics in Vancouver B.C. will put an even larger spotlight on our State, and we need to be prepared with a first-class transportation infrastructure. In addition, the Anacortes/San Juans/Sidney run will become even more viable during and after the Olympics. There seems to be a disconnect between Washington State Tourism and the Washington State Ferries.

Ferries are our residents' and visitors' lifeline, just as roads and bridges are on the mainland. The WSF system must remain affordable to island residents, small business owners and visitors. Please listen to your customers and formulate a long-range plan that will work for Washington's island residents and tourism-dependent economy.

Sincerely,
*Deborah Hopkins*
Executive Director
San Juan Islands Visitors Bureau

# San Juan County Council

350 Court Street No. 1
Friday Harbor, WA 98250
(360) 378 - 2898

District 1, Lovel Pratt
District 2, Rich Peterson
District 3, Howard Rosenfeld
District 4, Richard Fralick
District 5, Gene Knapp
District 6, Bob Myhr

January 13, 2009

Mr. David Moseley, Assistant Secretary of Transportation
Washington State Department of Transportation
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121-3014

Dear David:

RE: WSF's Draft Long-Range Plan

The San Juan County Council and Ferry Advisory Committee have jointly reviewed the December 19, 2008 Draft Long-Range Plan and ***reject the option of Plan B*** as an unrealistic representation of state ferry service.

- By eliminating the Anacortes/San Juans/Sidney vessel, over 80% of the domestic service capacity on that vessel is eliminated for seven months of the year, which is a 20% reduction in daily service capacity during this period.
- Plan B does not meet current or future service demands.
- There is insufficient information and time on both plans to allow the legislative bodies and communities to participate in a meaningful review.
- Lack of a financing component, as required by ESHB 2358, makes qualitative decisions impossible.
- Plan B removes one vessel from a totally ferry-dependent community.

We have entered the tenth year of difficult state decisions on state ferry funding in the post-I 695 transportation funding environment. We are entering the first year of what everyone hopes is a temporary economic downturn, particularly in elastic revenues received by state and local governments that necessarily slow during these economic conditions. Our first fear is that short-term finances will drive long-term funding decisions. ***Balancing the state budget for the 2009-11 biennium should not be the justification for a long-term state service mistake.***

The passage of time and the change in economic and government revenue fortunes have positioned WSF to be considered the ugly step-child of the state budget. Addressing the funding gap is the answer, not divestiture. Select what is right over what is easy. If the Plan A gap of $3.5 billion is divided by the 22-year planning horizon, it is a difference of $160 million per year. The loss of MVET in strict 1999 dollars was larger than this by many times. The legislature found a way to replace a good deal of the highway funding as a result of public pressure to fix and improve the roads. Over time (not necessarily all in this session), the legislature must do the same for the ferry system. It is clearly the east/west highway system over the waters of the Puget Sound.

The WSF Long Range Plan presents the ferry-served communities and, to a lesser extent, the citizens of this state with the age-old comparison of price versus value. While it was a conscious point of

demarcation not to include economic analysis as part of the study, that decision required the highlighting of cost centers in the WSF budget, while large portions of the overall value disappear into the general funds of the state and local governments in the form of sales tax and lodging tax.

San Juan County is a ferry-dependent community (as compared with a ferry-advantaged community) and is composed of a complex set of users representing four distinct groups: full-time residents, part-time residents, tourists and commercial users, including those that provide essential supplies. The Anacortes/San Juans route is an extension of State Highway 20 and has been identified as one of the highlights and most scenic elements of Washington State's most recently designated Scenic Byway. Maintenance and continued development of a functioning ferry system is critical to the economic viability of the San Juan community.

**Generally, Plan A meets the needs of the San Juan County community by providing reasonable transportation options for the multiple-user groups in the San Juan Islands.** However, it is not as specific as it should be when considering how the adaptive management strategies, particularly reservations, will appropriately balance the needs of those distinct user groups. It in itself is the minimum to which WSF should peg the level of service, and other targeted improvements; emergency back-up and passenger efficiencies should also be considered.

**Plan B will set in motion a divestiture approach that would make it very difficult to re-build the ferry system to the level of service provided today; it does not provide sufficient ferry capacity to meet current or future requirements.** The Plan decreases the number of runs within the San Juan Islands by eliminating the Anacortes/San Juans/Sidney boat and decreases the overall number of new vessels, which will also have a significant economic impact on San Juan Island communities. It also requires passenger-only ferries to be developed and managed by locally-funded entities. It forces mode and travel choices in adaptive management strategies rather than providing them by way of incentive.

The following comments apply primarily to Plan B:

1. **Economic Analysis - ESHB 2358 stated that WSF shall develop fare and pricing policies that: "consider the impacts on users, capacity and local communities"; however a long term economic analysis is conspicuously missing.** The decrease of any ferry service to the San Juan Islands will have a negative impact to the economic viability and health of this ferry-dependent community. For the past three legislative sessions, San Juan County has requested that such an analysis be undertaken. Without data from the economic analysis impact study, WSF cannot make sound decisions about the fate and subsequent impacts of eliminating the Anacortes/San Juans/Sidney route, as well as the loss of non-WSF tourism revenue to the state by diminishing service to the San Juans.

2. **Vessel Replacement – Ridership forecasts tell you to increase capacity; Plan A allows for that in a marginal manner over time without increasing the number of vessels, but Plan B, with no capacity increase, represents poor planning in the midst of the largest comprehensive ferry planning effort to date.** According to WSF planning staff, Plan A retires vessels early partially in the name of keeping shipyards happy in the hope they will give you better bids. The public should not make all the compromise. Explore lengthening by a year some of the later replacements to take vessels to their full life expectancy and to spread capital costs. Also, ***the bidding advantage given to the private shipyards which have no out-of-state competition must be explored for an equitable solution and to provide qualification for federal funding.***

The nickel gas tax provided some dedicated funding to vessel replacement. **A movement toward Plan B appears to be a second abdication of the promise made by that prior legislature.** A ferry-dependent community with no state highways can view that financial redirection with only a profound sense of loss.

The lack of an emergency backup vessel for more than the next five years is tantamount to driving a vehicle without insurance for that period. Emergency back-up vessels have been needed numerous times in just the past two years – there is no reason to expect the likelihood of that need to be any different over the next five years; therefore the situation should be included in any plan, not ignored.

Elimination of the Anacortes/San Juans/Sidney route has a significant impact on the mainland capacity of island traffic. Over 80% of the capacity in the off-season is assigned to domestic service.

3. **Transit – Regardless of the Plan, better coordination with local transit agencies is required to ensure that this mode shift is a realistic option** The Skagit/San Juan routes are the most difficult coordination opportunity due to the obvious need of residents, weekenders and tourists to move more materials than can be carried by an individual. As a result, it was ignored in either plan without even a footnote of the need to study it. Transit improvements were ignored because of an apparent default to commuters in the vision of the study. Mode shift can be achieved, but Skagit Transit, the County and WSF must work together to make it happen. Appendix F does not include any specific transit improvements for the Anacortes terminal, let alone any of the other terminals within the San Juan Islands. This is an item which has generated extensive comments in a number of community forums, most recently during WSF's inter-island information meeting last fall. Provisions for transit improvements at both ends of the Anacortes/San Juan route are necessary to coordinate with ferry service if any decrease in vehicle traffic is to be supported. Any effort to encourage walk-on traffic must also address parking fees. As long as the costs of parking a car at the Anacortes terminal approximate the cost of driving a car onto the islands, patrons will choose to drive their cars as it is more convenient.

4. **Reservations – This is a key component in both Plans and one which San Juan County supports, provided that no reservation fee is imposed.** As stated in Appendix G, development of a workable system must be developed with "Island agents". This is interpreted to mean representatives of San Juan County in order to ensure meaningful involvement in developing such a strategy, including the possibility of piloting the reservation strategy at one of the San Juan Island terminals this summer. The San Juan's have four distinct user groups: islanders, weekenders, tourists, and commercial. A poorly designed system based on indiscriminately filling vessels runs the risk of leaving groups at a disadvantage. In particular, island residents are still dependent on professional services and certain retail services available on the mainland. Being ferry dependent, and subject to the hours of those businesses, islanders cannot drive around the problem as those using other routes can. The last fare increase proposal engendered militant attitudes of islanders, who showed grass roots power. That attitude will be dwarfed by a reservation system that is not sensitive to ferry-dependent communities.

5. **Level of Service (LOS) –The current LOS is acceptable; however, the reduced LOS in Plan B is not acceptable when considering the long waits that currently exist between vessels to and from certain islands.** Additional information and analysis are required to determine the triggers for the two proposed levels and the subsequent impacts on ferry riders. Hidden in the alteration of the LOS standard is the previous trigger point for increase of vessel capacity. That has been exchanged for adaptive management strategies that could ultimately drive housing choice decisions and change the ridership growth assumptions.

6. **Foot passenger fare increases – It is very important to the San Juan County community that the existing no-charge for walk-ons on the interisland ferry continues.** It is unquestionably the best mode-shift policy employed by WSF on any route, although it currently creates externalities outside the terminal area in the form of parking and transit. It is understood and accepted that passenger fares from the Anacortes terminal could increase. However, additional parking and transit are essential to encourage increased foot traffic at the terminals at both ends of the route to maximize mode shift in this most unique run among ferry routes.

7. **Passenger-only ferries (POF) – A primary premise of Plan B is that current and future passenger-only ferries will be operated and maintained by locally funded entities; without the certainty, readiness or willingness of the affected counties to step in, Plan B begins to look like an exit strategy that creates a service gap and points to self-taxing enabling legislation as the response.** Before giving any consideration to Plan B, this is a major assumption that needs to be explored further with prospective providers to determine the realistic likelihood of such a change in funding, ownership and management. The legislature must also take a broader view of the natural perception that this is an abdication of a 56-year responsibility. That broader view will engender a move toward partnership, which may cause re-thinking that such an abandonment equals no participation in local provider public subsidy. *There is no guarantee of mode shift (and its positive attributes) in placing POF responsibilities on counties – it is only a guarantee of cost shift.*

This comment letter has been signed by the full San Juan County Council and Ferry Advisory Committee to signify our commitment to working with WSF to develop a logical and manageable plan to maintain the Anacortes/San Juan Island ferry route.

Sincerely,

**COUNTY COUNCIL**
**SAN JUAN COUNTY, WASHINGTON**

Lovel Pratt, Member
District No. 1, San Juan South
San Juan County Council

Richard Peterson, Chair
District No. 2, San Juan North
San Juan County Council

Howard Rosenfeld, Member
District No. 3, Friday Harbor
San Juan County Council

Richard Fralick, Vice Chair
District No. 4, Orcas West
San Juan County Council

Gene Knapp, Member
District No. 5, Orcas East
San Juan County Council

Bob Myhr, Member
District No. 6, Lopez/Shaw
San Juan County Council

Ed Sutton, Chair
Orcas Island
Ferry Advisory Committee

Robert de Gavre, Member
San Juan Island
Ferry Advisory Committee

John T. Whetten, Member
Lopez Island
Ferry Advisory Committee

EXCUSED ABSENT

John Brantigan, Member
Shaw Island
Ferry Advisory Committee

Patricia McKay, Member
San Juan Island, Alternate
Ferry Advisory Committee

Lance Evans, Member
Alternate
Ferry Advisory Committee

# KITSAP COUNTY BOARD OF COMMISSIONERS

*Efficient, accessible and effective county services*

**Steve Bauer**
DISTRICT 1

**Charlotte Garrido**
DISTRICT 2

**Josh Brown**
DISTRICT 3

**Nancy Buonanno Grennan**
County Administrator


January 22, 2009

David Moseley
Washington State Ferries
2901 Third Avenue
Seattle, WA 98121

Dear David:

RE: WSF's Draft Long-Range Plan

The Kitsap County Board of Commissioners reviewed the WSF 2008 Draft Long-Range Plan. All levels of government are facing difficult budget times due to the national recession and financial impacts affect our communities. We are very concerned that the long-range options, particularly Plan B's dramatic reductions, are being made without regard to statewide and regional policies or the impacts to the broader transportation system of the Puget Sound.

Plan A appears to be a workable beginning to discuss the future of Washington State Ferries, but needs additional work before adoption. However, Plan B would irreversibly damage the quality of life for our County's 250,000 residents and severely impact the entire Puget Sound region. The Kitsap County Board of Commissioners rejects Plan B and we look forward to working with your agency to refine an alternative for implementation. Some points we consider vital for the alternative plan are that it be a systems plan, reward innovations, work with jurisdictions about their future needs, and examine funding and service concerns.

The capital funding gap is an important element for consideration, but it cannot be the sole factor for decision making. We ask for a regional examination of the entire transportation system in the Puget Sound area. Simply put, it is contradictory for the State to push for long range improvements in the areas of carbon emissions reduction, managing congestion and infrastructure costs by linking land use with transportation investments, and building livable communities while at the same time it dismantles a WSF system which is critical component to meet those goals. The long-range plan should be developed with these regional and statewide goals in mind.

**Plan for a System**
It is critical that the long-range plan eventually adopted provides a system that is consistent with regional and statewide policy objectives.

**Work with User Jurisdictions**
Our jurisdiction is responsible to plan for transportation within Kitsap County and to partner with others in the Puget Sound region. Yet we were not consulted about input into the draft plan. This, despite the fact that Kitsap County hosts four State highways that end at Puget Sound.


614 Division Street, MS-4 • Port Orchard, Washington 98366-4676 • (360) 337-7146 • FAX (360) 337-4632
From: Olalla (253) 851-4147 • Bainbridge Island (206) 842-2061

**Reward Innovations**
The Governor and Legislature have committed to important reductions in carbon emissions and VMT. Kitsap County is a State leader in realizing results. Our single-commuter occupancy rate is second best in the State of Washington (second to densely populated King County). Ferries contribute significantly to this success.

**Examine Service Concerns**
WSF moved 5.65 million vehicles and 14 million total riders from ferry routes that reached the Kitsap Peninsula. These figures represent 52% and 59% of the system wide totals respectively. Kitsap County is planning to accommodate an additional 100,000 residents over the WSF planning horizon and WSF estimates riders on these Kitsap routes will increase 32% between now and 2030. Growth to the Puget Sound region is inevitable. The Puget Sound Regional Council projects 1.7 million new residents and 1.2 new jobs by 2040.

With the bulk of new jobs projected to be created in the east Puget Sound, it is clear that Plan B's reductions in service levels will dramatically force more commuters onto our region's highways. The escalation in ferry fares over recent years has had an impact on reducing ridership. Dramatic pullback in service levels will have an even stronger effect. We ask WSF to work with state agencies, the Puget Sound Regional Council, and local governments to provide analysis of the impacts to the environment and congested corridors of these plan alternatives.

**Consider Diverse Funding Issues**
In this legislative session, the State will likely examine severely bills that seek to create a regional taxing mechanism for programs such as the Puget Sound Partnership. Yet, while Kitsap and other Puget Sound jurisdictions will be sought to support these endeavors, our regional transportation network based on WSF will be eroded. We cannot support State efforts to tax us for new programs, while basic needs of our communities are ignored. A reexamination of State priorities is desperately needed.

Kitsap County has twice tried and twice failed to pass measures supporting passenger-only ferries (POF). We continue to examine how POF's can be brought to our region through the work of the Port of Kingston and critical wake-research being spearheaded by Kitsap Transit. However, the concept of POF service on Kitsap County has always been viewed as service enhancement---not replacement---of WSF's system. Simply put, we view the Plan B's goal of replacing WSF with POF's as a substantial unfunded mandate.

The Plan A funding gap of $3.5 billion dollars amounts to $160 million per year over the 22-year planning horizon. We believe a number of cost saving measures have not been suggested for review in the alternatives. While $3.4 billion is planned for vessel investments, the nearly $2 billion of capital monies for terminal costs needs to be closely scrutinized. The overwhelming preference for system users is to invest in boats, not terminals. In addition, we are disturbed by the fact that in no part of the long-range plan is there discussion about vessel procurement policies. Recent vessel purchases have been mired by exorbitant bids due to local builder requirements. While a noble goal, we believe the costs and benefits of these state policies need to be examined.

Finally, it is our understanding that due to these procurement policies, WSF is prevented from competing for Federal Economic recovery funds. While WSF is in need of vessel investments, the fact that not one boat has been requested as part of the Federal stimulus

package is unacceptable. We acknowledge Governor Gregoire's leadership on prioritizing investments in public infrastructure. Promoting the painting of boats and unnecessary terminal improvements over vessel procurement is a disastrous oversight. We implore you to seek vessel procurement monies.

**Look Forward**

Again, Kitsap County looks forward to working with WSF to adopt a long-range plan that meets the needs of the Puget Sound region, while implementing State policies. We know that Kitsap residents and legislators are working on a "Plan C", with focus groups examining issues such as fleet size and ferry construction, a ferry business plan and revenues, and schedules and service. Ultimately, the common goal shared by Kitsap County residents and government, and presumably WSF, is for workable solutions. By working together, we can surely shape future options that make sense.

Thank you for the opportunity to formally offer this comment letter.

Commissioner Charlotte Garrido, Chair

Commissioner Steve Bauer

Commissioner Josh Brown

January 20, 2009

Dear Mr. Moseley,

Thank you for coming to Vashon Island to hear about my community's concerns regarding the Washington State Ferries Division Draft Long Range Plan. I would like to thank you for opening up the Ferry Division to more sunshine after many decades of darkness. I am the Vashon Island School District's representative to the WSF Ferry Advisory Committee, appointed by the Vashon-Maury Island Community Council.

On behalf of the Vashon Island School District, I would like to say that any reduction in ferry service or rescheduling that doesn't coordinate with our school schedule would be harmful to our mission of providing the best education possible to our children. Previous service reduction at Tahlequah has been harmful and incurred additional costs to our District. Previous rescheduling of the Vashon-Fauntleroy run has also had negative impacts to our District. Additional reductions in service or uncoordinated schedule changes at either end of the Island will cause further hardship, pain and financial costs to our School District, our students and our employees. The VISD has about 135 students that commute from Fauntleroy, Pt. Defiance and Southworth via the WSF system. These students are an integral part of our business model that allows us to be fiscally sound. We also have about 25 teachers, administrators and other staff that commute via the ferry to get to work. This number will be increasing as teacher's and other staff's wages don't keep up with the rise in the cost of living and fewer of our new teachers can afford housing prices on the Island.

Furthermore, any reduction in ferry service or rescheduling that doesn't coordinate with our school schedule would be harmful to our interscholastic co-curricular activities and field trips that enrich our students education. The other schools that we compete with in debate, band, athletics and math Olympiad, to name a few, are on the mainland and require taking a ferry as it is our only means of getting off the Island. Just as important is the fact that these other schools are also stressed when the difficulty level of travel to Vashon Island is made more difficult and costly.

In the late 1990's, as President of the Vashon-Maury Island Community Council, I worked with WSF in the formulation of the 1999 20-year Long Range Plan. That 1999 20-year Long Range Plan called for a second boat on the Tahlequah-Pt. Defiance run in the year 2012. The 2009 "Plan A" now calls for only one boat still in 2012 and beyond and a smaller capacity boat at that. In the 1999 20-year Long Range Plan the Vashon-

Fauntleroy run was to have larger boats as well. Now the 2009 "Plan A" doesn't call for capacity upgrades until 2017 or 2019. This major shift in policy after 10 years of a 20-year plan strains my faith in your understanding of the issues. The 1999 20-year Long Range Plan understood those issues. It took the bold, politically incorrect but accurate position that Vashon Island and the San Juan Islands have no other transportation options than the Washington State Ferries and that it is the responsibility of the State to address those needs. The document that expresses this is the "Plan C" alternative of the WSF 1999 20-year Long Range Plan that similar to the 2009 "Plan B" explores the what if of minimal funding. "Plan C" of the 1999 20-year Long Range Plan recognizes the fact that Vashon Island and the San Juan Islands are the number one priority for ferry service as they have no other options. It recognizes this by providing service only for Vashon Island and the San Juan Islands in the worst case scenario of minimal WSF funding from the State. You must accept this underlying principle also. The solely ferry-dependent communities of Vashon Island and the San Juan Islands should not have to share the pain equally with those communities that have other transportation connectivity options such as bridges and state highways.

Another cause for concern is that despite repeated requests for WSF to communicate and collaborate with the Vashon Island School District on changes in service levels or scheduling, it does not seem to happen as no one at VISD was contacted in formulation of this plan. I asked you myself at the last Island meeting that you attended if you would do this and you seemed to nod in agreement. Therefore, I ask again that you please keep in touch with us because ferry changes can have severe adverse impacts on the education that we provide our students. As we both know, the State's paramount duty is the education of our children.

Jake Jacobovitch
WSF Ferry Advisory Committee member representing the Vashon Island School District
P.O. Box 1624
Vashon Island, WA 98070
email: VashonOne@aol.com
phone: 206.650.5253

Ferry Advisory Committee
Vashon Public Comment on WSF Long Range Plan
January 7, 2009

To Whom it May Concern

Vashon Island is a ferry-dependent community. Yes, we are also ferry served, but let us be very clear about the choices we have: without ferry service, we do not leave or come home.

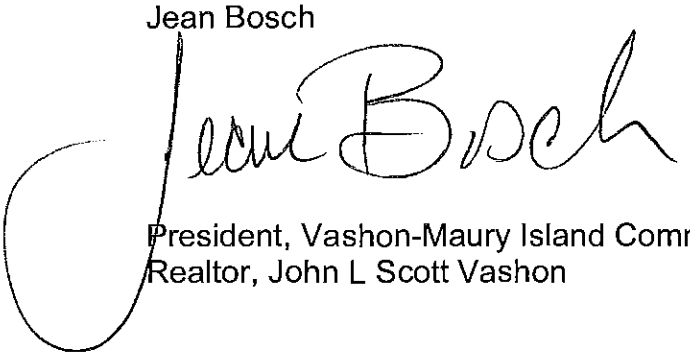
I invite the decision-makers at Washington State Ferries to walk a mile in our shoes. This is a real community with the nitty gritty needs of any town. Imagine the day you receive a letter saying that, due to budget constraints, traffic in and out of ***your*** community will only be allowed at very particular times of day and in limited numbers. Oh, and by the way, no one can leave or arrive after midnight. Some roads will close at 10. And did I mention that big trucks serving a newly-opened gravel mine will be taking up much of the allotment? It will cost you $20 every time you make the trip too.

It's your own fault, really, for living there.

You can no longer get to your medical appointment or your college classes. You must line up very early so you can compete with your anxious neighbors go to your job and your property values are declining. Your community is constantly embroiled in political campaigns, fighting for the simple right to come and go in a reasonable manner.

Vashon Islanders have already made painful adjustments to ferry service reductions and ferry fare increases. To implement the service cuts proposed will turn Vashon from a thriving community based largely on the commuter opportunities in Seattle and Tacoma to a place where only those who don't have to work and those who serve them will live. This prospect is unacceptable.

Jean Bosch



President, Vashon-Maury Island Community Council
Realtor, John L Scott Vashon

Website: www.vmfr.org
Email: admin@vmfr.org

# Vashon-Maury Fire & Rescue

Post Office Box 1150 Vashon, Washington 98070-1150
Telephone (206) 463-2405 Fax (206) 463-6494

January 7, 2008

WSDOT Ferries Division
Attn: Joy Goldenberg
2901 3rd Ave.
Seattle, WA 98121

Subject: Position Statement on Vashon Island Ferry Service

To the Division:

As Fire Chief of Vashon Island, I am vehemently opposed to any reduction of ferry service to or from Vashon Island, as increases in patient transportation time will be a certainty.

In 2008, Vashon Fire & Rescue responded to 1,058 emergency medical calls requiring immediate patient care and transportation to regional hospitals in Seattle, Burien, and Tacoma as Vashon has no critical care facilities. Further delays in ferry transportation may further impair the health and well-being of Vashon residents, visitors, and ferry passengers in time of medical need. Furthermore, on occasion, we have the need to contact ferry operations to request a boat diversion due to the rapid decline of a patient's condition. My speculation is that less ferry service will result in more special requests by our personnel, thus resulting in further delays and variations of your schedules.

In summary, I consider the Washington State Ferry Division and Vashon Island Fire & Rescue partners in transportation services for individuals in medical distress. As a professional in emergency care, implementing a change in service that equates to less transportation availability for EMS transports is not advised.

Sincerely,

Hank Lipe
Fire Chief

**TOWN OF COUPEVILLE**
4 NE Seventh
PO Box 725
Coupeville WA 98239
360.678.4461 FAX 360.678.3299



January 14, 2009

WA State Ferries
Attn Joy Goldenberg
2901 3rd Ave
Seattle WA 98121

Re: WSF Draft Long Range Plan

The Coupeville Town Council has discussed the proposed WSF Long Range Plan and the options in both Plan A and B. We have also conferred with representatives from Pt. Townsend, and both communities concur in our input. The consensus of our opinions is stated below:

We reluctantly accept the economic realities that indicate a version of the proposed Plan B is likely to be approved by the legislature. However, we request a modification to Plan B. Service between Keystone and Port Townsend must be reliable and predictable. A single vessel in the fleet will not guarantee that. A second Island Home must be built, and in the short term. Other studies commissioned by WSF indicate the Island Home can be useful on other runs and is efficient to run.

We strongly support several of the operational strategies proposed:

Reservations: The pilot reservation program on the PT/Keystone Ferry was a good start. We are glad the plan calls for a reservation system that allows for flexibility for each route. The needs are different in each community. The reservation system provides predictability and also helps ensure that each run is full, which increases economic efficiency.

Demand Management: Obviously we cannot afford to continue to build for peak hours use. Incentives for traveling at less busy times, for smaller vehicles, to encourage pedestrian/transit connections, are all important targets.

Operational Changes: Again, the needs are different in each community. We need to work together to be certain our local priorities are met. In our case, with one boat, we need to make sure every boat is full. In addition to reservations and incentives, prioritized boarding should be considered when needed to provide appropriate service to critical users.

When planning for individual routes, please be certain to include the rest of the Dept. of Transportation and also the local RTPOs. While we don't support shifting any financial burden to the local cities and counties, we do think it is possible to identify projects that may qualify for funding available to the local entities that serve more global purposes. We need to be certain the highways, ferries, transit and elected officials are all together on decisions being made in each community. The partnership meetings held the last two years with Coupeville and Keystone should be continued.

Our final request is for predictability, and should probably be directed to the legislature. If we have to accept changes and reductions in service as a result of economic shortfalls, give us a plan and funding mechanism that will endure. If we can plan with some certainty, we are better able to adjust to change.

Reliable ferry service is essential for commuters, tourism, commerce, and the military and for the quality of life of our residents. Ferries should be considered part of the transportation infrastructure. Thank you for your consideration.

Sincerely,

Dianne Binder, Councilmember

Bob Clay, Councilmember

Ann Dannhauer, Councilmember

Molly Hughes, Councilmember

Jim Phay, Councilmember

c: Senator Mary Margaret Haugen
Representative Norma Smith
Representative Barbara Bailey

# City of Port Townsend

250 Madison St, Port Townsend, WA 98368
(360) 379-5047 FAX (360) 385-4290
citycouncil@cityofpt.us


January 15, 2009

Washington State Ferries
Attn: Joy Goldenberg
2901 3rd Ave.
Seattle WA 98121

Re: WSF Draft Long Range Plan

The City Council has discussed the proposed WSF Long Range Plan and the options in both Plan A and B. The consensus of our opinions is stated below:

We reluctantly accept the economic realities that indicate a version of the proposed Plan B is likely to be approved by the legislature. However, we request a modification to Plan B. Service between Keystone and Port Townsend must be reliable and predictable. A single vessel in the fleet will not guarantee that. A second Island Home must be built, and in the short term. Other studies commissioned by WSF indicate the Island Home can be useful on other runs and is efficient to run.

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Our final request is for predictability, and should probably be directed to the legislature. If we have to accept changes and reductions in service as a result of economic shortfalls, give us a plan and funding mechanism that will endure. If we can plan with some certainty, we are better able to adjust to change.

Reliable ferry service is essential for commuters, tourism, commerce, the military and for the quality of life of our residents. Ferries should be considered part of the transportation infrastructure. Thank you for your consideration.

Sincerely,

Michelle Sandoval, Mayor

George Randels, Deputy Mayor

Brent Butler, Councilmember

David King, Councilmember

Laurie Medlicott, Councilmember

Catharine Robinson, Councilmember

Mark Welch, Councilmember

c: Senator Mary Margaret Haugen
Senator Jim Hargrove
Representative Norma Smith
Representative Lynn Kessler
Representative Barbara Bailey
Representative Kevin Van De Wege

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX E
## AGENCY AND STAKEHOLDER COMMENTS ON DRAFT PLAN

**TOWN OF VIEW ROYAL**
45 View Royal Avenue, Victoria, B.C., Canada V9B 1A6
Tel: (250) 479-6800 • Fax: (250) 727-9551
e-mail: info@town.viewroyal.bc.ca

Washington State Ferries
Attention: Mr. David Moseley (moseled@wsdot.wa.gov)

January 21, 2009

Dear Sir,

**RE: Washington State Ferries Long-Range Plan, December 2008**

I am writing on behalf of the Council of the Town of View Royal to appeal to Washington State Ferries and the Washington State Legislature not to follow through with the cancellation of the international ferry service between Anacortes Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view, there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local government business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry

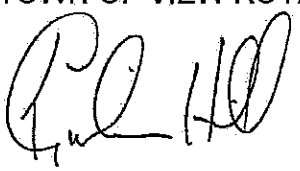
system in this regard. However, it is our strong belief that the Anacortes/Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes/Sidney ferry service is retained, for now, and long into the future.

Thank you for you consideration.

Sincerely,

TOWN OF VIEW ROYAL



Graham Hill, Mayor

**Saanich Peninsula Chamber of Commerce**
*The Voice of Business*

#201 - 2453 Beacon Avenue
Sidney, British Columbia V8L 1X7
Phone: 250-656-3616
Fax: 250-656-7111
Email: eleddy@peninsulachamber.ca
Web: www.peninsulachamber.ca

January 20, 2009

Mr. David Moseley
Washington State Ferries

Dear Mr. Moseley,

**Re: Washington State Ferries Long Range Plan, December 2008**

We are writing to appeal, on behalf of the Saanich Peninsula Chamber of Commerce and the business community of the Saanich Peninsula and Southern Vancouver Island, that Washington State Ferries set aside the proposed cancellation of the Sidney-Anacortes run at the end of the 2009 season.

The Sidney-Anacortes run is a vital link between Vancouver Island and Washington State. Visitors arriving from Anacortes inject millions of dollars, directly and indirectly, into the local, regional and Southern Vancouver Island economies annually. The implications of losing this revenue are staggering for business here.

In the summer of 2007, chamber executives from Skagit County, including Anacortes, converged on Sidney for a day of touring and information exchange. High on the agenda was the need to cross-promote between our two regions, with the goal of boosting both economies. Without the ferry run, opportunities for revenue generating cross-promotion disappear.

The arrival of the Anacortes ferry in Sidney every spring, marks the official beginning of the tourist season here and is cause for hope and celebration on this side of the border, owing to the economic benefits it brings to stakeholders in the town and the region. The highly active and visible Sidney Sister Cities association organizes a welcoming party to mark the occasion.

Cutting the ferry run would mean a significant loss in tourism revenue for Sidney, the Saanich Peninsula and Southern Vancouver Island. It would also interrupt the close cultural bond that has formed between our two complementary regions.

We believe that retaining the Sidney-Anacortes run is in the best interests of Washington State, as well as our region, for now and for the future. Observers on this side will attest to the vehicle line-ups, city blocks long, twice daily, at the ferry terminal: destination the San Juans and Anacortes. A recent ridership forecast for the ferry run estimated a net gain for Sidney of 78% over the next 20 years. We are hopeful that, for all of these good reasons, including the information contained in the Hovee Report, that the Sidney-Anacortes run can be retained.

Thank you.

Sincerely,

Eileen Leddy
Executive Director

# CITY OF COLWOOD

3300 Wishart Road, Colwood, B.C. V9C 1R1
www.colwood.ca

(250) 478-5541 – Administration/ CAO
(250) 478-5999 – Bylaw Enforcement/Building
(250) 478-5999 – Engineering
(250) 478-5530 – Finance & Property Taxes
(250) 478-8321 – Fire Department
(250) 478-5590 – Planning & Zoning
(250) 474-4133 – Public Works Yard
(250) 478-7516 – Facsimile
mayorsaunders@telus.net mayor@colwood.ca


January 21, 2009

Washington State Ferries:

**Sent Via Email: moseled@wsdot.wa.gov**

Attention: Mr. David Moseley

**Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to the Washington State Ferries and the Washington State Legislature to not follow through with cancellation of the international ferry service between Anacortes Washington and Sidney, British Columbia. The City of Colwood would like to add its voice to the vigorous campaign to preserve this important marine link between our countries.

We support the position of the Town of Sidney, and many other agencies, in their view that a number of compelling reasons exist to defend retention of the service:

1. There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (Hovee Report of July 2007).

2. A detailed analysis has not been undertaken on the Canadian side, yet it would be logical to assume that similar economic benefits from the service apply to Sidney and the entire Capital Regional District.

3. Ridership could be significantly improved by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. A coordinated marketing program through a consortium of stakeholders on both sides of the service would accomplish this.

4. An assessment of departure and arrival times for all terminals could vastly improve ridership. A schedule that requires travellers to leave a terminal late one day, stay overnight, and return first thing the next morning is not attractive to travellers – they are left with little time to enjoy their destination.

5. The significant value to the connection between Anacortes and Sidney is difficult to quantify. In a cultural, historical and social context it is nothing less

than priceless. The Sister City relationship is a clear expression of the importance of the relationship between these communities. In these times, living in a world facing significant hardship and unrest, we should do all we can to encourage and strengthen our relationships.

We are all in the local governance business and we are keenly aware of the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard, but it is still our belief that this service is a net fiscal gain for the State of Washington. We also believe there are value to this important connection that cannot be measured by dollars and cents. When considering any of the services we provide, and the costs associated with operating those services, we must also consider the *desires* of the community as well. The ferry system is a community service that allows communities from different countries establish and build friendship and business relationships that strengthen both our economies and provide immeasurable benefits to the personal well-being of all our citizens.

It is our sincere wish that the Anacortes / Sidney ferry service be retained for the valuable service and important link it provides to the people of the United States of America and Canada – and it should remain in service long into the future.

Thank you for your consideration.

Sincerely,

Corporate Officer

for David Saunders,
Mayor, City of Colwood

cc: Mayor Dean Maxwell, City of Anacortes – dean@cityofanacortes.org
Mr. Duane Clark, Save Our Ferry - dclark@capsantecourt.com
Honourable Gary Lunn, MP - lunnmp@garylunn.com
Honourable Murray Coell, MLA - murray.coell.mla@leg.bc.ca
Saanich Peninsula Chamber of Commerce – eleddy@peninsulachamber.ca
Sidney Business Association - manager@sidneybusiness.ca
Tourism Victoria - kelsi.woodward@tourismvictoria.com

21 January, 2009

TO: Washington State Ferries Planning Division
FROM: Preston Schiller, preston.schiller@wwu.edu, Transit Coordinator, North Sound Connecting Communities Project (NSCCP or "Farmhouse Gang")
ATTN: Joy Goldenberg, Ray Deardorf (wsfplanning@wsdot.wa.gov)
RE: Comments on transit-related matters in the Washington State Department of Transportation Ferries Division Draft Long-Range Plan, December 2008
cc/Bruce Agnew (Cascadia Center), Liz Illg (Town of Friday Harbor), Bill Watson (SJI-EDC), Shannon Wilbur (San Juan Co. Public Works)

There is considerable attention in this plan to the need and prospects for improving the linkages between WSF and local transit services as well as making terminal improvements to facilitate better transit and pedestrian access and rider information about transportation options at terminals.

The purpose of this brief communication is to make you aware of the interest of the NSCCP in these and related matters, especially in regards to the Anacortes WSF Terminal and the potential for improved connections between it and the Amtrak services at Skagit Station in Mount Vernon. Part of the mission of the NSCCP is to promote public transportation, improved traveler information, and improved intermodal connections in the North Sound region.

We note that although there are many references to improving transit connections to WSF services, and improving some WSF facilities in order to better accommodate transit and walk-ons, there are no specific plans for improving either at Anacortes WSF or the San Juan Islands terminals. We believe that more attention should be given to the specifics of improving these matters in regards to the latter-mentioned facilities.

The NSCCP has worked with WSF, Skagit Transit, Whatcom Transportation Authority, Island Transit, Everett Station, and the Whatcom Council of Governments in the development of improved traveler information and displays at key regional intermodal facilities. (see http://wcog.org/Completed-Projects/Kiosk-Project/266.aspx) A facility-by-facility description of our installations and remaining issues is available from me at my e-mail address above.

We have also been engaged over several years in discussions about improved transit connections at both ends of the Anacortes-San Juan Islands ferry services. At present, and partly as a result of the San Juan Transportation Summit of September 2008, there is renewed interest in this matter.

We are also exploring ideas about how a service connecting Skagit Station and Anacortes-WSF might better connect these facilities. At present there are several services, public and private, between these facilities, although none is direct or seamless or integrated with the schedule of the other. There are many challenges in offering a direct and seamless connection and we shall analyze these as well as offer suggestions in a forthcoming white paper. We will also be discussing these matters at an upcoming NSCCP Rail-Transit committee and San Juan Islands sub-committee meeting in early March. We shall keep you informed of the details of the report and the meetings in the hope that representatives from the WSF will participate and that our efforts will hopefully help your planning efforts.

# The Corporation of the District of Central Saanich

January 21, 2009 File No. 0220-01

Washington State Ferries

Attention: Mr. David Moseley
moseled@wsdot.wa.gov

Dear Mr. Moseley:

**Re: Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical, and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

.../2

1903 Mount Newton Cross Road, Saanichton, B.C. V8M 2A9
Phone: (250) 652-4444 Fax: (250) 652-0135

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Yours truly,

Jack Mar
Mayor

C: Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Honourable Gary Lunn, M.P.
Honourable Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Sidney Business Association
Tourism Victoria
Town of Sidney

DISTRICT OF HIGHLANDS

January 20, 2009

File: 1415 - 20

*VIA EMAIL: (moseled@wsdot.wa.gov)*

Transportation Building
Washington State Department of Transportation
310 Maple Park Avenue SE, PO Box 47300
Olympia WA 98504-7300

Attention: Mr. David Moseley

Dear Sir:

***Re: Washington State Ferries Long-Range Plan, December 2008***

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes Washington and Sidney British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

This ferry service provides tangible net mutual benefits to the communities it serves, fiscally and otherwise. Surely it will be more difficult to re-establish this important and valued service in the future should it be discontinued now.

It is our sincere wish that this service be retained for now and long into the future.

Sincerely,

DISTRICT OF HIGHLANDS

Jane Mendum,
Mayor

c: Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Honourable Gary Lunn, M.P.
Murray Coell, MLA
Saanich Peninsula Chamber of Commerce
Sidney Business Association
Tourism Victoria

1980 Millstream Road, Victoria, British Columbia V9B 6H1
Tel: (250) 474-1773 Fax: (250) 474-3677 Web: www.highlands.ca

# TOWN OF SIDNEY

2440 Sidney Avenue, Sidney, British Columbia V8L 1Y7
Phone: (250) 656-1184 Fax: (250) 655-4508
email: townhall@sidney.ca Website: www.sidney.ca

**Office of the Mayor Tel: (250) 656-1139 Fax: (250) 656-7056**

January 9, 2009

Washington State Ferries
Attention: Mr. David Moseley (moseled@wsdot.wa.gov)

Dear Sir:

**Re: Washington State Ferries Long-Range Plan – December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Larry Cross
MAYOR

c: Mayor Dean Maxwell, City of Anacortes
Honourable Gary Lunn, M.P.
Honourable Murray Coell, M.L.A.
Tourism Victoria
Duane Clark, Save Our Ferry
Saanich Peninsula Chamber of Commerce
Sidney Business Association

*MAYOR'S OFFICE*
*CITY OF LANGFORD*
*2nd Floor, 877 Goldstream Ave*
*Langford, BC*
*V9B 2X8*

*City of Langford*

***Administration & Finance***
***Tel: (250) 478-7882***
***Fax: (250) 478-7864***
***Website: cityoflangford.ca***

January 20, 2009

File No. 0400-50/SID

Washington State Ferries
Attention: Mr. David Moseley
VIA E-MAIL: moseled@wsdot.wa.gov

Dear Sir:

**Re: Washington State Ferries Long-Range Plan, December 2008**

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes Washington and Sidney British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007).

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District.

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service.

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local government business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is

our strong belief that the Anacortes / Sidney service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes / Sidney ferry service is retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Stewart Young
Mayor

cc: Mayor Dean Maxwell, City of Anacortes (dean@cityofanacortes.org)
Duane Clarke, Save our Ferry (clark@capsantecourt.com)
Hon. Gary Lunn, M.P. (lunnmp@garylunn.com)
Hon. Murray Coell, M.L.A. (muray.coell.mla@leg.bc.ca)
Saanich Peninsula Chamber of Commerce (eleddy@peninsulachamber.ca)
Sidney Business Association (manager@sidneybusiness.ca)
Tourism Victoria (kelsi.woodward@ourismvictoria.com)

# TOURISM VICTORIA

January 20, 2009

Washington State Ferries
Attention: Mr. David Moseley
moseled@wsdot.wa.gov

Dear Mr. Moseley:

**Re: Washington State Ferries Long-Range Plan**

Tourism Victoria strongly opposes the proposed elimination of the international ferry service between Anacortes, Washington and Sidney, British Columbia with the Washington State Ferries company.

With the 2010 Olympic and Paralympic Winter Games approaching, WSF would do better to consider *expanding* ferry service to Sidney, a key transfer point to Vancouver, or even permanently restoring the service.

Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets.

Losing the Anacortes/Sidney Ferry run will have a huge economic impact on Anacortes and the surrounding counties (Skagit, Whatcom, Island, San Juan, Snohomish, and Sidney, BC). The annual impact is $1.3 million in local taxes, 1470 jobs, $30 million in payroll, and $126 million in spending. *(See Independent Hovee Report)*

Mr. Moseley, I am aware that you have received a number of letters outlining the economic and other relevant impacts of eliminating this service and therefore will not re-state them here. However, our uncertain economic times are indeed the worst time to make "superficial" budget line item cuts. The short-term potential gain will certainly have much graver consequences to the mid and long term future of our regions. I urge you to reconsider the unnecessary and potential negative effects this cancellation will have on Anacortes and the surrounding communities as well as Sidney and Greater Victoria, British Columbia. With the information contained in the Hovee Report, the fiscal gain for the State of Washington is evident.

2009 is a year for leadership and courage. This is an opportunity to display vision and work together and Tourism Victoria sincerely hopes that all parties involved in this decision embrace this and do what is right.

We therefore strongly support the retention and enhancement of the Anacortes/Sidney ferry service for now, and long into the future.

Thank you for your consideration.

Sincerely,

Rob Gialloreto
President & CEO, Tourism Victoria

cc: 10th Legislative District
Senator & Representatives
40th Legislative District
Senator & Representatives
1st, 21st, 38th, 39th, 44th Legislative Districts
Senators & Representatives
Paula Hammond, WSDOT
Mitch Everton, Anacortes Chamber of Commerce
Don Wick, EDASC
Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Hon. Gary Lunn, M.P.
Hon. Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Mayor Larry Cross, City of Sidney, BC
Sidney Business Association
Bob Hyde, Port of Anacortes
Tourism Victoria Board of Directors

District of Sooke
*Incorporated December 7, 1999*

2205 Otter Point Road, Sooke, British Columbia, Canada V9Z 1J2

Phone: (250) 642-1634 • Fax: (250) 642-0541 • Email: info@sooke.ca • Website: www.sooke.ca

January 19, 2009

File No. 0470

VIA EMAIL: moseled@wsdot.wa.gov

Mr. David Moseley
Washington State Ferries

Dear Sir:

Re: Washington State Ferries Long-Range Plan, December 2008

I am writing to appeal to Washington State Ferries and the Washington State Legislature not to follow through with cancellation of the international ferry service between Anacortes, Washington and Sidney, British Columbia. We would like to add our voice to the vigorous campaign to preserve this important marine link between our countries.

In our view there are a number of compelling points to be made to defend retention of the service:

- There is strong evidence that the economic harm to Washington State and the key stakeholders in the northern Puget Sound area would significantly outweigh the alleged savings (reference the Hovee report of July 2007);

- Although a detailed analysis has not been undertaken on the Canadian side, it would be logical to assume that similar economic benefits from the service apply to Sidney and the Capital Regional District;

- Ridership could be significantly boosted by a meaningful marketing campaign directed at the "tourism-in-your-own-backyard" trend as well as traditional international and domestic tourism markets. I would personally rally support for a coordinated marketing program through a consortium of stakeholders, on both sides of the service;

- While difficult to quantify, there is deep meaning and significant value to the connection between Anacortes and Sidney, in a cultural, historical and social context. The Sister City relationship is a clear expression of the importance of the relationship to both communities.

Being in the local governance business, we are sensitive to the need to examine every opportunity to improve efficiency and effectiveness in our operations and capital programming. We understand the objective of the Washington State ferry system in this regard. However, it is our strong belief that the Anacortes/Sidney ferry service is, in fact, a net fiscal gain for the State of Washington. We also believe that there are values to this important connection that cannot be measured by dollars and cents.

It is our sincere wish that the Anacortes/Sidney ferry service be retained, for now, and long into the future.

Thank you for your consideration.

Sincerely,

Sheila Beech

Sheila Beech
Acting Mayor

cc. Mayor Larry Cross, Sidney
Mayor Dean Maxwell, City of Anacortes
Duane Clark, Save Our Ferry
Sidney Business Association
Hon. Gary Lunn, M.P.
Hon. Murray Coell, M.L.A.
Saanich Peninsula Chamber of Commerce
Tourism Victoria

Community Development Office

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**The Peninsula Celebrations Society**

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**Sister Cities Association**

Community Arts Council of the Saanich Peninsula
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Sidney, BC, V8L 5J6
Phone: 250-655-6417
Fax: 250-656-4368
info@sidneybusiness.ca
www.sidneybusiness.ca

# Sidney BY THE SEA BUSINESS ASSOCIATION

January 19, 2009

Mr. David Moseley,
Washington State Ferries

Re: Closure of the Anacortes/Sidney ferry run.

Dear Mr. Moseley,

The members of the Sidney Business Association wish to convey our gravest concern regarding the plan to consider eliminating the Anacortes/Sidney ferry run as of September, 2009.

This run has been in effect since 1951 and provides a valuable transportation link between the two countries. While we can understand the tight financial situation the WSF finds itself in, there are several economic factors that would escalate the financial decline in that area. We note that there would be a overall job loss of 1.470 jobs relating to the elimination of the ferry operation and this would have a serious economic impact on the Puget Sound area. The retail sales and service segment would be seriously impacted as a negative result of the loss of tourist dollars thereby causing more unemployment and a tremendous loss of tax revenue. We understand that a recent survey has shown that 91% of all residents in the region have used the ferries and 95% of Puget Sound residents responded that the ferries are very important with voter support at 70% in favor of continuing the ferry run.

It would certainly curtail if not totally eliminate the ongoing cultural relationship that has developed between Anacortes and the Sidney sister city committees.

We feel strongly that the elimination of the Anacortes/Sidney run will have a long term devastating economical and cultural effect on the two cities and we formerly request that you implement Plan A of your Draft Long –Range Plan whereby the WSF continues to operate and maintain the current service level of the Anacortes/Sidney ferry run. There are many economic, cultural and international reasons to keep this run operating and we urge you to consider those factors when considering your plan of action

We thank you for your consideration of this appeal.

Marie Rosko, President
Sidney Business Association.

***Generating new business for your Business***

PENINSULA Gallery

January 20, 2009

Mr David Moseley
Assistant Secretary for the Ferries Division
Washington State Department of Transportation
PO Box 47300
Olympia WA 98504-7300

Dear Mr Mosley,

Re: Anacortes- Sidney ferry

It was a shock to hear that Governor Gregoire has proposed eliminating the Anacortes-Sidney ferry route in the 2009-2011 biennium budget. I appeal to you to do all in your power to ensure that this important international ferry route continues to operate. This route provides approximately 1,470 jobs within the Northern Puget Sound region (Island, San Juan, Skagit, Snohomish, and Whatcom counties.)

There is over $30 million in annual payroll and nearly $126 million in annual spending that is directly and indirectly associated with this ferry service. In these uncertain economic times, every effort must be made to support the jobs that already exist. The spiraling negative effects of the job losses cannot be calculated.

In 2006, approximately 131,600 passengers rode the Anacortes to Sidney, BC ferry. Excluding the 17% of riders within the inter-islands, fully 83% (109,000 net passengers) traveled the full distance.

The State of Washington receives $4.6 million a year in taxes related to the ferry run. Local jurisdictions collect $1.3 million in tax receipts annually. This means approximately $45 in tax revenue per rider.

As well, the friendly cultural link between the USA & Canada and the sister city relationship between Anacortes & Sidney has been nurtured by this link. Our own business has enjoyed the visits of many ferry passengers over the years. With the approach of the 2010 Olympics, we hope many more visitors will include a trip to Vancouver Island via the Anacortes ferry. There are numerous positive effects from this ferry service

Please do all you can to keep this ferry route running. Many, many people (& their families) who depend on it for their living will be grateful voters in the years ahead.

Sincerely,

Larry & Gillian Hanlon

100 - 2506 Beacon Avenue Sidney, B.C. Canada V8L 1Y2
**Phone: (250) 655-1722 Fax: (250) 655-1232**

SENATE DEMOCRATS

WASHINGTON STATE

## Sen-Elect Kevin Ranker
## Statement in support of the Anacortes/Sidney Ferry

It is critical that we maintain the Anacortes/Sydney Ferry run because of the very serious economic impacts and job loss that would result from this cut. Ferries play a vital role in our regional economy as part of our state highway system.

A recent study conducted by E.D. Hovee & Company on behalf of the Economic Development Association of Skagit County found that ferries are vital to the economies of the communities that they serve, and the Sidney route is particularly important for tourism access both to Vancouver Island, B.C. and the Northern Puget Sound region, including Skagit County. Even a partial elimination of ferry service on the Anacortes-Sidney route would threaten thousands of jobs in the five counties of the Northern Puget Sound Region, impact up to $30 million in payrolls and as much as $126 million in related spending, and reduce state and local revenues that are generated by related economic activity. Further, the elimination of this run one year before the 2010 Olympics in BC is unrealistic as we expect an upwards of tens of thousands of visitors generating millions of dollars in revenue in the coming year.

As a member of the Senate Transportation Committee, one of my priorities will be to clarify that ferries are essential to the economic and community health of our region and that they deserve the full support of the Legislature. And, as someone with first-hand knowledge of how important these ferry runs are to the communities that rely on them, I will be doing everything I can to support the Anacortes/Sidney Ferry and ensure its continued presence as a valuable economic stimulus to our region.

# RESOLUTION NO. 04 – 2009

**A RESOLUTION EXPRESSING THE CITY'S SUPPORT FOR THE CONTINUED OPERATION OF THE INTERNATIONAL FERRY RUN.**

**WHEREAS**, the international ferry run between Anacortes and Sidney, B.C. has been in existence for many years providing this key transportation route which is a convenient and vital linkage between Vancouver Island and Washington State. In a recently published study by E. D. Hovee and Company, LLC, the analysis indicated that the following economic and fiscal benefits can be attributed to the international run:

- In 2006, approximately 131,600 passengers rode the Anacortes to Sidney, BC ferry. Excluding the 17% of riders within the inter-islands, fully 83% (109,000 net passengers) traveled the full distance.

- Approximately 1,470 jobs with over $30 million in annual payroll and nearly $126 million in annual spending are directly and indirectly associated with this ferry service within the Northern Puget Sound region (Island, San Juan, Skagit, Snohomish, and Whatcom counties.)

- The State of Washington receives $4.6 million a year in taxes related to the ferry run. Local jurisdictions collect $1.3 million in tax receipts annually. This equates to approximately $45 per rider; and

**WHEREAS**, The international run generated $126 million to the economies of Skagit, Island, San Juan, Whatcom and Snohomish counties in 2006, according to a study commissioned by the Economic Development Association of Skagit County; and

**WHEREAS**, the Governor, in her 2009-2011 biennium budget, has proposed eliminating the international ferry run, for a projected savings of $9.2 million; and

**WHEREAS**, the international ferry run facilitates tourism in Skagit County, benefitting the residents and businesses of Burlington and the entire community;

**NOW, THERFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BURLINGTON, WASHINGTON AS FOLLOWS:**

That the City Council of the City of Burlington strongly encourages the state legislature and the Washington State Ferries to continue operation of the international ferry run.

Adopted this 22nd day of January, 2009

Edward J. Brunz, Mayor

Testimony from Bainbridge

Comments regarding WSF Long Range Draft Plan A & B

ESHB 2358 stated that WSF shall develop fare and pricing policies that: "consider the impacts on users, capacity, and local communities". Without data from the economic analysis impact study, WSF cannot make sound decisions about the fate and subsequent impacts.

Presenting Plan B on the same day that Ferry Policy Committee was disbanded was pretty much pulling the voicebox out of the throats of our representatives who were there to speak and advocate on the behalf of ferry-served communities. They were disbanded before they could review, question, and comment on it. WSF did not speak with Ferry Advisory Committees or local officials and representatives in developing or reviewing of Plan B. Plan B is a non starter and should be flat out rejected by every ferry-served community.

## Let's focus on creating a Plan C – Citizen's Common Cents

### 1. First, make a commitment to fund the system after all efforts for efficiencies have been implemented.

This biannual scramble for funding has got to stop. Do the mountain passes have to scramble for funding of snow plows to keep the mountain passes clear each budget cycle? Is 520 looking at closing down two lanes to reduce its highway costs? Stop treating the marine highway & mass transit system as oddity of WSDOT. Put funding in the budget.

create "cost savings"

### 2. Look for cuts in the system.

WSF overhead should be immediately cut before the legislature even thinks about reaching into our wallets again.

The system has not changed drastically the number of crew, service, and boats in over 30 years. What has changed drastically is the amount of WSF administration - 5 times what it was! So at a minimum, we should be asking for 25% reduction in WSF headquarters. Use the money saved to build more flexible fleet of ferries.

Regrettably the legislature sent WSF on a path of having to find its own money to float the system - thus 80% fare increases in 6 years and the rush to figure out how to raise more money - become landlords, collect rents from franchise (Starbucks, MacDonalds, etc), sell advertisement, get more money out of users! Legislature should take responsibility of restoring funding in the budget.

### 3. Build boats not terminals.

Stop the nonsense of the expensive terminal expansions and improvements!

Terminals should be nothing more than glorified bus stops - shelter and spaces to pass through on the way to your destination. We don't want high end shops, hotels, and

restaurant/coffee franchises at the ferry terminals...we want people to go to our towns to visit, shop, and buy from our mom and pop locally owned stores. Build boats not Terminals! The old terminal's were built like bomb shelters – built to last.

**4. Have contracts for the life cycle of the vessels.**

All new vessels should have build/maintain bidding contracts.

Now that we don't have steel electrics that needed hand-crafted parts and wood shop repairs - downsize the maintenance yard or better get rid of it and contract out maintenance as the majority is now already being done elsewhere – Todd Shipyard currently Dakota, Edmonds.

How is it that WSDOT spends $21 million a year maintaining 946 buildings and WSF is going to spend $22 million for one maintenance yard operation in Eagle Harbor? And why is Eagle Harbor Maintenance yard budgeted into the future up to $90 million dollars? That money could build two new boats! Is there something outrageous about this sort of spending? Is there room for cutting expenses?

**5. Change law requiring ferries to be built only in Washington.**

Common sense would say - repeal the law that requires ferries be built in Washington only. Previous ferries were built at $220 K per vehicle space. The recent ONE BID ONLY came in at $1.5 million per vehicle space – 7 TIMES THE COST! With the new US administration talking about creating jobs for infrastructure - with the build only in Washington law we will not qualify for those federal funds.

**6. Finally, increase the WSF portion of the gas tax from 1/2 a cent to 1.5 cents.**

Citizens' Common Cents.

Debbi Lester
Ferry Community Partnership
Bainrbidge Island member

J07

**These are Doug Rauh's comments on the WSF 2009 Long Range Plan.**

The WSF 2009 Long Range Plan does not meet the goals of the WSF customers or the financial goals of th Legislature.
I will address the things I believe need to be changed in order to meet the Legislature and customer goals.

The very first step that is needed is for WSF to change WSF policies that will improve the systems efficiency, reduce its expenses and make the commute easier for the customers.

- **(no fee) Reservation System accessible by phone or computer.**
  Page 53 current vehicle queuing process is inefficient and would cost about $1,000,000,000 to upgrade all the holding areas.
  A reservation system would accomplish the same thing for approximately $42,000,000.
  Page 54 "How do customers deal with the loss of spontaneity?" Use the Tacoma Narrows Bridge or Walk on.

- **Charge vehicles per linear foot of deck space used**. The Appendix on Strategies did not indorse this idea. The reason given was no benefit to WSF and to hard for the customer to change to shorter vehicles. The US Census indicates that a large portion of West Sound residents have 2, 3 or more vehicles. I have assumed the vehicles vary in length. If WSF provided the incentive the customers would provide the shorter vehicles thus providing additional deck space on each run that can be sold to other customers and reduce the potential for an over load where vehicles must be left at the dock.
  Page 61 "a small car discount would target a very small portion of total riders."
  Bad assumption. Look at the US Census. Most West Sound residents have 2+ vehicles. All it would take to get someone to use the shortest vehicle is for WSF to charge by the linear deck space used.
  The current **WSF policy** actually gives a discount to the longer vehicle because all vehicles under 20 feet pay exactly the same price.
  Page 62 "

- **All variations on vehicle fares should be eliminated for all vehicles with more than 2 wheels.**
  Charge strictly by the per foot length of deck space used.

- **Remove the vehicle over height charge.**
  A vehicle with a bicycle on it's roof will be charged a double vehicle fare per WSF pricing policy.
  A bicycle rack on the back of vehicle use 3 or more feet of deck space and save 50% on the vehicle fare.
  A MarkII has approximately 4,400 linear feet of vehicle deck space.
  The MarkII's final cost to the state was well over $100,000,000 each for the current 208 (20') vehicle capacity.
  Therefore each foot of deck space cost the tax payers of Washington about $24,000.
  During route overload periods please maximize the use of deck space.

- **Implement a fuel surcharge** to help mitigate the volatility in fuel prices.

Note: When WSF purchased the MarkII's Caterpillar Marine won the Life Cycle Cost bid. Then the Legislature change the bidding process to Low Cost bid. The only other bidder Siemens Marine than won the bid. The Life Cycle Cost bid analysis indicated the Siemens engines would use $48,000,000 more fuel over the 40 year life analysis period than the Caterpillar Marine engines. The Legislature moved a Capital Cost to an Operation Cost. Operational costs are paid for by fare box recovery. W should do a lot more to educate the Legislature on how to lower WSF customer expenses. The bid analysis did not consider $140 per barrel oil, so the fuel difference may be much larger due to the recent Diesel fuel increases.

- **State publicly how the vehicle boats are to be categorized.**
  Are ferries highways, mass transit, floating bridges or some combination.
  Treat the ferries equally financially according to their categorization.
  If a land bus gets a subsidy than a marine bus should get the same subsidy.
  If a bridge (floating or suspension) gets a certain percentage of funds than a floating bridge (aka ferry) should get the same funding.
  As a highway of Statewide significance ferries highways should be in line for the same money as highways built on land.

- **Put one MarkII on Bremerton, Bainbridge, and Kingston routes.**
  Assign any additional capacity as needed on those 3 routes.

- **Change the current WSF model of two ferries per route to 3 or more ferries per route.**
  This will reduce the land side infrastructure problems caused by the 10 to 1 compression of the demand caused by WSF offloading 60 minutes of vehicles in about 6 minutes on to the land side transportation system.
  This also reduces the impact of a breakdown from the current 50% lose of capacity to a 33% lose of capacity with 3 boats.
  A side benefit of shutting a boat down during light demand periods.
  The time between boats is reduced by at least one third or 20 minutes on the Bremerton run.

- **Build lighter boats by using aluminum instead of steel.**
  The MarkII boats were built with 900 tons more steel than the Jumbo's.
  If the average vehicle weighted 3,000 pounds than 900 tons is equal to approximately 600 vehicles.
  Thus when a Mark II with a empty car deck is heavier than a Jumbo with 3 loads of vehicles.
  Every MarkII must push the empty weight of a Jumbo + 3 additional loads of cars every time it crosses the Sound.
  Let's change ferry boat construction from steel to aluminum.

- **SR-305 needs the Red Light Runner program installed on all the Traffic Signals on Bainbridge Island because of the traffic surges caused by WSF.**

- **Foss Tug built a Green Tug.** I would like to see WSF review the Foss Tug design for possible ideas that could benefit WSF. See Foss Maritime Company Hybrid Tug Boat 10:20am presentation at the Washington State Transportation Commission Jan 13, 2009.

- **Stop using Bremerton as the operational relieve boat for the other routes.**

When a route loses a boat that route takes the hit.

- **Collect passenger tolls only on one side of a route.** Appendix indicated manual toll process was a restriction to rapid boat turn around. Suggested hiring addition toll collectors, putting two toll booths in a row, and stop selling tickets at the toll booth to speed the tolling process.

- **Round round-trip passenger fares to the nearest dollar for faster cash transactions.**

- **Integrate intelligent automation throughout the WSF system.**

- **Work with WSDOT to mitigate the traffic compression caused by using Ferries as cross Sound Highway Bridges by implementing an Intelligent Transportation System on SR-305.**
  Sensors should be used to monitor SR-305 and the local cross traffic for load changes. When the ferry offload occurs SR-305 should be treated like a railroad track and the offloading vehicles like a train. The first mile of more of vehicles should get a solid green until the first major break in traffic. If there is no waiting cross traffic than the traffic signals should stay green until all the ferry vehicles have passed as determined by real time sensors.

- **The new traffic signal on SR-305 at the Bainbridge Island WSF Toll slows down the offload of the ferry.**
  Currently WSF directs all passengers to the North side of SR-305 than WSDOT directs them to the South side of SR-305 using a new $300,000 traffic signal. A better option would have been to allow WSF passengers to unload to the South side of SR-305.

- **The Coleman Dock turnstiles are to close together to allow passage of wheeled bags** which are used extensively on the Bainbridge route.
  The turnstiles are to close to the access point to the gangway .
  This does not allow any pre-ticketing until after the completion of the unload.
  Thus only allowing less then 10 minutes to process up to 2,000 customers.
  This puts undue stress on the customers.
  The barcode readers with the wider separation and plastic doors that open sideways works better than the three pronged people pokers.

- **The Coleman Dock turnstiles would work more efficiently if they were located back closer to the manned ticket booth.**
  There are two sets of turnstiles at Coleman, one for Bremerton and one for Bainbridge.
  If the turnstiles were located by the ticket booth only one set of turnstiles would have been necessary to process both
  Bremerton and Bainbridge.

- **Put bar code above an below fold line on on-line passenger tickets.**
  This would allow WSF passenger customers to insert the folded bar coded 8x11 paper either way and still get a successful read. The current single barcode is an inefficient way to process that form and effects tourist, senior citizens and anyone familiar with the system but not paying attention thus slowing down the bar code reading process.

- **Use an email Bar Code sent to a Cell Phone as the WSF Boarding pass.**

**Telecommunication bandwidth** is increasing to a point where audio anywhere is expected. Video display, conferencing and even holographic displays are possible. As the mobile and conferencing becomes faster and easier telecommunication will replace some cross Sound ferry trips.

The **volatility of fuel prices** will affect home buying decisions. In the near term the lower prices of hon in the West Sound has been canceled out by the higher ferry fares coupled with the uncertainty of future route schedules and reliability.

Per January 5, 2009 Aviation Week & Space Technology "In the next two decades, almost 80 million Americans will become eligible for Social Security **retirement** benefits at a rate of more than 10,000 a day – seven Boomers every minute." This will change the WSF customer base.

The **business model** has changed from the post World War II model of (8 to 5) 5 days a week at one location to a much more flexible work environment. The biggest impediment to the change has been the upper and middle managers. This recession has flushed most of them right out of the work. Expect more business models like American, Jet Blue and Southwest Airlines. All have used data processing to reduce the actual cost of operating an airline. American allows customers to use their cell phone to display a barcode as the boarding pass (no paper). How long before WSF would try this. Are the WSF bar code readers capable of process cell phone bar codes? Jet Blue has the reservation workers working from home. All of them all the time. Southwest made history by staying in the black by hedging future fuel purchases.

Many of WSF customers use the system to get to **medical treatment** that is only available on the East Side. As the West Sound grows more medical treatment is being offered on the West Sound. Within less than the time frame of this Long Range Plan the West Sound will have most of the treatments the East Sound has.

Many of WSF customers use the system to access **Aviation Infrastructure** or **SeaTac**. If the next Regional Airport is built on the West Sound many of those customers will no longer cross the Sound only to access aviation infrastructure.

Many of WSF customers are going to **Cultural events**. With the reduced schedule the number of individuals who can afford to stay overnight in Seattle or drive around after the event will be greatly reduced.

With the sale of Puget Sound **Energy** to Macquarie the price of electrical energy will be going up substantially. This will affect business type and location. Fewer businesses locating or staying in the Puget Sound means fewer WSF trips.

Originally people worried that WSF would take business from the **Tacoma Narrow Bridge**. Who would have predicted the substantial increase in fare would force those that can to drive around using the TNB.

**Tourism** is a growing segment of the Washington economy. If WSF cuts the links like Port Townsend to Keystone and Sydney to Anacortes fewer tourist will want to use the system.

The lack of awareness as to what was available made me very upset with WSF.
It appeared to me that WSF and Kitsap Transit did not care about Bainbridge Island. Their only concern was could they get grant money from the feds. That is why you see New Jersey barrier along SR-305 across the Ravine. Those are the only New Jersey barriers on the Island and it appears to be just a WSDOT finger in your eye type of statement.

Repeatedly WSF and Kitsap Transit consultants have proposed routing bus uphill to East Winslow Way, turn left toward SR-305 then turn right on SR-305. Where do you get these designers? A much better solution would be to route all traffic down hill from the bus holding and parking garages. Hold all SR-305 access until the ferry is offloaded. Then let the buses access SR-305 followed by the cars from the parking lot. Keep all traffic signals green on SR-305 while the offloading traffic is clearing. Use ITS (Intelligent Traffic System) sensors to identify when the ferry traffic needs the green. Then hold the green until the traffic has cleared. This could take 6-8 minutes, but would ensure that the regional highway (SR-305) actually worked like a regional highway.
WSF should never propose to put truck access across the Ravine and next to the Bainbridge Island Water Front Park. Parks are sacred on Bainbridge.

WSF proposed building a 600 vehicle holding area next to the WSF Terminal on Bainbridge. Any vehicle that has to wait 3 or more boats is better off driving around. It would be cheaper and faster. WSF would have had to cut the trees between the WSF Maintenance Yard and the WSF Terminal. Next to parks, trees are Islanders most sacred objects. WSF should think long and hard before cutting trees.

- The 2009 WSF Long Range Plan proposes to put the largest share of its capacity at the only terminal you have to cross a bridge to get to and that bridge sits on top of the Seattle Fault Line (**earth quake**). The Puget Sound does have earth quakes so lets plan for them in the planning stage. Earthquakes can destroy anything so the best solution is to disperse the ferry capacity to multiple terminals. I like the idea of one MarkII at Bremerton, Bainbridge, and Kingston.

- Page 8 WSF Long Range Plan revenue for plan "A" $5,638,000,000.
  revenue for plan "B" $5,243,000,000.
  Difference **$ 395,000,000.**
  On a reasonableness factor this would rate as **not believable.**

- Page ES-9 "With a dedicated tax subsidies of almost $900 million over the 22 years, there would be an estimated tax subsidy **surplus in the operating account** of approximately $719 million, which would be available to."

  How do you convert Operational Funds into Capital Funds? Is this what other Mass Transit systems do? I do not like this mixing up of the funds. I get nervous that some of the money may get lost in the shuffle.
  It looks like the West Sound is paying an additional transportation tax so Seattle will be able to use more state funds for large Seattle projects.

- Page 30 WSF Long Range Plan Seattle-Bainbridge 2030 Vehicles 2,909,767.

MarkII max vehicles 202, 46 runs (23 each direction), 9,292 daily vehicle capacity, 3,391,580 annual vehicle capacity.
2,909,767 / 3,391,580 = **90% full all runs all year.**
This load factor is **not believable.**

- Page 32 WSF Long Range Plan **Westbound PM** Arrival Terminal **Bainbridge** Vehicles **Peak Hour** Year **2030= 604.**
With two(2) MarkII's working this route each having a maximum Vehicle capacity of 202 and a 35 minute crossing time.
You would need to dock 3 times in 60 minutes. If that is currently not possible how can it be possible in 2030?
The 604 number is **not believable.**

- Page 33 **"Mukilteo-Clinton...a significant portion of its ridership is commuter-based."**
Boeing moved their headquarters to Chicago. Boeing moved the 787 wing manufacturing to Japan. Boeing excess Renton facilities have been sold for condo's. Labor has struck Boeing the last two contracts. Boeing is preparing to build new assembly facilities outside of the Puget Sound Region, State, Country. The move will occur with the next launch the 797. The Mukilteo-Clinton route will see the commuter numbers shrink over the next 20 years.

- **Page 34 WSF Long Range Plan "The ridership projections used in this planning effort assume that recreational ridership will increase at the same rate as other ridership."**
As the Baby Boomers retire the commuter ridership will reduce faster than other segments and the recreational ridership will increase faster than other segments.
**Bad assumption by WSF.**

- **Page 38 WSF Long Range Plan "Seattle-Bainbridge was given a 2-boat-wait standard in order to equalize its overall average trip time with Seattle- Bremerton."**
A regular uses of the Bainbridge and Bremerton route know it takes one hour to drive from Bremerton to Bainbridge. The total trip time from Bremerton thru Bainbridge to Seattle takes about 2 hours.
The reason every one doe it is because the first boat of a two boat wait is always missing in Bremerton whereas you just might get on the first boat at Bainbridge. This is because Bainbridge has 23 departures compared to Bremerton's 14.
The logic goes like this Bainbridge (~20,000) is half the size of Bremerton(~40,000) and the Bremerton boats(~100) are half the size of the Bainbridge boats(~200) plus the Bremerton boats run half(14) as often as Bainbridge(23).
The result is the Bremerton area get less vehicle space per 1000 population than Bainbridge.
For Bainbridge's 20,000+ population WSF provides 4,646 vehicle departure and arrival spaces.
Bremerton's 40,000+ population gets (~2,000) vehicle departure and arrival spaces.
The rule of thumb is Bremerton will only get one quarter of the service Bainbridge gets.
WSF keeps switching boats on the Bremerton route so it is difficult to analyze the actual capacity.
This uncertainty at Bremerton is another reason the West Sound population favors the Bainbridge route.

- **Page 41 WSF Long Range Plan "Exhibit 10 shows actual volume-to-capacity ratios - the percentage of vehicle space (capacity) on a vessel that is taken up by paying vehicles (volume)...".**
How many non-paying vehicles are on the deck?

- **Page 47 WSF Long Range Plan "For all jurisdictions, except Whidbey Island, the ferry LOS standards do not have an impact on local growth management concurrency plans."**
  Why wouldn't the Growth Management Board review the lack of capacity on a state highway the same as lack of capacity on a county/city road.
  The Growth Management Board should review the WSF Long Range Plan for compliance.
  Bremerton has a new four lane divided highway to the WSF terminal, new terminal, new parking garage, new ferry exit tunnel, one quarter the capacity of Bainbridge and WSF is proposing cutting the capacity in half.
  Bainbridge will have a congested SR-305 from ferry traffic due to the boat size being mismatch with the land side vehicle capacity, old terminal, limited holding, no reservation system, mass transit cutting buses and service, WSF funneling Bremerton vehicles to Bainbridge while not using the new facilities in Bremerton, plus Bainbridge is the only West Sound terminal you have to use a bridge to get to and that bridge is on top of the Seattle Earthquake fault. WSF should just hope no one in either Bremerton or Bainbridge pushes the concurrency issue to the Growth Management Board.

- **Page 73 Where is the WSF Maintenance Yard preservation costs?**

- **Page 80 "The interlocking reasons for the declines in ridership from 2000 through 2006 (fare increases, increased telecommuting, rising gasoline prices, economic conditions, etc.)"**

  Baby Boomer retirement needs to be added to this list.

- **Page 83 "The most promising cross-sound candidate routes are:"**
  Bainbridge to Seattle was not listed yet that is probably one of the very best routes for passenger only service.
  Large base of customers with money that want to go to Seattle and do go to Seattle for business and pleasure.
  The trip would be around 12-15 minutes each way making a 30 minute round trip possible.
  3 passenger only boats could provide 10 to 15 minute departure time.
  WSF needs to save fuel cost one Mark II could removed from this route.
  Passenger only vessels could leave as soon as they are loaded or every 15 minutes which ever came first.
  Passenger only vessels could be shut down during low demand periods.
  Buses could pick up Island residents all day long on an on-demand versus routed service.
  During the 10-15 year Viaduct construction period Seattle would want WSF to deliver fewer vehicles to downtown Seattle.

- Page 91 **"a complimentary passenger-only system that would be funded at the regional level."**
  Sounds like an unfunded mandate to me. What will the state and regional level costs look like when combined.
  The constituents of the state and the constituents of the region are the same tax payers. Just setting up another set of books and building another layer of government does not reduce transportation expenses which should be our primary goal.

- Appendix D page 12 Bainbridge (2006) 2,950 (2030) 3,880

Bremerton (2006) 1,500 (2030) 1,740

Bainbridge increases 1,000 and Bremerton a quarter of that.

How many on the Bainbridge route would have used the Bremerton route if WSF had provided the service?

- Appendix D page 14 **Bremerton headway 75 minutes**
  24 hours times 60 minutes = 1,440 minutes.
  14 departures in 1,440 minutes = 103 minutes between departures in a day, not 75 minutes.

- Appendix D page 19 **30%** growth seems high. Did the peer review team include the Baby Boomer retirement, additional telecommunications, increased band width.

- Appendix D page 25 **The Bremerton Sunday peak period is 3-7pm while Bainbridge is 6:30-10:30pm.**
  Why not route some of the Bainbridge 7-10:30pm traffic to Bremerton?
  This would spread the load and reduce the wait time.

- Appendix D page 26 **"Recreational travel may not be as closely related to future land use as other discretionary and maintenance (or non-discretionary) trip purposes,"**

  Bad assumption. How did you confirm land use and WSF trips are related?

- Appendix E-4 Page **Increase Parking Capacity at Terminals** this strategy should not continue.
- Appendix E-4 Page 14 **Optimize Use of Electronic Fare Sytem (EFS)** yes continue.
- Appendix E-4 Page 20 **Fare Card Coordination - ferries and parking** WSF customers need real time on-line access to reserved parking before arriving at a terminal. If all parking is full the customer needs to know so they can drive on or park and take a bus.
- Appendix E-4 Page 26 **Round Trip Ticketing** yes continue.
- Appendix E-4 Page 29 **Tandem Ticketing** NO use automation correctly no more manual ticket processing.
- Appendix E-4 Page 32 **Link employee reviews to ticketing processing times** No the slow processing is in the application design not the toll booth operator. Fix the design. Do not eliminate auto level ticketing sales at terminals.
- Appendix E-4 Page 35 **Extended ferry schedule** yes continue
- Appendix E-4 Page 40 **Remote Ticketing** yes continue
- Appendix E-4 Page 43 **Re-orient Basic System Design** Yes Yes & Yes
- Appendix E-4 Page 49 **Reservation System** Yes and do not make it complicated, if you use license plates than allow a driver to enter multiple plates.
- Appendix E-4 Page 53 **Shared Parking** Yes WSF could make the **Eagle Harbor Maintenance Yard Parking Lot** available for a couple hundred vehicles.

# Passenger

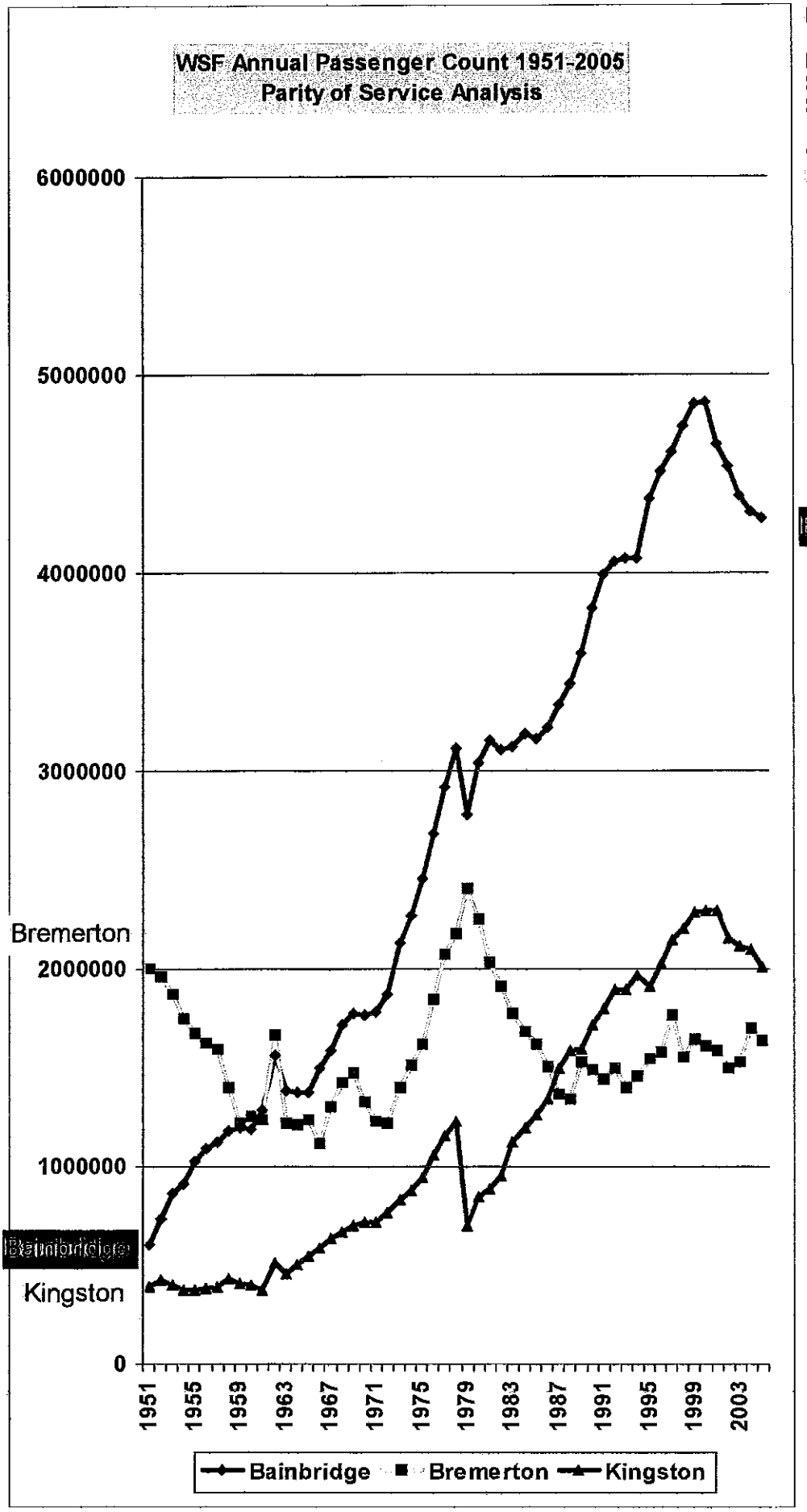
Puget Sound Regional Council
WSF Passenger Counts

PSRC Excel (wsf05.xls)

PSRC Contact
Kris Overby
KOverby@psrc.org

Charted by
Doug Rauh
rauh01@msn.com

Oct 13, 2006



# Vehicle

Puget Sound Regional Council
WSF Vehicle Counts

PSRC Excel (wsf05.xls)

PSRC Contact
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KOverby@psrc.org

Charted by
Doug Rauh
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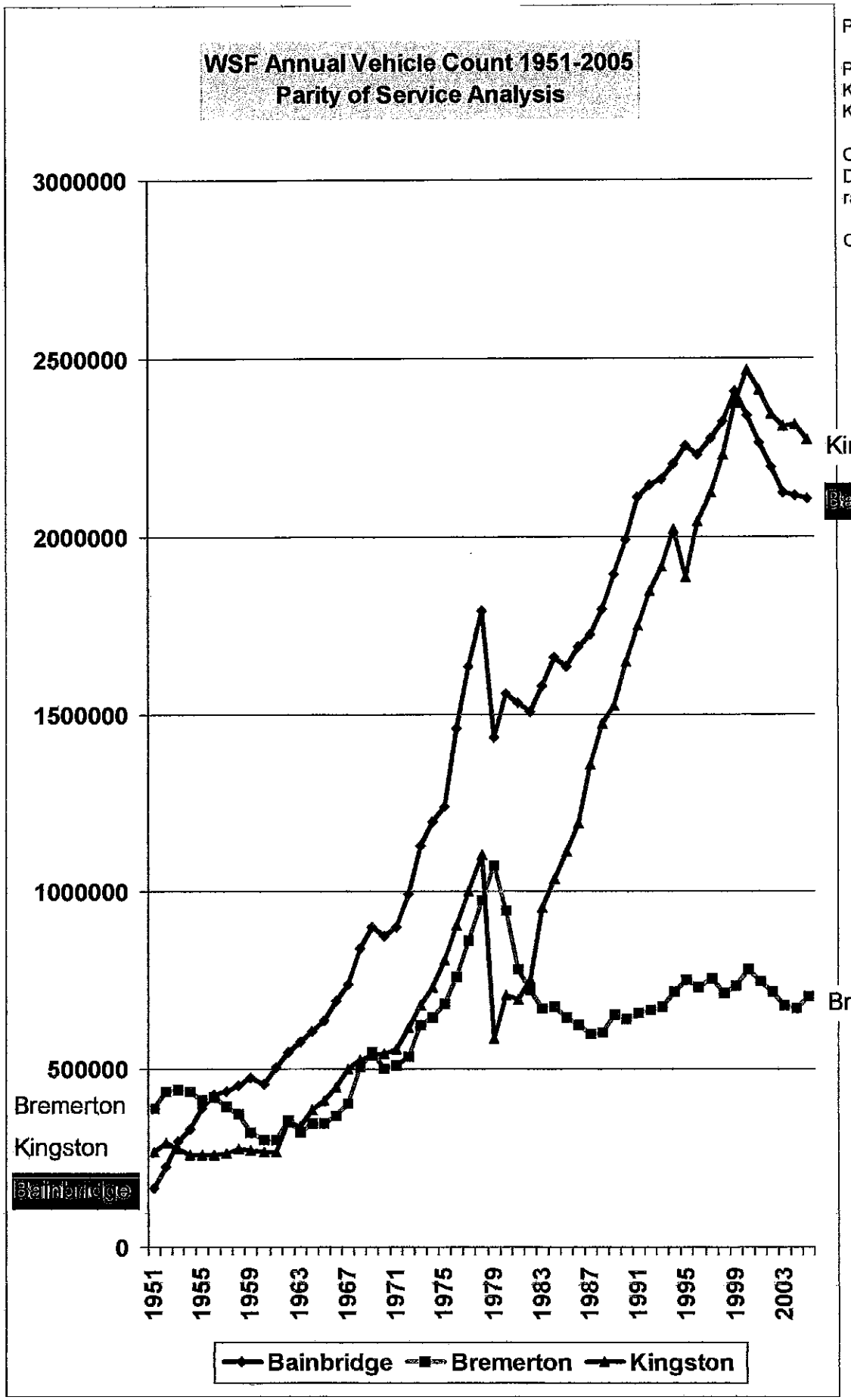
Oct 13, 2006



January 21, 2008
Written Comment on Draft Long-Range Plan

My name is Jane Crum, I live at 803 Merrill Pl W., Bremerton, WA 98312. I work for the City of Seattle and commute Monday through Friday. Thank you for the opportunity to comment on the WSF Draft Long-range Draft Plan.

Proposal B recommending one ferry on the Bremerton run and cutting night service; and reducing service to two ferries on the Southworth/Fauntleroy/Vashon run is incredibly unbelievable. These reductions in service would have devastating consequences on individuals, families, the community, environment, and economy of Kitsap County. The following bullets contain highlights of some of my thoughts:

- I moved to Bremerton in 2001 from Seattle to help my mother who had developed Alzheimer's disease. From personal experience, I know if you cut service to Bremerton the people who have responsibilities caring for young children, elderly parents, or ill loved ones will be in serious trouble. If this proposed cut had happened when Mom was living, I would have had to quit my job, or move my mother to Seattle, selling my house in Bremerton and relocating also.

- The ferry is a highway, another form of transportation. With all the transportation problems in Western Washington, taking away another form of transportation doesn't make sense. The volume of traffic will increase dramatically with people driving to Seattle, or driving to Bainbridge to try to catch a ferry there. And of course there is the return trip as well. This is counter to the state's commute trip reduction program. The Bremerton and Southworth runs cut down on use of congested roads.

- I'm reading the Title VI statement on WA State Depart. Of Transportation Ferries Division Draft Long-Range Plan: "...(WSDOT) assures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination based on race, color, national origin and sex in the provision of benefits and services...." I think that the plan B discriminates against lower income communities. I don't see that plan B reduces service to Bainbridge, which is good, but why to the communities of Bremerton and Port Orchard, Southworth, Vashon? It is common opinion that our communities don't have as much clout or power as residents of Bainbridge.

- As service is reduced, the ridership will continue to decrease. It has decreased as your plan states over the past years because with less service, getting on the ferry is risky. The proposed reservation system again speaks to a class system, and those who ride the ferry less, or may need it for emergencies, or do not have a regular schedule may not be able to get on with their vehicle. If commuting on the ferry becomes too difficult, by foot, or by car, I may have to move to Seattle, or quit my job.

- As more people drive to Seattle because of the proposed poor ferry service, more goods and services will be purchased in Pierce and King Counties. Less revenue and less taxes for Kitsap County.

- How can the planners of Plan B be serious about Kitsap County supplying 2 or 3 foot ferries when Kitsap County is cutting bus service due to budget? The 9:50 p.m. bus meeting the 8:50 p.m. Bremerton ferry arrival will be

discontinued sometime in 2009 (I can't get the exact date, I've asked twice). Sunday bus service on Kitsap Transit will be discontinued, and the Access bus meeting the 4:50 a.m. ferry from Bremerton also. These are just the services in Bremerton that I know about. I often use Southworth ferry and Kitsap Transit, but I haven't zeroed in on those proposed reductions. If they can't keep adequate bus service, I don't see that they would have the money to operate a foot ferry system to Seattle

- Please consider all the times the Bremerton ferry is down due to maintenance problems, personnel scheduling mistakes, or ferry/dock collisions. What will we do without a second ferry to serve as transportation? And to top it off, there wouldn't be any extra capacity to pull ferries from other runs, and no back-up ferry.

- Is it lawful to cut off a community from viable transportation? It doesn't seem like it could be.

- I don't understand how Governor Gregoire or the Washington Department of Transportation Ferries Division could consider dismantling the ferry system that is the state's largest tourist attraction, and also the second largest transit system in Washington and the largest ferry system in the United States. "No matter how you look at it, a ferry is a beautiful way to go." It is, but for commuters, it is not a cruise. It is a practical, viable means of transportation that enables us to earn a living and return home to spend money on goods and services in Kitsap County, increasing tax revenue. For Washington residents and tourists from across the United States and other countries, it is a beautiful trip and access to the Kitsap and Olympic Peninsula. Again, is grievously weakening the ferry system the legacy Governor Gregoire and the JTC and Ferry Policy Subcommittee want?

- I have friends that ride the ferry just to have lunch at the beautiful Bremerton waterfront, and return to Seattle via the ferry. They will not be doing this if they can not be assured to return to Seattle on a convenient schedule. Bremerton and Kitsap County will go into a serious recession and will not be allowed to thrive if you cut off access to Kitsap Peninsula and surrounding counties.

- Has the Ferry Division re-fit the ferries with more fuel efficient engines? Has that been considered to save costs and make the older ferries more efficient?

- Has sharing a smaller ferry between Bremerton and Vashon/Southworth or Bainbridge runs at night or mid-day when car volume goes down been considered; keeping runs available, but smaller boats when there are less cars?

Thank you for considering these thoughts. I plead with you to take another look at your proposal B, and take into consideration the lives that would be negatively impacted or destroyed by your decision.

Sincerely,

Jane Crum

January 21, 2009



**Marine Transportation Association of Kitsap**
**Comments on Washington State Ferries' Long Range Plan**

The Marine Transportation Association of Kitsap (MTAK), formerly known as Sinclair Landing Association, is a not-for-profit corporation that is involved in the research and development of an environmentally-sensitive, high speed-low wake boat designed to successfully navigate Rich Passage. MTAK is also committed to pursuing passenger ferry service between Kitsap and King Counties. In existence for over a decade, MTAK served as a partner and funding conduit in the very successful public/private partnership for the Bremerton Transportation Center, now the best ferry terminal in the State of Washington.

MTAK is pleased to see the inclusion of passenger ferry service as part of WSF's vision for transporting Kitsap residents to their jobs, schools, health care, and recreation in Seattle and King County. The MTAK Board of Directors has long believed that higb-speed, energy efficient passenger ferry service will be an integral part of connecting Puget Sound in the future and shaping the Kitsap economy. We encourage state, local and regional government to collaborate in the development of an integrated marine transportation solution, including the provision of a viable funding mechanism for the Puget Sound region.

Our concerns regarding this new long-range plan include:

1. The plan proposed by WSF substitutes passenger ferries for 50% of the commuter service from Bremerton to Seattle. The plan MTAK has been envisioning in recent years includes service that supplements WSF's service during the commute time, rather than replacing it. Passenger ferry service could provide service during off-peak hours, potentially providing operational savings to WSF.

2. MTAK is concerned about the timetable proposed for the implementation of passenger ferry service and the reduction of service in Plan B. History has demonstrated that there will be a need for some public funding for successful uninterrupted passenger service, and there is no funding plan for WSF's proposed model. The plan also calls for the local transit agencies to provide passenger ferry service, yet many operational details remain unclear, i.e., private sector involvement and governance of inter-county service. In order for passenger ferry service to be successfully implemented, a plan for an orderly transition will need to be developed.

MTAK stands ready to serve in any appropriate role, including assistance with the development of the fleet of boats that will be needed to provide service. In addition, we would welcome the opportunity to replicate a funding and planning model similar to that which we used in the development of the Bremerton Transportation Center.

Contact information:

| | |
|---|---|
| Beverly Kincaid, President | (360) 895-1321 |
| Carla Sawyer, Board Coordinator | (253) 756-1180 |
| Joan Dingfield, Communication Chair | (360) 990-0475 |

**Marine Transportation Association of Kitsap**
P.O. Box 29 ~ Bremerton, Washington 98337
Website: www.MTAK.org

Mayor Cary Bozeman

January 21, 2009

David Moseley, Assistant Secretary
WSDOT Ferries Division
2901 3rd Avenue, Suite 500
Seattle WA 98121

Dear Mr. Moseley:

Below are my comments regarding the WSF Draft Long Range Plan that was released in December 2008.

Plan B is clearly unacceptable and the focus needs to be on improving Plan A or considering Plan C. Plan B is an abdication of a critical state role that has served as the life blood of the citizens and the economy of the West Sound and a vital support to the economy of King, Pierce and Snohomish Counties and their Cities for their employers and businesses. We need to be more creative and aggressive about finding ways to save money within the ferry system. We should focus on boats not terminals and reform some of our approaches around ferry design and purchasing to reduce the costs that are driving much of the project ferry capital shortfall. Rather than viewing passenger-only ferry service as a complement to the existing auto service and a means to improve the financial viability of the system, both Plans A and B assume that POF service should be a substitute for the auto ferries.

WSF is part of our State Highway system and must be funded as such: "WSF is an essential part of the highway network in western Washington. Its 200 miles of marine highway provide links between urban areas on the east side of Puget Sound, growing communities on the Kitsap Peninsula, and the more rural destinations on the Olympic Peninsula and the San Juan Islands" (Pg. 3). Ferries are our bridges and our roads and have always been considered by state law as a legitimate part of the highway system. However, this draft plan repeatedly makes a case to reduce the ferry system in order to protect funding for highways. A stated goal of "The Ferry Bill" ESHB 2358 was to keep costs as low as possible while continuously improving the quality and timeliness of services, the proposed Plan B dramatically decreases the quality of service. Our ferry system serves 23 million passengers annually and provides vital cross sound links between eight counties and Canada. Our state should not sacrifice one portion of Washington's highway system by abdicating state responsibility by shifting the responsibility to local jurisdictions, primarily Kitsap County. 95% of Puget Sound residents believe the ferry system is important. Cutting service is akin to closing down highways or only keeping our vital highway passes open during peak seasons.

I urge you to maintain the current level of service in our ferry system and begin a serious process of deciding how to adequately fund the system in the future.

Sincerely,

Cary Bozeman
Mayor

Amanda Callison
7312 N.E. North Shore Rd., Belfair, WA 98528

January 11, 2009

Ms. Joy Goldenberg
Washington State Ferries
2901 Third Avenue
Seattle, WA 98121

Dear Ms. Goldenberg,

Please improve the Washington State Ferry system's Draft Long-Range Plan (Plan B).

I have been a regular commuter on the Bremerton/Seattle ferry run for the past 2.5 years. As a daily commuter, I **depend on the current level of service** on this run to get to and from my job in Seattle. Due to my work schedule, I have no flexibility to take ferries other than 6:20 a.m. from Bremerton to Seattle and 5:30 p.m. from Seattle to Bremerton. A reduction of service on this run would force me to find alternative transportation.

At least 30 percent of your ferry riders are commuters, like myself. I believe commuters are the majority of those unable to adjust their schedules. A reduction of service could dramatically reduce ridership on this run, thus escalating the problem of low ridership.

I am skeptical of the proposal to rely on the counties to provide supplemental passenger-only ferries. Kitsap County attempted to assume responsibility for the Bremerton/Seattle passenger-only boats when the State cut that service. However, the county tax-payers refused. I don't believe those tax-payers have changed their minds.

**We need more service, not less.** Ferry ridership is expected to increase by 36 percent by 2030 (assuming current service levels). Therefore, it is unreasonable to cut service on our marine highway system. The Washington State Ferries are a lifeline connecting the communities on each side of the Puget Sound. The ferry system is as important as other highways and should be provided the same respect, funding, and level of service as the rest of Washington State's transportation system.

I believe the new Presidential administration provides an opportunity to increase funding. President-elect Obama wants to help stimulate the economy by improving the nation's transportation infrastructure. I urge you to take action to secure additional funding to expand and improve Puget Sound ferry service rather than to cut back.

If you make the mistake of reducing service now, it will become difficult to recover when more service is needed. Plan B is out of phase with reality.

Thank you for your consideration,

Amanda L. Callison

Amanda Callison
Daily Ferry Commuter

# Response to Washington State Ferries Long-Range Plan
# Written Comments from Joan Dingfield
# Bremerton resident and commuter
# January 8, 2009

In previous testimony during this process as a member of the Ferry Advisory Committee Executive Council, I stated that I was looking for courage. Today as a Bremerton commuter, I am returning to say that I am still looking for that courage.

This draft long-range plan put forth by Washington State Ferries is the last key milestone in the two-year ferry financing study. There has been a great deal of distrust expressed about the process, and I am not at all certain anything is going to come from the two years of work. I am concerned that the State will continue to cobble together some sort of program and that Plan A and Plan B somehow will get institutionalized for future action without more dialogue in a community-oriented public process.

So I again call for leadership and courage from Washington State Ferries management, labor, the Transportation Commission, the State Legislature, and the Governor and Transportation leadership. Each carries a role in orchestrating the final steps of this work, and the same public that supported change at the national level is looking for change at the state level.

## Washington State Ferries management

I was dismayed at the definition of the core marine highway system. By taking the position of keeping some service on every existing route, you thwarted any creative approach to the design of transportation service and committed to spending hundreds of millions of dollars in your capital program on a plan that may not be the best choice.

It takes courage to reform an organization so deeply entrenched in labor rules and bureaucracy. In choosing someone who is not a maritime industry person to lead the organization, you have chosen to pursue systems reform and innovation. You need to go beyond simple budget cuts and service reductions. There has been no report-out on operational efficiencies, other than mention of the elimination of 25 budgeted positions, which certainly does not represent the actual number of reductions; the plan is silent on efficiencies recommended by the consultant through this two-year process. This is the window of opportunity for fundamental operational shifts, and more importantly, a change from an employee-oriented system to a customer-oriented one. Your customers will support you if you take on the transformational work necessary to get the ferry system operating soundly, with expenditures under control and revenues to support it.

## Labor Leadership

As stated earlier, I find that WSF is an employee-oriented system, not a customer-oriented system. There is a pervasive sense of entitlement that I struggle with day-to-day as I ride. I know there are employees who earn six-figure salaries when overtime is included, and yet I hear multiple conversations about the need for new chairs and about not being willing to visit

Bremerton because of the obligation to pay for parking. I don't want to trip over brooms and plungers when I know you are being asked to keep boats cleaner - I would much rather encounter people who take pride in their work. We are all working harder and not gaining ground. In these economic times and as a fellow state employee, I feel very fortunate that I have the benefits I have.

I am looking for courage from you in epic proportions. Bremerton is facing a 50% reduction in service from a system that is tangled in complex, burdensome work rules and lifetime benefits. As I look at other public agencies doing transformational work, I have seen no evidence of labor being at the table during this last two years, expressing a willingness to take on the reform work necessary to save this transportation system. I would invite you to come to a Ferry Advisory Executive Council meeting and hear from the communities you serve. There are many opportunities for better and more efficient service that are thwarted by a system that cannot change.

## Transportation Commission

I am looking for courage from you to advocate for increased revenue from the State for ferries. Do not fall into the trap of the State Auditors Office mentality of getting revenue from customers either way – by driving the Narrows Bridge or through ferry fares. I have been clear in my belief that ferry customers should pay more. But farebox recovery cannot be the sole source of new revenue; it already carries a disproportionate burden compared to other transportation systems. WSF needs some intense support right now with the Legislature - you need to use your own studies and fight for new sources of revenue.

## State Legislature

The courage I am looking for in the Legislature is to face your own Growth Management mandates, recognize the ferry system as an integral part of the state's transportation system, do the hard work of defining the core system, then properly fund it. That's all. I do not believe it is productive to take the punitive approach of not providing more money because of voter support for I-695 and funding. If this conversation continues, I can assure you that ferry communities will organize and focus on equitable reductions of funding from other communities in the state that supported I-695, also looking at tax dollars paid vs. tax dollars returned. Please do not pass on these reform efforts for yet another decade or two while patching together some scheme to pay for a system that is deteriorating rather than improving.

Other issues to consider:

- Look at the trade-off your Build in Washington policy brings vs. the loss of access to federal dollars because of it.
- Eliminate the retire-rehire law as part of your own economic stimulus package. When the state and other agencies are laying people off, retire-rehire allows double-dipping in the state system. It also does not develop a new workforce and encourages the status quo rather than looking at new ways of doing business.
- Putting more cars on the roads by reducing ferry service flies in the face of the work you are trying to accomplish with the restoration of Puget Sound. As a commuter, if my options are reduced by 50%, I will reluctantly shift to driving.

**Governor Gregoire, Secretary Hammond, and senior policy staffs**

Courage will be most important here. We need long-term sustainable leadership that will leave a ferry and transportation legacy that future generations will benefit from. Do not let this reform opportunity go by. Do not let the Legislature and the ferry system take a pass on the difficult decisions that lay ahead. Ferry customers and communities will help with the work. We need leadership, however, that is willing to confront the old system, create a new one, and commit to its future.

## Other:

My remaining comments deal with specific issues raised in the plan.

## Bremerton-specific issues:

- Plan B shifts the entire focus of ferry service north, reducing service in central and south Puget Sound. That is not where the population is currently or where growth projections are in the future.
- I will not belabor the point too much about the 50% reduction in service from the only run that has shown an increase in use. WSF's approach to Bremerton service is one of capacity and numbers, not access to service. Dropping one boat from this run will shift the burden to Bainbridge and put more traffic on Hwy. 305.
- The super-class ferries are the best design for Rich Passage and can be sped up to achieve a 45-minute run. If you do that, you will dramatically change the ridership for both Bainbridge and Bremerton.

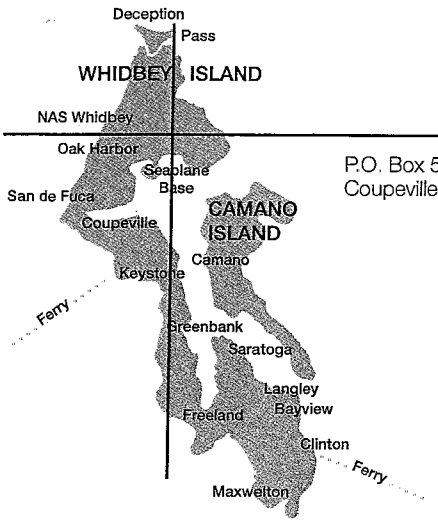
## Passenger ferry service:

I have long been a proponent of passenger ferry service connecting communities around Puget Sound and believe that it is not just our past but our future in transportation. The nature of the Bremerton commuter runs supports a water transit system. However, rather than just arbitrarily handing the responsibility off to local agencies in three years, Washington State Ferries needs to be at the table, actively participating in the design of the Puget Sound transportation system. And the local agencies will need a ten-year transition period with some state funding included to get the service up and viable.

## Information technology:

- I am delighted with the move toward better systems through better information technology and would encourage an even quicker move in this direction. A reservation system and expansion of electronic ticketing is more efficient and is the norm in all other transportation systems. Providing a way to purchase tickets with cash via a machine of some kind will also support more efficiency.
- Should the State pursue passenger ferry service as a local-only option, we will need WSF to ticket their walk-on passengers on both sides of the run; maintaining the current system will undermine the success of passenger ferry service. This should not be a negotiated item for WSF, as they are abdicating their responsibility for providing service.

Dayside




# Island County Board of Commissioners

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From Camano: (360) 629-4522
From S. Whidbey: (360) 321-5111
Fax (360) 679-7381
www.islandcounty.net

January 23, 2009

Washington State Ferries
Attn: Joy Goldenberg
2901 3rd Avenue Suite 500
Seattle WA 98121-1042

Dear Ms. Goldenberg:

Whidbey Island depends upon the ferry system for its access. The future of our marine transportation system is of great importance to us. The ferry system provides two-thirds of the Island's ingress and egress connections. Deception Pass Bridge, located on the northern tip, provides the only other access point. Both ferry routes are important to our communities. The proposed severe cutbacks to the Keystone run are most disturbing.

The two most critical transportation needs of our community are reliability and accessibility. Reliability of service is necessary for our businesses, our Navy Base and for our visitors. For this reason, whatever plan you adopt **must** include the funding for two Island Home Ferries. The current passenger-only service on the Keystone run is disruptive, inadequate and unacceptable into the future. Lacking vehicle transport to the peninsula has impacted us economically and has reduced our ability for emergency evacuation by one-third.

Understand that we support expanding public transportation opportunities regionally and nationally. There exists great potential for passenger-only service throughout many parts of Puget Sound as we shift our culture away from being so dependent upon the automobile. It is also important to recognize the unique demands of each ferry run to meet the needs of our travelers. Just as the demands are different from the Narrows Bridge to Deception Pass Bridge, so are there contrasts between each ferry route. The commuters to the urban docks have taxi, vanpool, transit, and airport shuttle service as well as rail options. Military commuters, commercial users and tourists on this route are very automobile dependent because of our rural area. Increased dependence on passenger-only service for Keystone or Clinton will not provide the reliability and

accessibility we need to sustain our economy, adequately meet our emergency preparedness needs, nor meet the needs of our Navy base.

Our Naval Air Station with approximately 50 frequent users of the Keystone ferry service, has been significantly impacted. Also there is a need to transport equipment and goods via this route.

This transport of supplies and personnel to Bangor or Bremerton, now must travel north to Skagit County, then south through Edmonds because the service is so limited at Keystone, adding costs and congestion.

We understand the severe financial constraints facing Washington State. For this reason efficiency and effectiveness should be of highest priority. The Keystone run must be made more reliable with sturdy vessels which are not as subject to weather related cancellations and sufficient trips each day to accommodate the demand. Commercial and Navy traffic should be encouraged during early morning and evening runs to reduce competition with tourism. The reservation system must be refined so that every boat is filled to capacity. Please correct your signs so they do not say "Reservations are required". This is a deterrent to potential ridership. Currently vehicles without reservations are discouraged from taking a chance at getting across.

It is unfortunate the upheavals to service have created distrust so ridership is declining at a time when revenue generation is most needed. Reliability and accessibility are needed for our community which is dependent upon the Keystone ferry service. We urge you to include two Island Home ferries into your plan, explore ways to enhance the reservation system to improve efficiency, and to maximize ridership and thus revenues. This approach will best begin to meet the needs of our community and sustain our economy.

We look forward to working with your agency to meet the transportation needs of our county.

Board of County Commissioners
Island County, Washington

John Dean, Chairman

Helen Price Johnson, Member

Angie Homola, Member

# CITY OF MUKILTEO

11930 CYRUS WAY • MUKILTEO, WASHINGTON 98275

January 13, 2009

Mr. Ray Deardorf
Planning Director
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121

**RE: Mukilteo City Council Input on Draft Long Range Plan**

Dear Mr. Deardorf:

On behalf of the Mukilteo City Council and Mayor Marine, I am providing documentation of their input related to the Draft Long Range Plan Update and operation strategies as part of the formal public input process.

**Funding Shortfalls Needs to be Addressed:**
The City Council is supportive of the legislature addressing the operating and capital shortfalls that presently exist and will continue into the future for the ferry system. The shortfall in funding is both for capital improvements (terminals and vessels) and for escalation in fuel prices. Adequate funding for the existing system is not in place and thus operating the system over time under the current funding scenario creates an on-going deficit that will only grow larger. The City Council recognizes that even if fares were required to meet 80% or more of the operating expenditures that fares can not cover all operation costs as there are off-peak hours and seasons when ferries are not operated at capacity, but must sail to maintain service as envisioned to be a part of the state-wide marine highway system. Capital improvements are a burden that must be shared on a state-wide level and deferring terminal improvements and vessel maintenance and replacement is clearly no longer an option.

**Draft Plan's Option A Preferred:**
The Draft Plan – Option A addresses both operating and capital shortfalls. Both the Mukilteo and Clinton terminals require capital improvements to maximize operational strategies proposed in the Draft Plan to contain demand that otherwise would require additional more costly capital facilities. The City Council supports expanding the reservation system to runs such as Mukilteo-Clinton, as well as pedestrian and transit improvements that will assist with mode shifts at both the Mukilteo and Clinton terminals.

**Draft Plan's Option B May Only Be Workable with Local Transportation Funding for Passenger Ferries:**
Plan B applies operational strategies that will assist with current and future demand, but assumes that there will be reduction in the number of ferries on any given run as well as eliminating runs. In addition, Plan B does not adequately meet capital improvement needs that are required now for safety, in times of emergency, nor does it address community impacts that already exist. Plan B is less than the existing ferry system or a 17% reduction and does not appear to be adequate to operate our state ferry system into the future. It does address the terminal relocation that is needed for the Mukilteo-Clinton run. With the potential for counties to provide passenger service on central Puget Sound runs and with alternative land routes, then maybe Option B will work. But without having studied these whether they are capable of generating the revenues necessary to operate passenger ferries, then this scenario may not be realistic. In addition, because further financing may be required in the future and capital improvements take such a long lead time it will be very difficult to restructure this decision in five years and thus a cautionary note is needed for the decisions made by legislators in 2009.

This Plan represents an extensive amount of work by many. The process was very inclusive and we want to thank Assistant Secretary David Mosley for his oversight and emphasis on working with so many interests. This is a very important decision and a dramatic change of course for the ferry system, impact to the users, and as the iconic symbol of our state and many cities, as well as being critical to our transportation system.

Thank you again for providing an opportunity for the Mukilteo City Council to provide input.

Sincerely,

Joe Marine

Joe Marine
Mayor
City of Mukilteo
(425) 263-8000

Pc: Christine Gregoire, Governor of Washington State
Paula Hammond, Secretary of Washington State Department of Transportation
David Moseley, WSF Division Assistant Secretary
City staff

# Additional Information on the Mukilteo Terminal and Comments on Specific Operational Strategies that would Work

## Mukilteo's Unique Attributes as a Host Ferry City

1) The Mukilteo route **does not have off-peak vehicle capacity during the summer**
2) There is typically a **four (4) boat wait (2 hours)** Late Spring – Mid Fall, Wednesday, Thursday, Friday evenings and Saturday mornings.
3) There is typically a two (2) boat wait (1 hour) (even Mid May, Mid-week that is used for LOS).
4) A 20% increase in vehicles to 2030 is forecast by WSF.
5) A larger **increase in pedestrians** over a longer period is forecast by WSF.
6) The Mukilteo route does **have capacity for pedestrians** during the summer.
7) There have **not been any major capacity improvements** at the Mukilteo terminal since the 1930's – while the demand continues to grow – making the terminal and one slip obsolete.
8) Soils and wave action at the existing Mukilteo terminal make it problematic and expensive to continue it as a terminal site.
9) Deficit of availability of parking with parking garage and off-site park & ride lot(s) will occur in 2009 with city projects eliminating commuter parking due to redevelopment

## Operating Strategies that Could be Applied at Mukilteo

- **Reservations:**
  - Reservations look to be promising and Mukilteo would like to be accessed for the next site for reservation implementation,
  - Implement as soon as possible using a phased strategy
  - Implementing reservations on week-ends or for recreational users needs to include Thursday and Friday afternoon and nights
  - If more than one queue lane is required for the reservation system, then SR 525 Bridge has constraints that could limit its application.
  - Enhance fare collection system
- **Transit and Parking Enhancements:**
  - Work cooperatively towards a parking garage and off site park and ride lot(s)
  - Transit Access Enhancements are needed and to help change demand and will help to improve capacity and operations
  - There will be no parking on the waterfront for commuters in the near future – ferry commuters need to be using transit to make connections.
  - Enhance User Information for transfers to bus and ST commuter rail and for off-site remote parking availability
  - Enhance bike and pedestrian connections along SR 525 and 5th Street
  - Capacity use created with12:00 PM Boeing shift (Transit schedules and TDM coordination is needed)
  -

- **Mode Shift Encouraged:**
  - Increase fares at peak times year-around to shift - time of day use and to encourage pedestrian usage.
- **Traffic Management:**
  - Enhance traffic management (metering off-loading vehicles to create less of an impact on the community)

Gregory J. Nickels
Mayor of Seattle

January 21, 2009

David Moseley, Assistant Director
Ferries Division, Washington State Department of Transportation
2901 Third Avenue, Suite 500
Seattle, Washington 98121

**RE: Washington State Ferries Draft Long-Range Strategic Plan, December 2008**

Dear Mr. Moseley:

Thank you for providing the City of Seattle the opportunity to comment on Washington State Department of Transportation's Ferries Division Draft Long Range Strategic Plan, 2008-2030. The recently released plan represents a change in direction from past draft plans. To address constrained financial resources, the new plan's two options, "Plan A" and "Plan B", include significantly reduced service and capital programs than presented in previous plans. With a greater focus on financial sustainability, both plan options identify significant funding gaps over the plan's 22-year planning horizon.

Still, we are pleased to see several strategies and recommendations in both Plan options that the City of Seattle supports:

- Colman Dock is prioritized and funded as a preservation project. Colman Dock is the busiest terminal in the system and a gateway to Seattle. This is an aging facility that is in need of significant upgrades to address the terminal building and the wooden dock trestle on which it sits.

- Use of adaptive management to: reduce the need for large facilities; ensure better use of the system throughout the day (not just peak hours); and, maximize walk-on use. This includes use of reservations, transit enhancements and pricing. These strategies are appropriate in the context of Seattle's dense, urban environment.

However, addressing growth demands from South Kitsap and existing concerns with the current Southworth-Vashon-Fauntleroy service triangle are key issues to resolve in this plan. Draft "Plan A" includes an option that had not been previously discussed with City of Seattle representatives or community members. This plan option presents no service changes (except for phased vessel replacement with

slightly larger vessels), the expansion of Fauntleroy's overwater dock and the addition of overhead passenger loading. *The City of Seattle does not support this recommendation.*

Past letters from the City (July 21, 2006, from myself and September 27, 2005, from SDOT Director Crunican) have stated that Fauntleroy has limited capacity to accommodate vehicular demand and the *City would not support expansion of Fauntleroy*. I request that Washington Ferry System (WSF) staff work closely with City of Seattle staff to evaluate this alternative and look for other options to include in a final plan.

Washington State Ferries has worked without a long-range plan for many years; we support your efforts to finalize a plan. As the plan is revised for approval, we look forward to working closely with WSF and the legislature. If you have any questions regarding the city's comments, please feel free to contact my office or Seattle Department of Transportation Director Grace Crunican at 684-5000.

Sincerely,

GREG NICKELS
Mayor of Seattle

CC: Tim Ceis, City of Seattle Deputy Mayor
Grace Crunican, Seattle Department of Transportation Director
Kevin Desmond, King County/Metro General Manager
Kristine Lund, King County Ferry District Executive Director

FAUNTLEROY
WATERSHED
COUNCIL

## ABOUT FAUNTLEROY CREEK

Fauntleroy Creek discharges into Puget Sound due south of the ferry pier. It provides habitat for juvenile coho salmon, both "home hatch" and fry released by schoolchildren through the state's Salmon in the Classroom program. We have documented spawning in the lower creek since 1994. The number of spawners varies widely, depending on saltwater conditions.

Two environmental studies, both reported just three years ago, speak to your proposed investment of $100 million in the present ferry pier at Fauntleroy.

## TERMINAL SHADING

Your own agency's examination of the effects of ferry terminals on juvenile salmon documented their behavior around 10 terminals, including Fauntleroy. It sought to answer the question, "Do these over-water structures alter the behavior of migrating juvenile salmon?" The answer was yes. Shading caused by ferry terminals can deter or delay juvenile salmonid movement - movement that, for example, enables them to find food and see predators. Light must get through. As documented by King County in 2004, Fauntleroy Cove is teeming in late spring with juvenile salmon, including endangered chinook and many that take a sharp left out of the Duwamish River and head for Fauntleroy. More shading will be more bad news for all of them.

## BEACH ASSESSMENT

In conjunction with restoration of the reach to the beach, the Fauntleroy Watershed Council engaged Jim Johannessen, one of the region's most respected coastal geologists, to assess beach dynamics, paying particular attention to the buildup of logs and sand that threatens spawner to the creek. His conclusion: The ferry pier has likely had a substantial effect on beach accretion experienced by homeowners to the south, especially after the pier was widened. The pier's closely spaced piles trap drift logs, causing jams that hold the sand, redirect creek flow, and create a formidable obstacle course for spawners. Because of this dynamic out of our control, we did not attempt any beach modifications at the creek mouth. More piles under a wider pier will be more bad news for Fauntleroy Creek spawners, as well as for homeowners south of the pier.

## PROJECTION

If the state adopts the long-range plan as drafted and then attempts to implement it at Fauntleroy, we will challenge you on solid environmental grounds at every turn. If the state, instead, adopts a plan that reflects creative, science-based thinking that reduces traffic through Fauntleroy, we will be honored to work with you.

### REFERENCES


Southard, S.L., et al, 2006. Impacts of Ferry Terminals on Juvenile Salmon Movement Along Puget Sound Shorelines. Washington State Department of Transportation, Project No. 46820.

Brennan, Jim, et al, 2004. Juvenile Salmon Composition, Timing, Distribution, and Diet in Marine Nearshore Waters of Central Puget Sound in 2001-2002, King County Department of Natural Resources and Park.

Johannessen, Jim, et al, 2006. Fauntleroy Creek Mouth Beach Assessment and Recommendations. Fauntleroy Watershed Council.



1/21/09 testimony by Judy Pickens 206-938-4203 / judy_pickens@msn.com

SAN JUAN ISLANDS
VISITORS BUREAU

January 21, 2009

Mr. David Moseley
Assistant Secretary of Transportation
Washington State Dept. of Transportation
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121-3014

Re: WSF's Draft Long-Range Plan

Dear Mr. Moseley,
The San Juan Islands Visitors Bureau (SJIVB) supports the San Juan County Council, San Juan County Ferry Advisory Committee and San Juan County residents in rejecting Plan B.

The SJIVB represents over 350 tourism-related businesses in the San Juan Islands, primarily on Lopez, Orcas and San Juan Islands. As you are likely aware, tourism is the economic driver for our islands, and approximately half of the residents here depend on the direct income from or the "trickle down" effect of "new" tourism dollars left behind by visitors. The Washington State Ferries bring most of these visitors to our islands – visitors who contributed over $127 million to our economy in 2007, according to the latest Washington State Tourism research. Our new designation as the State's newest Scenic Byway, including the WSF marine route from Anacortes to our islands, will bring even more visitors to this beautiful area.

Tourism is Washington State's fourth largest industry, and the ferries are as iconic to Washington State as the Space Needle is to Seattle. These iconic ferries should be properly funded in order to exceed our visitors' expectations when they visit our unique corner of the world. The 2010 Winter Olympics in Vancouver B.C. will put an even larger spotlight on our State, and we need to be prepared with a first-class transportation infrastructure. In addition, the Anacortes/San Juans/Sidney run will become even more viable during and after the Olympics. There seems to be a disconnect between Washington State Tourism and the Washington State Ferries.

Ferries are our residents' and visitors' lifeline, just as roads and bridges are on the mainland. The WSF system must remain affordable to island residents, small business owners and visitors. Please listen to your customers and formulate a long-range plan that will work for Washington's island residents and tourism-dependent economy.

Sincerely,
*Deborah Hopkins*
Executive Director
San Juan Islands Visitors Bureau

# San Juan County Council

350 Court Street No. 1
Friday Harbor, WA 98250
(360) 378 - 2898

District 1, Lovel Pratt
District 2, Rich Peterson
District 3, Howard Rosenfeld
District 4, Richard Fralick
District 5, Gene Knapp
District 6, Bob Myhr

January 13, 2009

Mr. David Moseley, Assistant Secretary of Transportation
Washington State Department of Transportation
Washington State Ferries
2901 Third Avenue, Suite 500
Seattle, WA 98121-3014

Dear David:

RE: WSF's Draft Long-Range Plan

The San Juan County Council and Ferry Advisory Committee have jointly reviewed the December 19, 2008 Draft Long-Range Plan and ***reject the option of Plan B*** as an unrealistic representation of state ferry service.

- By eliminating the Anacortes/San Juans/Sidney vessel, over 80% of the domestic service capacity on that vessel is eliminated for seven months of the year, which is a 20% reduction in daily service capacity during this period.
- Plan B does not meet current or future service demands.
- There is insufficient information and time on both plans to allow the legislative bodies and communities to participate in a meaningful review.
- Lack of a financing component, as required by ESHB 2358, makes qualitative decisions impossible.
- Plan B removes one vessel from a totally ferry-dependent community.

We have entered the tenth year of difficult state decisions on state ferry funding in the post-I 695 transportation funding environment. We are entering the first year of what everyone hopes is a temporary economic downturn, particularly in elastic revenues received by state and local governments that necessarily slow during these economic conditions. Our first fear is that short-term finances will drive long-term funding decisions. ***Balancing the state budget for the 2009-11 biennium should not be the justification for a long-term state service mistake.***

The passage of time and the change in economic and government revenue fortunes have positioned WSF to be considered the ugly step-child of the state budget. Addressing the funding gap is the answer, not divestiture. Select what is right over what is easy. If the Plan A gap of $3.5 billion is divided by the 22-year planning horizon, it is a difference of $160 million per year. The loss of MVET in strict 1999 dollars was larger than this by many times. The legislature found a way to replace a good deal of the highway funding as a result of public pressure to fix and improve the roads. Over time (not necessarily all in this session), the legislature must do the same for the ferry system. It is clearly the east/west highway system over the waters of the Puget Sound.

The WSF Long Range Plan presents the ferry-served communities and, to a lesser extent, the citizens of this state with the age-old comparison of price versus value. While it was a conscious point of

demarcation not to include economic analysis as part of the study, that decision required the highlighting of cost centers in the WSF budget, while large portions of the overall value disappear into the general funds of the state and local governments in the form of sales tax and lodging tax.

San Juan County is a ferry-dependent community (as compared with a ferry-advantaged community) and is composed of a complex set of users representing four distinct groups: full-time residents, part-time residents, tourists and commercial users, including those that provide essential supplies. The Anacortes/San Juans route is an extension of State Highway 20 and has been identified as one of the highlights and most scenic elements of Washington State's most recently designated Scenic Byway. Maintenance and continued development of a functioning ferry system is critical to the economic viability of the San Juan community.

**Generally, Plan A meets the needs of the San Juan County community by providing reasonable transportation options for the multiple-user groups in the San Juan Islands.** However, it is not as specific as it should be when considering how the adaptive management strategies, particularly reservations, will appropriately balance the needs of those distinct user groups. It in itself is the minimum to which WSF should peg the level of service, and other targeted improvements; emergency back-up and passenger efficiencies should also be considered.

**Plan B will set in motion a divestiture approach that would make it very difficult to re-build the ferry system to the level of service provided today; it does not provide sufficient ferry capacity to meet current or future requirements.** The Plan decreases the number of runs within the San Juan Islands by eliminating the Anacortes/San Juans/Sidney boat and decreases the overall number of new vessels, which will also have a significant economic impact on San Juan Island communities. It also requires passenger-only ferries to be developed and managed by locally-funded entities. It forces mode and travel choices in adaptive management strategies rather than providing them by way of incentive.

The following comments apply primarily to Plan B:

1. **Economic Analysis - ESHB 2358 stated that WSF shall develop fare and pricing policies that: "consider the impacts on users, capacity and local communities"; however a long term economic analysis is conspicuously missing.** The decrease of any ferry service to the San Juan Islands will have a negative impact to the economic viability and health of this ferry-dependent community. For the past three legislative sessions, San Juan County has requested that such an analysis be undertaken. Without data from the economic analysis impact study, WSF cannot make sound decisions about the fate and subsequent impacts of eliminating the Anacortes/San Juans/Sidney route, as well as the loss of non-WSF tourism revenue to the state by diminishing service to the San Juans.

2. **Vessel Replacement – Ridership forecasts tell you to increase capacity; Plan A allows for that in a marginal manner over time without increasing the number of vessels, but Plan B, with no capacity increase, represents poor planning in the midst of the largest comprehensive ferry planning effort to date.** According to WSF planning staff, Plan A retires vessels early partially in the name of keeping shipyards happy in the hope they will give you better bids. The public should not make all the compromise. Explore lengthening by a year some of the later replacements to take vessels to their full life expectancy and to spread capital costs. Also, ***the bidding advantage given to the private shipyards which have no out-of-state competition must be explored for an equitable solution and to provide qualification for federal funding.***

The nickel gas tax provided some dedicated funding to vessel replacement. **A movement toward Plan B appears to be a second abdication of the promise made by that prior legislature.** A ferry-dependent community with no state highways can view that financial redirection with only a profound sense of loss.

The lack of an emergency backup vessel for more than the next five years is tantamount to driving a vehicle without insurance for that period. Emergency back-up vessels have been needed numerous times in just the past two years – there is no reason to expect the likelihood of that need to be any different over the next five years; therefore the situation should be included in any plan, not ignored.

Elimination of the Anacortes/San Juans/Sidney route has a significant impact on the mainland capacity of island traffic. Over 80% of the capacity in the off-season is assigned to domestic service.

3. **Transit – Regardless of the Plan, better coordination with local transit agencies is required to ensure that this mode shift is a realistic option** The Skagit/San Juan routes are the most difficult coordination opportunity due to the obvious need of residents, weekenders and tourists to move more materials than can be carried by an individual. As a result, it was ignored in either plan without even a footnote of the need to study it. Transit improvements were ignored because of an apparent default to commuters in the vision of the study. Mode shift can be achieved, but Skagit Transit, the County and WSF must work together to make it happen. Appendix F does not include any specific transit improvements for the Anacortes terminal, let alone any of the other terminals within the San Juan Islands. This is an item which has generated extensive comments in a number of community forums, most recently during WSF's inter-island information meeting last fall. Provisions for transit improvements at both ends of the Anacortes/San Juan route are necessary to coordinate with ferry service if any decrease in vehicle traffic is to be supported. Any effort to encourage walk-on traffic must also address parking fees. As long as the costs of parking a car at the Anacortes terminal approximate the cost of driving a car onto the islands, patrons will choose to drive their cars as it is more convenient.

4. **Reservations – This is a key component in both Plans and one which San Juan County supports, provided that no reservation fee is imposed.** As stated in Appendix G, development of a workable system must be developed with "Island agents". This is interpreted to mean representatives of San Juan County in order to ensure meaningful involvement in developing such a strategy, including the possibility of piloting the reservation strategy at one of the San Juan Island terminals this summer. The San Juan's have four distinct user groups: islanders, weekenders, tourists, and commercial. A poorly designed system based on indiscriminately filling vessels runs the risk of leaving groups at a disadvantage. In particular, island residents are still dependent on professional services and certain retail services available on the mainland. Being ferry dependent, and subject to the hours of those businesses, islanders cannot drive around the problem as those using other routes can. The last fare increase proposal engendered militant attitudes of islanders, who showed grass roots power. That attitude will be dwarfed by a reservation system that is not sensitive to ferry-dependent communities.

5. **Level of Service (LOS) –The current LOS is acceptable; however, the reduced LOS in Plan B is not acceptable when considering the long waits that currently exist between vessels to and from certain islands.** Additional information and analysis are required to determine the triggers for the two proposed levels and the subsequent impacts on ferry riders. Hidden in the alteration of the LOS standard is the previous trigger point for increase of vessel capacity. That has been exchanged for adaptive management strategies that could ultimately drive housing choice decisions and change the ridership growth assumptions.

6. **Foot passenger fare increases – It is very important to the San Juan County community that the existing no-charge for walk-ons on the interisland ferry continues.** It is unquestionably the best mode-shift policy employed by WSF on any route, although it currently creates externalities outside the terminal area in the form of parking and transit. It is understood and accepted that passenger fares from the Anacortes terminal could increase. However, additional parking and transit are essential to encourage increased foot traffic at the terminals at both ends of the route to maximize mode shift in this most unique run among ferry routes.

7. **Passenger-only ferries (POF) – A primary premise of Plan B is that current and future passenger-only ferries will be operated and maintained by locally funded entities; without the certainty, readiness or willingness of the affected counties to step in, Plan B begins to look like an exit strategy that creates a service gap and points to self-taxing enabling legislation as the response.** Before giving any consideration to Plan B, this is a major assumption that needs to be explored further with prospective providers to determine the realistic likelihood of such a change in funding, ownership and management. The legislature must also take a broader view of the natural perception that this is an abdication of a 56-year responsibility. That broader view will engender a move toward partnership, which may cause re-thinking that such an abandonment equals no participation in local provider public subsidy. *There is no guarantee of mode shift (and its positive attributes) in placing POF responsibilities on counties – it is only a guarantee of cost shift.*

This comment letter has been signed by the full San Juan County Council and Ferry Advisory Committee to signify our commitment to working with WSF to develop a logical and manageable plan to maintain the Anacortes/San Juan Island ferry route.

Sincerely,

**COUNTY COUNCIL**
**SAN JUAN COUNTY, WASHINGTON**

Lovel Pratt, Member
District No. 1, San Juan South
San Juan County Council

Richard Peterson, Chair
District No. 2, San Juan North
San Juan County Council

Howard Rosenfeld, Member
District No. 3, Friday Harbor
San Juan County Council

Richard Fralick, Vice Chair
District No. 4, Orcas West
San Juan County Council

Gene Knapp, Member
District No. 5, Orcas East
San Juan County Council

Bob Myhr, Member
District No. 6, Lopez/Shaw
San Juan County Council

Ed Sutton, Chair
Orcas Island
Ferry Advisory Committee

Robert de Gavre, Member
San Juan Island
Ferry Advisory Committee

John T. Whetten, Member
Lopez Island
Ferry Advisory Committee

EXCUSED ABSENT

John Brantigan, Member
Shaw Island
Ferry Advisory Committee

Patricia McKay, Member
San Juan Island, Alternate
Ferry Advisory Committee

Lance Evans, Member
Alternate
Ferry Advisory Committee

# KITSAP COUNTY BOARD OF COMMISSIONERS

*Efficient, accessible and effective county services*

**Steve Bauer**
DISTRICT 1

**Charlotte Garrido**
DISTRICT 2

**Josh Brown**
DISTRICT 3

**Nancy Buonanno Grennan**
County Administrator


January 22, 2009

David Moseley
Washington State Ferries
2901 Third Avenue
Seattle, WA 98121

Dear David:

RE: WSF's Draft Long-Range Plan

The Kitsap County Board of Commissioners reviewed the WSF 2008 Draft Long-Range Plan. All levels of government are facing difficult budget times due to the national recession and financial impacts affect our communities. We are very concerned that the long-range options, particularly Plan B's dramatic reductions, are being made without regard to statewide and regional policies or the impacts to the broader transportation system of the Puget Sound.

Plan A appears to be a workable beginning to discuss the future of Washington State Ferries, but needs additional work before adoption. However, Plan B would irreversibly damage the quality of life for our County's 250,000 residents and severely impact the entire Puget Sound region. The Kitsap County Board of Commissioners rejects Plan B and we look forward to working with your agency to refine an alternative for implementation. Some points we consider vital for the alternative plan are that it be a systems plan, reward innovations, work with jurisdictions about their future needs, and examine funding and service concerns.

The capital funding gap is an important element for consideration, but it cannot be the sole factor for decision making. We ask for a regional examination of the entire transportation system in the Puget Sound area. Simply put, it is contradictory for the State to push for long range improvements in the areas of carbon emissions reduction, managing congestion and infrastructure costs by linking land use with transportation investments, and building livable communities while at the same time it dismantles a WSF system which is critical component to meet those goals. The long-range plan should be developed with these regional and statewide goals in mind.

**Plan for a System**
It is critical that the long-range plan eventually adopted provides a system that is consistent with regional and statewide policy objectives.

**Work with User Jurisdictions**
Our jurisdiction is responsible to plan for transportation within Kitsap County and to partner with others in the Puget Sound region. Yet we were not consulted about input into the draft plan. This, despite the fact that Kitsap County hosts four State highways that end at Puget Sound.


614 Division Street, MS-4 • Port Orchard, Washington 98366-4676 • (360) 337-7146 • FAX (360) 337-4632
From: Olalla (253) 851-4147 • Bainbridge Island (206) 842-2061

**Reward Innovations**
The Governor and Legislature have committed to important reductions in carbon emissions and VMT. Kitsap County is a State leader in realizing results. Our single-commuter occupancy rate is second best in the State of Washington (second to densely populated King County). Ferries contribute significantly to this success.

**Examine Service Concerns**
WSF moved 5.65 million vehicles and 14 million total riders from ferry routes that reached the Kitsap Peninsula. These figures represent 52% and 59% of the system wide totals respectively. Kitsap County is planning to accommodate an additional 100,000 residents over the WSF planning horizon and WSF estimates riders on these Kitsap routes will increase 32% between now and 2030. Growth to the Puget Sound region is inevitable. The Puget Sound Regional Council projects 1.7 million new residents and 1.2 new jobs by 2040.

With the bulk of new jobs projected to be created in the east Puget Sound, it is clear that Plan B's reductions in service levels will dramatically force more commuters onto our region's highways. The escalation in ferry fares over recent years has had an impact on reducing ridership. Dramatic pullback in service levels will have an even stronger effect. We ask WSF to work with state agencies, the Puget Sound Regional Council, and local governments to provide analysis of the impacts to the environment and congested corridors of these plan alternatives.

**Consider Diverse Funding Issues**
In this legislative session, the State will likely examine severely bills that seek to create a regional taxing mechanism for programs such as the Puget Sound Partnership. Yet, while Kitsap and other Puget Sound jurisdictions will be sought to support these endeavors, our regional transportation network based on WSF will be eroded. We cannot support State efforts to tax us for new programs, while basic needs of our communities are ignored. A reexamination of State priorities is desperately needed.

Kitsap County has twice tried and twice failed to pass measures supporting passenger-only ferries (POF). We continue to examine how POF's can be brought to our region through the work of the Port of Kingston and critical wake-research being spearheaded by Kitsap Transit. However, the concept of POF service on Kitsap County has always been viewed as service enhancement---not replacement---of WSF's system. Simply put, we view the Plan B's goal of replacing WSF with POF's as a substantial unfunded mandate.

The Plan A funding gap of $3.5 billion dollars amounts to $160 million per year over the 22-year planning horizon. We believe a number of cost saving measures have not been suggested for review in the alternatives. While $3.4 billion is planned for vessel investments, the nearly $2 billion of capital monies for terminal costs needs to be closely scrutinized. The overwhelming preference for system users is to invest in boats, not terminals. In addition, we are disturbed by the fact that in no part of the long-range plan is there discussion about vessel procurement policies. Recent vessel purchases have been mired by exorbitant bids due to local builder requirements. While a noble goal, we believe the costs and benefits of these state policies need to be examined.

Finally, it is our understanding that due to these procurement policies, WSF is prevented from competing for Federal Economic recovery funds. While WSF is in need of vessel investments, the fact that not one boat has been requested as part of the Federal stimulus

package is unacceptable. We acknowledge Governor Gregoire's leadership on prioritizing investments in public infrastructure. Promoting the painting of boats and unnecessary terminal improvements over vessel procurement is a disastrous oversight. We implore you to seek vessel procurement monies.

**Look Forward**

Again, Kitsap County looks forward to working with WSF to adopt a long-range plan that meets the needs of the Puget Sound region, while implementing State policies. We know that Kitsap residents and legislators are working on a "Plan C", with focus groups examining issues such as fleet size and ferry construction, a ferry business plan and revenues, and schedules and service. Ultimately, the common goal shared by Kitsap County residents and government, and presumably WSF, is for workable solutions. By working together, we can surely shape future options that make sense.

Thank you for the opportunity to formally offer this comment letter.

Commissioner Charlotte Garrido, Chair

Commissioner Steve Bauer

Commissioner Josh Brown

January 20, 2009

Dear Mr. Moseley,

Thank you for coming to Vashon Island to hear about my community's concerns regarding the Washington State Ferries Division Draft Long Range Plan. I would like to thank you for opening up the Ferry Division to more sunshine after many decades of darkness. I am the Vashon Island School District's representative to the WSF Ferry Advisory Committee, appointed by the Vashon-Maury Island Community Council.

On behalf of the Vashon Island School District, I would like to say that any reduction in ferry service or rescheduling that doesn't coordinate with our school schedule would be harmful to our mission of providing the best education possible to our children. Previous service reduction at Tahlequah has been harmful and incurred additional costs to our District. Previous rescheduling of the Vashon-Fauntleroy run has also had negative impacts to our District. Additional reductions in service or uncoordinated schedule changes at either end of the Island will cause further hardship, pain and financial costs to our School District, our students and our employees. The VISD has about 135 students that commute from Fauntleroy, Pt. Defiance and Southworth via the WSF system. These students are an integral part of our business model that allows us to be fiscally sound. We also have about 25 teachers, administrators and other staff that commute via the ferry to get to work. This number will be increasing as teacher's and other staff's wages don't keep up with the rise in the cost of living and fewer of our new teachers can afford housing prices on the Island.

Furthermore, any reduction in ferry service or rescheduling that doesn't coordinate with our school schedule would be harmful to our interscholastic co-curricular activities and field trips that enrich our students education. The other schools that we compete with in debate, band, athletics and math Olympiad, to name a few, are on the mainland and require taking a ferry as it is our only means of getting off the Island. Just as important is the fact that these other schools are also stressed when the difficulty level of travel to Vashon Island is made more difficult and costly.

In the late 1990's, as President of the Vashon-Maury Island Community Council, I worked with WSF in the formulation of the 1999 20-year Long Range Plan. That 1999 20-year Long Range Plan called for a second boat on the Tahlequah-Pt. Defiance run in the year 2012. The 2009 "Plan A" now calls for only one boat still in 2012 and beyond and a smaller capacity boat at that. In the 1999 20-year Long Range Plan the Vashon-

Fauntleroy run was to have larger boats as well. Now the 2009 "Plan A" doesn't call for capacity upgrades until 2017 or 2019. This major shift in policy after 10 years of a 20-year plan strains my faith in your understanding of the issues. The 1999 20-year Long Range Plan understood those issues. It took the bold, politically incorrect but accurate position that Vashon Island and the San Juan Islands have no other transportation options than the Washington State Ferries and that it is the responsibility of the State to address those needs. The document that expresses this is the "Plan C" alternative of the WSF 1999 20-year Long Range Plan that similar to the 2009 "Plan B" explores the what if of minimal funding. "Plan C" of the 1999 20-year Long Range Plan recognizes the fact that Vashon Island and the San Juan Islands are the number one priority for ferry service as they have no other options. It recognizes this by providing service only for Vashon Island and the San Juan Islands in the worst case scenario of minimal WSF funding from the State. You must accept this underlying principle also. The solely ferry-dependent communities of Vashon Island and the San Juan Islands should not have to share the pain equally with those communities that have other transportation connectivity options such as bridges and state highways.

Another cause for concern is that despite repeated requests for WSF to communicate and collaborate with the Vashon Island School District on changes in service levels or scheduling, it does not seem to happen as no one at VISD was contacted in formulation of this plan. I asked you myself at the last Island meeting that you attended if you would do this and you seemed to nod in agreement. Therefore, I ask again that you please keep in touch with us because ferry changes can have severe adverse impacts on the education that we provide our students. As we both know, the State's paramount duty is the education of our children.

Jake Jacobovitch
WSF Ferry Advisory Committee member representing the Vashon Island School District
P.O. Box 1624
Vashon Island, WA 98070
email: VashonOne@aol.com
phone: 206.650.5253

Ferry Advisory Committee
Vashon Public Comment on WSF Long Range Plan
January 7, 2009

To Whom it May Concern

Vashon Island is a ferry-dependent community. Yes, we are also ferry served, but let us be very clear about the choices we have: without ferry service, we do not leave or come home.

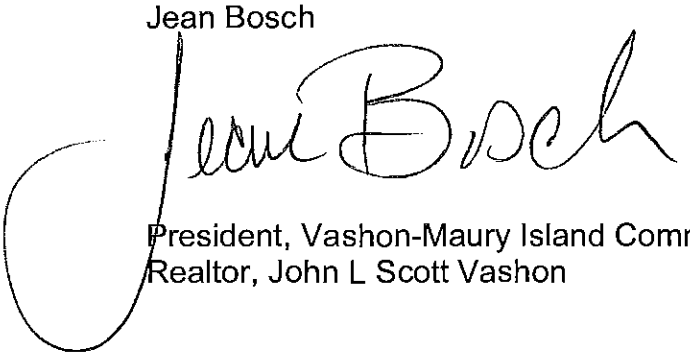
I invite the decision-makers at Washington State Ferries to walk a mile in our shoes. This is a real community with the nitty gritty needs of any town. Imagine the day you receive a letter saying that, due to budget constraints, traffic in and out of ***your*** community will only be allowed at very particular times of day and in limited numbers. Oh, and by the way, no one can leave or arrive after midnight. Some roads will close at 10. And did I mention that big trucks serving a newly-opened gravel mine will be taking up much of the allotment? It will cost you $20 every time you make the trip too.

It's your own fault, really, for living there.

You can no longer get to your medical appointment or your college classes. You must line up very early so you can compete with your anxious neighbors go to your job and your property values are declining. Your community is constantly embroiled in political campaigns, fighting for the simple right to come and go in a reasonable manner.

Vashon Islanders have already made painful adjustments to ferry service reductions and ferry fare increases. To implement the service cuts proposed will turn Vashon from a thriving community based largely on the commuter opportunities in Seattle and Tacoma to a place where only those who don't have to work and those who serve them will live. This prospect is unacceptable.

Jean Bosch



President, Vashon-Maury Island Community Council
Realtor, John L Scott Vashon

Website: www.vmfr.org
Email: admin@vmfr.org

# Vashon-Maury Fire & Rescue

Post Office Box 1150 Vashon, Washington 98070-1150
Telephone (206) 463-2405 Fax (206) 463-6494

January 7, 2008

WSDOT Ferries Division
Attn: Joy Goldenberg
2901 3rd Ave.
Seattle, WA 98121

Subject: Position Statement on Vashon Island Ferry Service

To the Division:

As Fire Chief of Vashon Island, I am vehemently opposed to any reduction of ferry service to or from Vashon Island, as increases in patient transportation time will be a certainty.

In 2008, Vashon Fire & Rescue responded to 1,058 emergency medical calls requiring immediate patient care and transportation to regional hospitals in Seattle, Burien, and Tacoma as Vashon has no critical care facilities. Further delays in ferry transportation may further impair the health and well-being of Vashon residents, visitors, and ferry passengers in time of medical need. Furthermore, on occasion, we have the need to contact ferry operations to request a boat diversion due to the rapid decline of a patient's condition. My speculation is that less ferry service will result in more special requests by our personnel, thus resulting in further delays and variations of your schedules.

In summary, I consider the Washington State Ferry Division and Vashon Island Fire & Rescue partners in transportation services for individuals in medical distress. As a professional in emergency care, implementing a change in service that equates to less transportation availability for EMS transports is not advised.

Sincerely,

Hank Lipe
Fire Chief

**TOWN OF COUPEVILLE**
4 NE Seventh
PO Box 725
Coupeville WA 98239
360.678.4461 FAX 360.678.3299



January 14, 2009

WA State Ferries
Attn Joy Goldenberg
2901 3rd Ave
Seattle WA 98121

Re: WSF Draft Long Range Plan

The Coupeville Town Council has discussed the proposed WSF Long Range Plan and the options in both Plan A and B. We have also conferred with representatives from Pt. Townsend, and both communities concur in our input. The consensus of our opinions is stated below:

We reluctantly accept the economic realities that indicate a version of the proposed Plan B is likely to be approved by the legislature. However, we request a modification to Plan B. Service between Keystone and Port Townsend must be reliable and predictable. A single vessel in the fleet will not guarantee that. A second Island Home must be built, and in the short term. Other studies commissioned by WSF indicate the Island Home can be useful on other runs and is efficient to run.

We strongly support several of the operational strategies proposed:

Reservations: The pilot reservation program on the PT/Keystone Ferry was a good start. We are glad the plan calls for a reservation system that allows for flexibility for each route. The needs are different in each community. The reservation system provides predictability and also helps ensure that each run is full, which increases economic efficiency.

Demand Management: Obviously we cannot afford to continue to build for peak hours use. Incentives for traveling at less busy times, for smaller vehicles, to encourage pedestrian/transit connections, are all important targets.

Operational Changes: Again, the needs are different in each community. We need to work together to be certain our local priorities are met. In our case, with one boat, we need to make sure every boat is full. In addition to reservations and incentives, prioritized boarding should be considered when needed to provide appropriate service to critical users.

When planning for individual routes, please be certain to include the rest of the Dept. of Transportation and also the local RTPOs. While we don't support shifting any financial burden to the local cities and counties, we do think it is possible to identify projects that may qualify for funding available to the local entities that serve more global purposes. We need to be certain the highways, ferries, transit and elected officials are all together on decisions being made in each community. The partnership meetings held the last two years with Coupeville and Keystone should be continued.

Our final request is for predictability, and should probably be directed to the legislature. If we have to accept changes and reductions in service as a result of economic shortfalls, give us a plan and funding mechanism that will endure. If we can plan with some certainty, we are better able to adjust to change.

Reliable ferry service is essential for commuters, tourism, commerce, and the military and for the quality of life of our residents. Ferries should be considered part of the transportation infrastructure. Thank you for your consideration.

Sincerely,

Dianne Binder, Councilmember

Bob Clay, Councilmember

Ann Dannhauer, Councilmember

Molly Hughes, Councilmember

Jim Phay, Councilmember

c: Senator Mary Margaret Haugen
Representative Norma Smith
Representative Barbara Bailey

# City of Port Townsend

250 Madison St, Port Townsend, WA 98368
(360) 379-5047 FAX (360) 385-4290
citycouncil@cityofpt.us


January 15, 2009

Washington State Ferries
Attn: Joy Goldenberg
2901 3rd Ave.
Seattle WA 98121

Re: WSF Draft Long Range Plan

The City Council has discussed the proposed WSF Long Range Plan and the options in both Plan A and B. The consensus of our opinions is stated below:

We reluctantly accept the economic realities that indicate a version of the proposed Plan B is likely to be approved by the legislature. However, we request a modification to Plan B. Service between Keystone and Port Townsend must be reliable and predictable. A single vessel in the fleet will not guarantee that. A second Island Home must be built, and in the short term. Other studies commissioned by WSF indicate the Island Home can be useful on other runs and is efficient to run.

We strongly support several of the operational strategies proposed:

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Demand Management: Obviously we cannot afford to continue to build for peak hours use. Incentives for traveling at less busy times, for smaller vehicles, to encourage pedestrian/transit connections, are all important targets.

Operational Changes: Again, the needs are different in each community. We need to work together to be certain our local priorities are met. In our case, with one boat, we need to make sure every boat is full. In addition to reservations and incentives, prioritized boarding should be considered when needed to provide appropriate service to critical users.

When planning for individual routes, please be certain to include the rest of the Dept. of Transportation and also the local RTPOs. While we don't support shifting any financial burden to the local cities and counties, we do think it is possible to identify projects that may qualify for funding available to the local entities that serve more global purposes. We need to be certain the highways, ferries, transit and elected officials are all together on decisions being made in each community. The partnership meetings held the last two years with Coupeville and Keystone should be continued.

Our final request is for predictability, and should probably be directed to the legislature. If we have to accept changes and reductions in service as a result of economic shortfalls, give us a plan and funding mechanism that will endure. If we can plan with some certainty, we are better able to adjust to change.

Reliable ferry service is essential for commuters, tourism, commerce, the military and for the quality of life of our residents. Ferries should be considered part of the transportation infrastructure. Thank you for your consideration.

Sincerely,

Michelle Sandoval, Mayor

George Randels, Deputy Mayor

Brent Butler, Councilmember

David King, Councilmember

Laurie Medlicott, Councilmember

Catharine Robinson, Councilmember

Mark Welch, Councilmember

c: Senator Mary Margaret Haugen
Senator Jim Hargrove
Representative Norma Smith
Representative Lynn Kessler
Representative Barbara Bailey
Representative Kevin Van De Wege

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX F
## RIDERSHIP FORECASTING TECHNICAL REPORT

# WSDOT Ferries Division Final Long-Range Plan:

# Ridership Forecasting Technical Report

Submitted to:

**Washington State Ferries**

Submitted:

**December 31, 2008**

Submitted by:

**Parsons Brinckerhoff**

**Resource Systems Group**

**RST International**

**WSDOT Ferries Division Final Long-Range Plan:**

**Ridership Forecasting Technical Report**

December 31, 2008

## 1.0 INTRODUCTION

This appendix describes the overall survey/counts data, analytical procedures, and major assumptions used to produce ferry ridership forecasts in support of the Long-Range Strategic Plan (LRSP) for the Ferries Division of the Washington State Department of Transportation (WSF). The ferry ridership forecasting benefited greatly from constant oversight of a peer review team who met regularly for over a year from fall 2007 throughout 2008. The peer review team was comprised of travel demand modeling/forecasting specialists representing public agencies and consulting firms. Basic assumptions underpinning the ridership ridership forecasting analysis included, but not limited to, the following:

- Fares are expected to grow at the rate of 2.5% annually.
- Service remains similar to current, with some modest capacity improvements on some routes resulting from replacing retiring vessels with ones slightly larger.
- Population in the Central Puget Sound area is expected to grow by 0.9 million in 2006 to 4.4 million in 2030, and employment by 0.6 million to 2.5 million in 2030, providing more demand for ferry transportation.

This appendix is organized into five sections. Overview of the ferry travel demand modeling procedures including base year validation and ferry ridership forecasting analysis results are described in the next section. "Reconciliation" analysis of forecasts between the WSF planning and revenue models is presented in section three. Forecasting analysis pertaining to summer peak periods and recreational travel is included in section four. Analyses related to estimation of price elasticities are presented in the final section.

## 2.0 FERRY RIDERSHIP MODELING/FORECASTING ANALYSIS

The primary planning tool employed to perform ferry ridership forecasting analysis was the updated WSF Travel Forecasting (Planning) EMME[1] Model. This Model was initially developed in 1994/1995 and has been successively updated to reflect availability of new ferry travel survey data as well as for consistency with latest regional model databases and those from the outlying jurisdictions. WSF Model uses incremental choice methods and a two-staged forecasting analysis procedure that relies on actual ferry travel patterns and survey-based estimation of parameters such travel time and cost elasticities. Specific details are included in the *"Washington State Ferries Travel Forecasting Methodology Report,"* prepared by Parsons Brinckerhoff, Inc., Seattle, Washington, March 2005. The year 2005 version of the WSF model and its databases were updated in 2007/2008 to suit the current LRSP. Key features that were incorporated into the updated WSF Model included the following:

- Data from the 2006 Origin-Destination Onboard Survey that reflects current ferry travel patterns. A detailed report on this survey is available at the WSF website www.wsdot.wa.gov/ferries/planning/odsurvey. This survey data was expanded to reflect average annual weekday PM peak ridership experienced in 2006. Subsequently, base year (2006) PM peak ferry trip matrices were developed representing auto-board passengers and vehicles as well as walk-board by mode of access and egress. The total expanded base year (2006) PM peak ferry travel survey amounted to about 23,200 person trips of which 16,200 (or 70%) was auto-board riders and the remaining 7,000 (or 30%) walk-board riders.
- Validation analysis for the base year (2006). This involved making necessary updates to the EMME macros to conform to the new base year conditions as well as to the relevant interface with the Puget Sound Regional Council (PSRC) model.
- Latest land-use forecasts available in spring 2008 from PSRC and the outlying jurisdictions.
- A new procedure to establish total ferry ridership in a future year. This is referred to as Stage 1 Forecasting Analysis.
- Reliance on a cost-feasible transportation network that was defined and prepared by PSRC. In addition, zonal parking costs were updated to conform to those in the PSRC model for both base year and future years.

### 2.1 Validation Results

The validation analysis process included an update to the highway and transit networks to reflect base year (2006) PM peak conditions. Land side networks were developed using conventions used in the new PSRC model (Version 1.0), including volume-delay functions. Background (non-ferry) vehicle trips were extracted from the PSRC model database. The actual boardings used to compare the model results are primarily based on fare revenue (i.e., the number of tickets sold) collected by WSF during the PM peak period on the survey day. Pertinent information from the WSF traffic database was obtained, and actual boardings were

[1] EMME is a travel modeling software package, developed by INRO, Montreal, Canada. Additional information about this software is available at the INRO's website below: software is available to the licensed users at the website: http://www.inro.ca/en/products/emme/index.php

calculated for the purpose of analyzing the 2006 O/D Travel Survey. Actual boardings, however, were not available for all routes and directions. This is due to the nature of the WSF fare collection system, where passenger fares (and in a few cases vehicle fares) are only collected in one direction for a round trip. For cases where data was not available, best estimates were made to represent actual boardings.

The base year model update also involved using ferry trip tables representing the expanded 2006 ferry travel survey data. Subsequently, the updated WSF model was run to produce route level ridership and an overall validation test of reasonableness. Tables 2.1a and 2.1b show PM peak auto-board and walk-on board ferry riders for 2006, respectively. Estimated PM peak ridership volumes are within 10 percentage points of actual ridership for most routes for both auto-board as well as walk-on board riders.

**Table 2.1a - Comparison Between 2006 Actual Counts and Estimated PM Peak (3:00-7:00) Weekday Total Auto-Board Ferry Ridership**

| | Actual Ridership | | | Estimated (Modeled) Ridership | | | Estimated/Actual | | |
|---|---|---|---|---|---|---|---|---|---|
| Ferry Routes | EB | WB | Total | EB | WB | Total | EB | WB | Total |
| Point Defiance-Tahlequah | 100 | 270 | 370 | 160 | 280 | 440 | 1.60 | 1.04 | 1.19 |
| Vashon-Southworth | 70 | 60 | 130 | 80 | 60 | 140 | 1.14 | 1.00 | 1.08 |
| Fauntleroy-Vashon | 760 | 740 | 1,500 | 770 | 760 | 1,530 | 1.01 | 1.03 | 1.02 |
| Fauntleroy-Southworth | 180 | 550 | 730 | 230 | 530 | 760 | 1.28 | 0.96 | 1.04 |
| Seattle-Bremerton | 370 | 830 | 1,200 | 360 | 730 | 1,090 | 0.97 | 0.88 | 0.91 |
| Seattle-Bainbridge | 760 | 1,920 | 2,680 | 850 | 1,760 | 2,610 | 1.12 | 0.92 | 0.97 |
| Edmonds-Kingston | 1,120 | 1,560 | 2,680 | 970 | 1,650 | 2,620 | 0.87 | 1.06 | 0.98 |
| Mukilteo-Clinton | 790 | 1,460 | 2,250 | 750 | 1,480 | 2,230 | 0.95 | 1.01 | 0.99 |
| Port Townsend-Keystone | 310 | 340 | 650 | 320 | 340 | 660 | 1.03 | 1.00 | 1.02 |
| **Subtotal** | **4,460** | **7,730** | **12,190** | **4,490** | **7,590** | **12,080** | **1.01** | **0.98** | **0.99** |
| **Anacortes-San Juan Islands[1]** | | | | | | | | | |
| All vessels to/from Anacortes | 1,730 | 1,730 | 3,460 | 1,710 | 1,790 | 3,500 | 0.99 | 1.03 | 1.01 |
| Inter-Island Vessel Only | 180 | 180 | 360 | 140 | 210 | 350 | 0.78 | 1.17 | 0.97 |
| **Anacortes/San Juan Islands-Sidney, B.C.** | 110 | 110 | 220 | 110 | 90 | 200 | 1.00 | 0.82 | 0.91 |
| **Grand Total** | **6,480** | **9,750** | **16,230** | **6,450** | **9,680** | **16,130** | **1.00** | **0.99** | **0.99** |

[1]Reflects daily ridership for the San Jaun routes.
LEGENDS:
- EB stands for Eastbound direction.
- WB stands for Westbound direction.

**Table 2.1b - Comparison Between 2006 Actual Counts and Estimated PM Peak (3:00-7:00) Weekday Total Walk-Board Ferry Ridership**

| Ferry Routes | Actual Ridership EB | Actual Ridership WB | Actual Ridership Total | Estimated (Modeled) Ridership EB | Estimated (Modeled) Ridership WB | Estimated (Modeled) Ridership Total | Estimated/Actual EB | Estimated/Actual WB | Estimated/Actual Total |
|---|---|---|---|---|---|---|---|---|---|
| Point Defiance-Tahlequah | 10 | 80 | 90 | 20 | 50 | 70 | 2.00 | 0.63 | 0.78 |
| Vashon-Southworth | 0 | 10 | 10 | 0 | 20 | 20 | 0.00 | 2.00 | 2.00 |
| Fauntleroy-Vashon | 270 | 270 | 540 | 270 | 280 | 550 | 1.00 | 1.04 | 1.02 |
| Fauntleroy-Southworth | 10 | 210 | 220 | 10 | 210 | 220 | 1.00 | 1.00 | 1.00 |
| Seattle-Vashon/Vashon-Southworth P.O. | 0 | 50 | 50 | 0 | 50 | 50 | 0.00 | 1.00 | 1.00 |
| Seattle-Vashon Passenger Only | 20 | 180 | 200 | 20 | 170 | 190 | 1.00 | 0.94 | 0.95 |
| Seattle-Bremerton | 170 | 1,170 | 1,340 | 150 | 1,110 | 1,260 | 0.88 | 0.95 | 0.94 |
| Seattle-Bainbridge | 160 | 2,570 | 2,730 | 190 | 2,580 | 2,770 | 1.19 | 1.00 | 1.01 |
| Edmonds-Kingston | 60 | 380 | 440 | 70 | 390 | 460 | 1.17 | 1.03 | 1.05 |
| Mukilteo-Clinton | 30 | 490 | 520 | 40 | 490 | 530 | 1.33 | 1.00 | 1.02 |
| Port Townsend-Keystone | 40 | 20 | 60 | 40 | 30 | 70 | 1.00 | 1.50 | 1.17 |
| **Subtotal** | **770** | **5,430** | **6,200** | **810** | **5,380** | **6,190** | **1.05** | **0.99** | **1.00** |
| **Anacortes-San Juan Islands**[1] | | | | | | | | | |
| All vessels to/from Anacortes | 320 | 320 | 640 | 350 | 280 | 630 | 1.09 | 0.88 | 0.98 |
| Anacortes/San Juan Islands-Sidney, B.C. | 50 | 50 | 100 | 40 | 50 | 90 | 0.80 | 1.00 | 0.90 |
| **Anacortes/San Juan Islands-Sidney, B.C.** | 10 | 10 | 20 | 10 | 10 | 20 | 1.00 | 1.00 | 1.00 |
| **Grand Total** | **1,150** | **5,810** | **6,960** | **1,210** | **5,720** | **6,930** | **1.05** | **0.98** | **1.00** |

[1]Reflects daily ridership for the San Jaun routes.
LEGENDS:
- EB stands for Eastbound direction.
- WB stands for Westbound direction.

## 2.2 Stage 1 Forecasting Analysis

The WSF model depends on PSRC model databases for the overall growth for the cross-sound travel demand. Growth estimates could have been derived either from PSRC model trip distribution results or directly based on forecasts for demographics. Given that PSRC model was being refined and going through additional validation for the cross-sound travel market, the WSF peer review team reached a consensus to derive travel growth from forecasts of total households and employment. Such an approach for development of travel growth has been also used in the Sound Transit incremental model and staged ridership forecasting analysis process. ST model procedures has gone through independent peer reviews, including review and acceptance from the Federal Transit Administration (FTA) in support of their Full Funding Grants Agreements with FTA for the Central and University light rail lines.

The Stage 1 forecasting analysis process involved:

- Calculation of growth in total households and employment between 2006 and a future year (e.g., 2020 or 2030) at 51 districts encompassing the 12-county WSF service areas (see Figure 2.2a). Total households and employment summaries (at a 28-district level) and implied growth in 2010, 2020, and 2030 relative to 2006 are included in Tables 2.2a and 2.2b, respectively. A map of 28-district boundaries is shown in Figure 2.2b. Note that household forecasts were not available for the outlying areas. Average household size for Kitsap County was used as a proxy in conjunction with forecast of population for these counties to estimate households.

- Base year PM peak trip ends were estimated according to projected growth in households and employment at 51-district level. Resulting future year trip ends in conjunction with a base year trip matrix (aggregated at 51-district level) were fed into the matrix-balancing module in EMME to produce a future year trip table (at 51-district level).

Subsequently, implied district-to-district growth in trips was calculated and applied to the base year trip table at the WSF zonal level. This process was repeated to produce a Stage 1 trip table in all forecast years. This process evolved based on feedback from the peer review team resulting from discussion of the Stage 1 forecasting procedure.

The system-wide Stage 1 ferry forecasts and implied growth are presented in Table 2.2c. Implied growth estimates shown in Table 2.2c indicate that 2010, 2020, and 2030 Stage 1 ferry ridership forecasts exhibit an annual growth of 1.06%, 1.35%, and 1.34%, respectively. District-level stage 1 forecasts by PM trip origins and destinations are shown in Tables 2.2d and 2.2e, respectively. District-level implied growth estimated for ferry trips at PM origins and destinations (shown in Tables 2.2d and 2.2e) are reasonably aligned with those exhibited in employment and household projections (shown in Tables 2.2b and 2.2a).

**Figure 2.2a – 51 District Map**

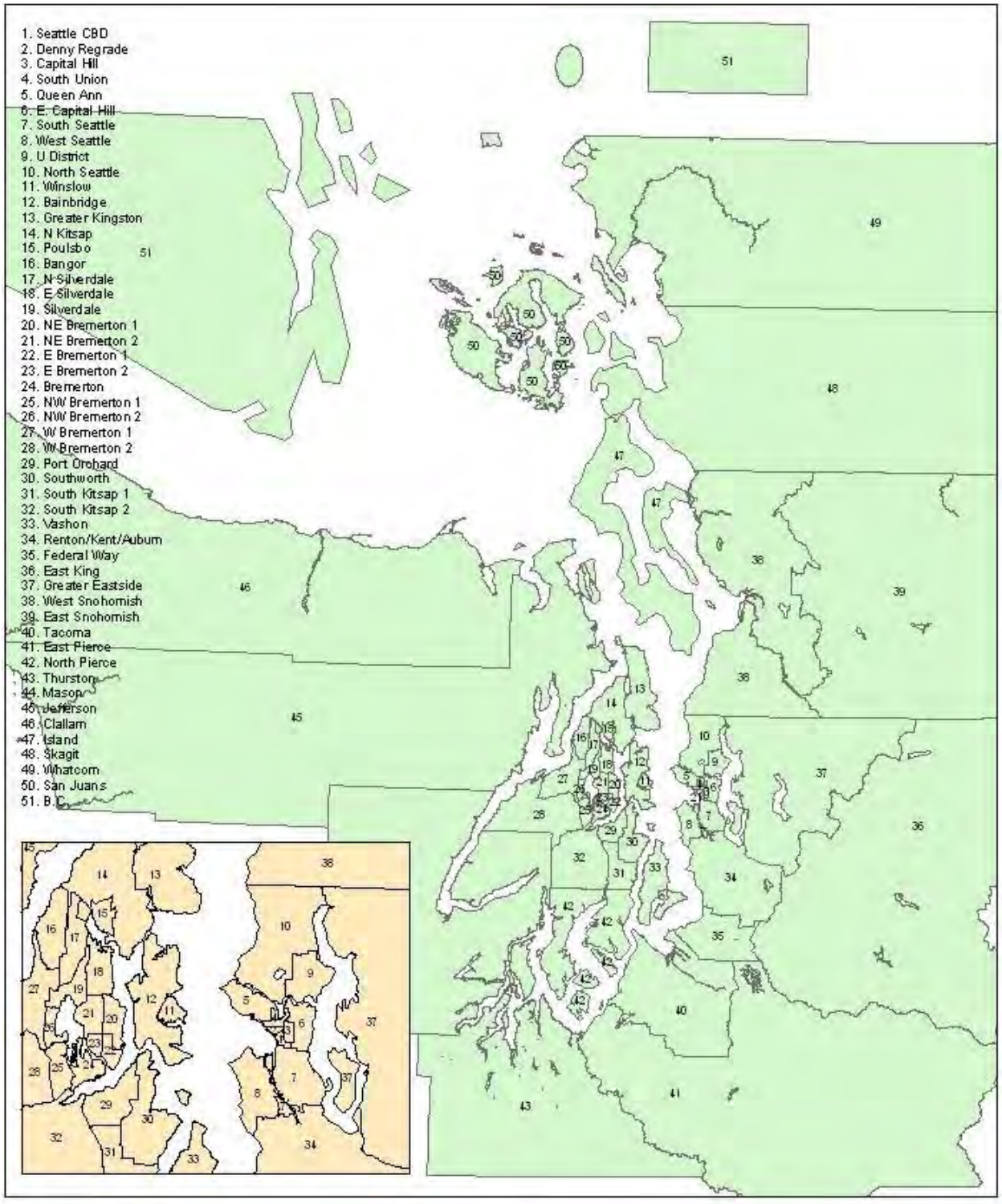


**Figure 2.2b – 28 District Map**

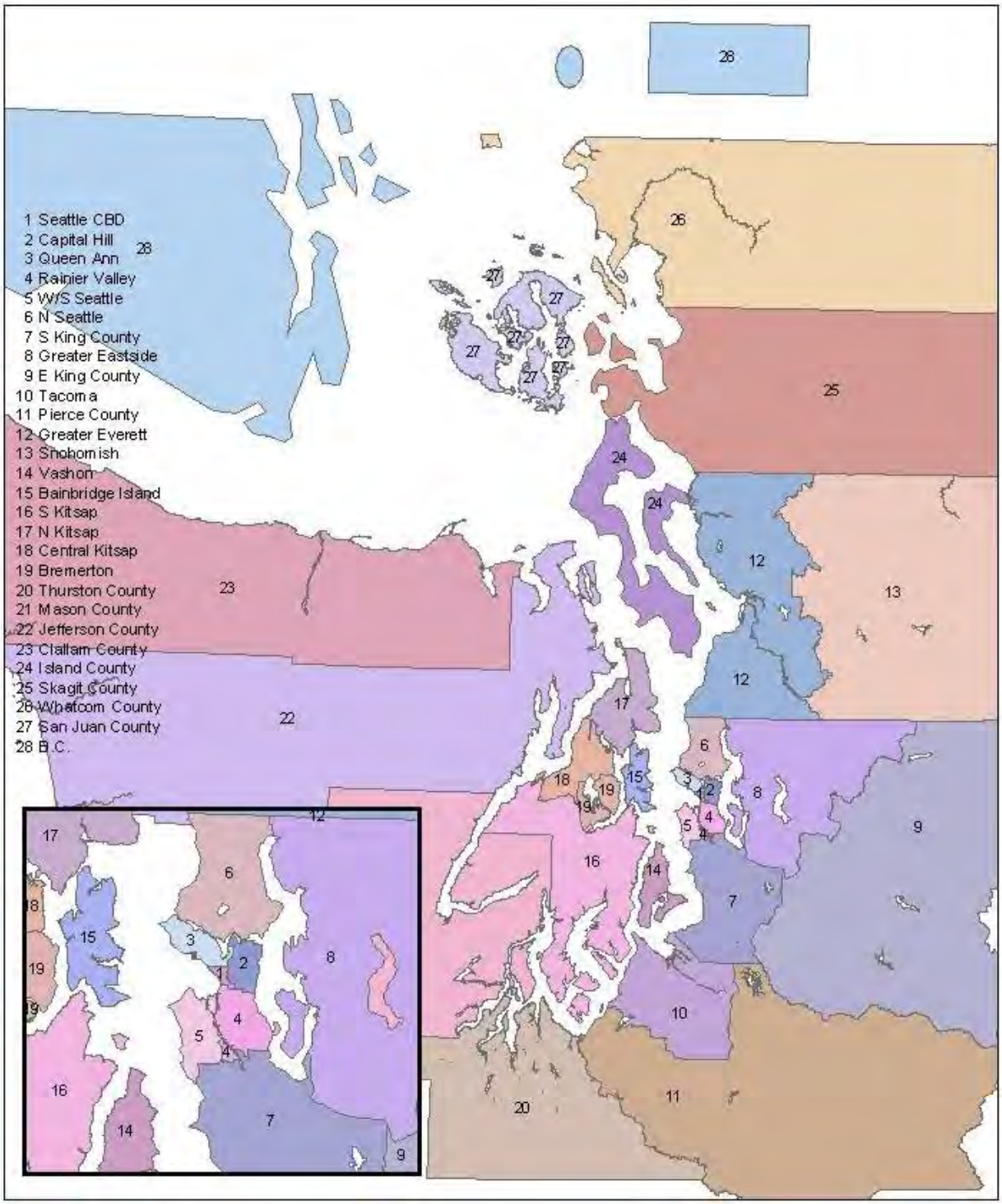


**Table 2.2a – Household Forecasts by 28 Districts**

| | Households | | | | Growth Rate relative to 2006 | | |
|---|---|---|---|---|---|---|---|
| District | 2006 | 2010 | 2020 | 2030 | 2010 | 2020 | 2030 |
| **1** Seattle CBD | 15,400 | 18,100 | 23,900 | 31,600 | 1.18 | 1.55 | 2.05 |
| **2** Capital Hill | 44,200 | 45,000 | 49,800 | 53,100 | 1.02 | 1.13 | 1.20 |
| **3** Queen Ann | 32,700 | 34,300 | 40,700 | 46,200 | 1.05 | 1.24 | 1.41 |
| **4** Rainier Valley | 24,700 | 25,300 | 27,300 | 29,400 | 1.02 | 1.11 | 1.19 |
| **5** W/S Seattle | 35,500 | 35,800 | 37,100 | 38,500 | 1.01 | 1.05 | 1.08 |
| **6** N Seattle | 136,200 | 137,600 | 150,700 | 162,700 | 1.01 | 1.11 | 1.19 |
| **7** S King County | 208,300 | 215,500 | 242,000 | 268,700 | 1.03 | 1.16 | 1.29 |
| **8** Greater Eastside | 209,900 | 221,900 | 257,900 | 290,400 | 1.06 | 1.23 | 1.38 |
| **9** E King County | 46,000 | 50,200 | 60,700 | 71,300 | 1.09 | 1.32 | 1.55 |
| **10** Tacoma | 215,700 | 227,600 | 262,100 | 295,600 | 1.06 | 1.22 | 1.37 |
| **11** Pierce County | 49,500 | 54,100 | 67,900 | 80,200 | 1.09 | 1.37 | 1.62 |
| **12** Greater Everett | 238,800 | 258,400 | 314,300 | 364,700 | 1.08 | 1.32 | 1.53 |
| **13** Snohomish | 17,400 | 18,700 | 22,700 | 26,900 | 1.07 | 1.30 | 1.55 |
| **14** Vashon | 4,400 | 4,500 | 4,900 | 5,400 | 1.02 | 1.11 | 1.23 |
| **15** Bainbridge Island | 8,700 | 9,200 | 11,100 | 13,000 | 1.06 | 1.28 | 1.49 |
| **16** S Kitsap | 48,900 | 52,100 | 61,500 | 71,700 | 1.07 | 1.26 | 1.47 |
| **17** N Kitsap | 14,700 | 15,800 | 19,900 | 24,500 | 1.07 | 1.35 | 1.67 |
| **18** Central Kitsap | 14,200 | 15,200 | 18,200 | 21,200 | 1.07 | 1.28 | 1.49 |
| **19** Bremerton | 30,000 | 30,700 | 34,300 | 39,500 | 1.02 | 1.14 | 1.32 |
| **20** Thurston County | 91,100 | 102,000 | 129,600 | 156,700 | 1.12 | 1.42 | 1.72 |
| **21** Mason County | 21,500 | 25,000 | 31,400 | 38,900 | 1.16 | 1.46 | 1.81 |
| **22** Jefferson County | 11,300 | 11,700 | 14,000 | 16,500 | 1.04 | 1.24 | 1.46 |
| **23** Clallam County | 26,000 | 29,400 | 33,700 | 39,000 | 1.13 | 1.30 | 1.50 |
| **24** Island County | 30,200 | 33,800 | 41,100 | 49,600 | 1.12 | 1.36 | 1.64 |
| **25** Skagit County | 45,200 | 47,500 | 57,100 | 88,000 | 1.05 | 1.26 | 1.95 |
| **26** Whatcom County | 72,100 | 78,200 | 93,400 | 109,800 | 1.08 | 1.30 | 1.52 |
| **27** San Juan County | 6,200 | 6,900 | 8,400 | 10,100 | 1.11 | 1.35 | 1.63 |
| **28** B.C. | 1.00 | 1.27 | 1.53 | 1.70 | 1.27 | 1.53 | 1.70 |
| **Total** | **1,698,800** | **1,804,500** | **2,115,700** | **2,443,200** | **1.06** | **1.25** | **1.44** |

Sources: Note that for the outlying areas, household forecasts for the outlying areas were not available. They were estimated based on applying average household size, implied in the PSRC forecast of population for Kitsap to their respective population forecasts available from the following sources:

1. PSRC 2006 small area forecasts by FAZ (2000, 2010, 2020, 2030 & 2040)
2. Thurston Regional Planning Council (TRPC) demographic forecasts 2007
3. OFM average of low and medium projections
4. OFM average of medium and high projections.
5. OFM medium projection.
6. OFM medium projection.
7. OFM average of low and medium projections.
8. OFM high projection.
9. OFM average of medium and high projections.

**Table 2.2b – Total Employment Forecasts by 28 Districts**

| | Total Employment[1] | | | | Growth Rate relative to 2006 | | |
|---|---|---|---|---|---|---|---|
| District | 2006 | 2010 | 2020 | 2030 | 2010 | 2020 | 2030 |
| **1** Seattle CBD | 194,500 | 202,000 | 225,800 | 243,600 | 1.04 | 1.16 | 1.25 |
| **2** Capital Hill | 65,900 | 66,900 | 70,900 | 71,900 | 1.02 | 1.08 | 1.09 |
| **3** Queen Ann | 72,700 | 75,500 | 90,900 | 98,000 | 1.04 | 1.25 | 1.35 |
| **4** Rainier Valley | 90,200 | 92,000 | 100,200 | 109,700 | 1.02 | 1.11 | 1.22 |
| **5** W/S Seattle | 19,300 | 19,600 | 23,000 | 26,900 | 1.02 | 1.19 | 1.39 |
| **6** N Seattle | 135,500 | 138,200 | 156,600 | 172,000 | 1.02 | 1.16 | 1.27 |
| **7** S King County | 317,000 | 323,100 | 369,000 | 419,800 | 1.02 | 1.16 | 1.32 |
| **8** Greater Eastside | 348,600 | 371,400 | 435,700 | 492,600 | 1.07 | 1.25 | 1.41 |
| **9** E King County | 19,100 | 20,200 | 23,500 | 27,400 | 1.06 | 1.23 | 1.43 |
| **10** Tacoma | 218,100 | 225,700 | 260,100 | 295,100 | 1.03 | 1.19 | 1.35 |
| **11** Pierce County | 44,600 | 45,000 | 49,500 | 55,100 | 1.01 | 1.11 | 1.24 |
| **12** Greater Everett | 233,000 | 245,500 | 294,900 | 344,600 | 1.05 | 1.27 | 1.48 |
| **13** Snohomish | 3,600 | 3,700 | 4,400 | 5,400 | 1.03 | 1.22 | 1.50 |
| **14** Vashon | 2,400 | 2,300 | 2,500 | 2,800 | 0.96 | 1.04 | 1.17 |
| **15** Bainbridge Island | 5,500 | 5,600 | 6,400 | 7,400 | 1.02 | 1.16 | 1.35 |
| **16** S Kitsap | 23,500 | 24,400 | 28,300 | 32,900 | 1.04 | 1.20 | 1.40 |
| **17** N Kitsap | 9,700 | 10,200 | 12,100 | 14,100 | 1.05 | 1.25 | 1.45 |
| **18** Central Kitsap | 18,800 | 19,400 | 21,700 | 24,100 | 1.03 | 1.15 | 1.28 |
| **19** Bremerton | 43,100 | 44,100 | 49,100 | 54,300 | 1.02 | 1.14 | 1.26 |
| **20** Thurston County[2] | 118,100 | 137,200 | 161,500 | 172,600 | 1.16 | 1.37 | 1.46 |
| **21** Mason County[3] | 11,300 | 17,500 | 21,980 | 27,230 | 1.55 | 1.95 | 2.41 |
| **22** Jefferson County[3] | 7,700 | 8,190 | 9,800 | 11,550 | 1.06 | 1.27 | 1.50 |
| **23** Clallam County[3] | 20,400 | 20,580 | 23,590 | 27,300 | 1.01 | 1.16 | 1.34 |
| **24** Island County[3] | 13,400 | 16,900 | 20,550 | 24,800 | 1.26 | 1.53 | 1.85 |
| **25** Skagit County[4] | 43,700 | 46,600 | 54,642 | 64,120 | 1.07 | 1.25 | 1.47 |
| **26** Whatcom County[3] | 77,900 | 78,200 | 93,400 | 109,800 | 1.00 | 1.20 | 1.41 |
| **27** San Juan County[3] | 4,900 | 4,830 | 5,880 | 7,070 | 0.99 | 1.20 | 1.44 |
| **28** B.C. | 1.00 | 1.27 | 1.53 | 1.70 | 1.27 | 1.53 | 1.70 |
| **Total** | **2,162,500** | **2,264,800** | **2,615,942** | **2,942,170** | **1.05** | **1.21** | **1.36** |

Sources:

1. PSRC 2006 small area forecasts by FAZ (2000, 2010, 2020, 2030 & 2040)
2. Thurston Regional Planning Council (TRPC) demographic forecasts 2007
3. Skagit County Employment based on Mirai Review of Comprehensive Plan 2007 using employment growth found in adopted 2003 plan
4. 2006 data were derived from Census Bureau's Quick Fact web site (http://quickfacts.census.gov/qfd/states/53/)
   2010, 2020 and 2030 projections were based on job to households ratios derived from census and ESD database (2005).

**Table 2.2c – System-wide Stage 1 PM Peak Ferry Ridership Forecasts and Implied Growth Rates Comparison**

| Forecast Year | PM Peak Ferry Riders | Implied Growth |
|---|---|---|
| Base Year (2006) | 23,200 | |
| Year 2010 | 24,200 | |
| Year 2020 | 28,000 | |
| Year 2030 | 31,900 | |
| Growth Rate: | | |
| 2006 to 2010 | | 4.3% |
| 2006 to 2020 | | 20.7% |
| 2006 to 2030 | | 37.5% |
| 2010 to 2020 | | 15.7% |
| 2020 to 2030 | | 13.9% |
| % Annual Growth: | | |
| 2006 to 2010 | | 1.06% |
| 2006 to 2020 | | 1.35% |
| 2006 to 2030 | | 1.34% |
| 2010 to 2020 | | 1.47% |
| 2020 to 2030 | | 1.31% |

**Table 2.2d – District-Level Stage 1 Ferry Ridership Forecasts Comparison - Trip Ends for PM Origins**

| District | Stage 1 PM Peak Riders by PM Origins | | | | Ratio of Future Year Riders over Base Year (2006) Riders | | |
|---|---|---|---|---|---|---|---|
| | 2006 | 2010 | 2020 | 2030 | 2010 | 2020 | 2030 |
| **1** Seattle CBD | 3,880 | 4,030 | 4,470 | 4,820 | 1.04 | 1.15 | 1.24 |
| **2** Capital Hill | 1,070 | 1,090 | 1,170 | 1,190 | 1.02 | 1.09 | 1.11 |
| **3** Queen Ann | 930 | 970 | 1,160 | 1,260 | 1.04 | 1.25 | 1.35 |
| **4** Rainier Valley | 860 | 880 | 950 | 1,050 | 1.02 | 1.10 | 1.22 |
| **5** W/S Seattle | 240 | 240 | 280 | 330 | 1.00 | 1.17 | 1.38 |
| **6** N Seattle | 1,360 | 1,390 | 1,570 | 1,720 | 1.02 | 1.15 | 1.26 |
| **7** S King County | 1,010 | 1,030 | 1,170 | 1,340 | 1.02 | 1.16 | 1.33 |
| **8** Greater Eastside | 1,160 | 1,240 | 1,450 | 1,640 | 1.07 | 1.25 | 1.41 |
| **9** E King County | 10 | 10 | 10 | 10 | 1.00 | 1.00 | 1.00 |
| **10** Tacoma | 370 | 380 | 440 | 500 | 1.03 | 1.19 | 1.35 |
| **11** Pierce County | 20 | 20 | 20 | 20 | 1.00 | 1.00 | 1.00 |
| **12** Greater Everett | 2,080 | 2,200 | 2,640 | 3,080 | 1.06 | 1.27 | 1.48 |
| **13** Snohomish | 30 | 30 | 40 | 40 | 1.00 | 1.33 | 1.33 |
| **14** Vashon | 1,250 | 1,230 | 1,330 | 1,470 | 0.98 | 1.06 | 1.18 |
| **15** Bainbridge Island | 670 | 680 | 800 | 940 | 1.01 | 1.19 | 1.40 |
| **16** S Kitsap | 240 | 250 | 290 | 350 | 1.04 | 1.21 | 1.46 |
| **17** N Kitsap | 570 | 600 | 750 | 910 | 1.05 | 1.32 | 1.60 |
| **18** Central Kitsap | 320 | 340 | 390 | 440 | 1.06 | 1.22 | 1.38 |
| **19** Bremerton | 590 | 610 | 680 | 750 | 1.03 | 1.15 | 1.27 |
| **20** Thurston County | 50 | 50 | 60 | 70 | 1.00 | 1.20 | 1.40 |
| **21** Mason County | 100 | 160 | 200 | 240 | 1.60 | 2.00 | 2.40 |
| **22** Jefferson County | 490 | 530 | 630 | 740 | 1.08 | 1.29 | 1.51 |
| **23** Clallam County | 420 | 430 | 490 | 580 | 1.02 | 1.17 | 1.38 |
| **24** Island County | 1,020 | 1,290 | 1,560 | 1,890 | 1.26 | 1.53 | 1.85 |
| **25** Skagit County | 1,320 | 1,410 | 1,650 | 1,930 | 1.07 | 1.25 | 1.46 |
| **26** Whatcom County | 320 | 320 | 380 | 450 | 1.00 | 1.19 | 1.41 |
| **27** San Juan County | 2,590 | 2,600 | 3,110 | 3,770 | 1.00 | 1.20 | 1.46 |
| **28** B.C.[1] | 210 | 250 | 300 | 330 | 1.19 | 1.43 | 1.57 |
| **Total** | **23,180** | **24,260** | **27,990** | **31,860** | **1.05** | **1.21** | **1.37** |

[1]Both households and employment are not available, border crossing estimates was used as surrogate.

**Table 2.2e - District-Level Stage 1 Ferry Ridership Forecasts Comparison - Trip Ends for PM Destinations**

| | Stage 1 PM Peak Riders by PM Destinations | | | | Ratio of Future Year Riders over Base Year (2006) Riders | | |
|---|---|---|---|---|---|---|---|
| District | 2006 | 2010 | 2020 | 2030 | 2010 | 2020 | 2030 |
| **1** Seattle CBD | 520 | 590 | 680 | 860 | 1.13 | 1.31 | 1.65 |
| **2** Capital Hill | 380 | 370 | 400 | 420 | 0.97 | 1.05 | 1.11 |
| **3** Queen Ann | 370 | 390 | 500 | 570 | 1.05 | 1.35 | 1.54 |
| **4** Rainier Valley | 220 | 210 | 220 | 230 | 0.95 | 1.00 | 1.05 |
| **5** W/S Seattle | 400 | 390 | 390 | 390 | 0.98 | 0.98 | 0.98 |
| **6** N Seattle | 1,040 | 1,020 | 1,080 | 1,120 | 0.98 | 1.04 | 1.08 |
| **7** S King County | 650 | 650 | 710 | 760 | 1.00 | 1.09 | 1.17 |
| **8** Greater Eastside | 600 | 610 | 690 | 730 | 1.02 | 1.15 | 1.22 |
| **9** E King County | 80 | 80 | 100 | 110 | 1.00 | 1.25 | 1.38 |
| **10** Tacoma | 150 | 160 | 180 | 190 | 1.07 | 1.20 | 1.27 |
| **11** Pierce County | 40 | 40 | 50 | 50 | 1.00 | 1.25 | 1.25 |
| **12** Greater Everett | 1,080 | 1,140 | 1,340 | 1,460 | 1.06 | 1.24 | 1.35 |
| **13** Snohomish | 50 | 60 | 70 | 70 | 1.20 | 1.40 | 1.40 |
| **14** Vashon | 1,630 | 1,620 | 1,720 | 1,780 | 0.99 | 1.06 | 1.09 |
| **15** Bainbridge Island | 2,950 | 3,020 | 3,500 | 3,880 | 1.02 | 1.19 | 1.32 |
| **16** S Kitsap | 1,160 | 1,190 | 1,360 | 1,500 | 1.03 | 1.17 | 1.29 |
| **17** N Kitsap | 2,030 | 2,110 | 2,560 | 2,990 | 1.04 | 1.26 | 1.47 |
| **18** Central Kitsap | 670 | 690 | 810 | 890 | 1.03 | 1.21 | 1.33 |
| **19** Bremerton | 1,500 | 1,480 | 1,600 | 1,740 | 0.99 | 1.07 | 1.16 |
| **20** Thurston County | 70 | 70 | 90 | 100 | 1.00 | 1.29 | 1.43 |
| **21** Mason County | 200 | 220 | 270 | 310 | 1.10 | 1.35 | 1.55 |
| **22** Jefferson County | 660 | 660 | 760 | 850 | 1.00 | 1.15 | 1.29 |
| **23** Clallam County | 370 | 400 | 450 | 490 | 1.08 | 1.22 | 1.32 |
| **24** Island County | 2,280 | 2,480 | 2,910 | 3,310 | 1.09 | 1.28 | 1.45 |
| **25** Skagit County | 920 | 940 | 1,090 | 1,580 | 1.02 | 1.18 | 1.72 |
| **26** Whatcom County | 420 | 450 | 510 | 570 | 1.07 | 1.21 | 1.36 |
| **27** San Juan County | 2,530 | 2,730 | 3,210 | 3,640 | 1.08 | 1.27 | 1.44 |
| **28** B.C.[1] | 230 | 280 | 320 | 340 | 1.22 | 1.39 | 1.48 |
| **Total** | **23,200** | **24,050** | **27,570** | **30,930** | **1.04** | **1.19** | **1.33** |

[1]Both households and employment are not available, border crossing estimates was used as surrogate.

## 2.3 Stage 2 Forecasting Analysis (Route-Level Ferry Ridership Forecasts)

Stage 1 forecast representing total PM peak ferry travel patterns for a future year. This is input into the WSF model for production of route-level ridership forecasts. The WSF model includes:

- An incremental model for method of boarding between walk-ons and auto-boardings;
- A subchoice incremental model for walk-ons; and
- A subchoice incremental model for auto boardings.

Matrices representing level of service related variables used in the mathematical equations for the auto-board and walk-board mode of access and egress choices are generated from the procedures described in the *"Washington State Ferries Travel Forecasting Methodology Report,"* prepared by Parsons Brinckerhoff, Inc., Seattle, Washington, March 2005. WSF travel

forecasting model was used to produce route-level PM peak ridership forecasts for scenario of interest. Ridership forecasting analysis was performed for the Baseline Alternative.

**Baseline Alternative Definition**

The Baseline alternative assumes that ferry service remains similar to current service levels, with some modest capacity improvements on some routes resulting from replacing retiring vessels with ones slightly larger.

Levels of service (LOS) for the Baseline Alternative were defined by WSF and are shown in Table 2.3a. Underlying assumptions were documented in a memorandum, entitled *"WSF Base Year and Future Baseline – Key Assumptions," dated April 8, 2008* prepared by Parsons Brinckerhoff, Inc*.,* Seattle, Washington. This document includes fare assumptions used in the WSF planning model, highlighted below.

***Fare Assumptions***

The fares that went into effect on May 1, 2006 serve as the basis for creating blended passenger and vehicle/driver fares for input to the WSF Planning Model. Specifically, the Planning Model requires as input one fare for passengers and one fare for vehicles including drivers on each route, which are calculated as weighted averages of various posted fares. The weighting scheme considers the distribution of ridership across different fare categories as well as the blending of ridership between summer surcharge/peak season and non-peak season for applicable fare categories. The fare inputs for the San Juan Islands routes uses fares already blended to reflect early week (Sunday-Tuesday) and late week (Wednesday-Saturday) fares. Note that the fare inputs prepared for Planning Model use were intended for measuring changes in travel behavior reflected in relative fare differences by route and mode, and were not anticipated to be used for revenue calculations. For example, the model vehicle fares reflect a blend of regular and discounted auto fares, but excludes weighting factors and corresponding higher fares for oversize/commercial vehicles.

The WSF Planning Model is designed for general planning purposes and not for predicting the specific characteristics of each fare category, particularly those of commercial truck movements. For future Baseline years, fare assumptions were based on the WSF Revenue Forecast Scenario#2 ("Baseline Fare Increases"), which assumes 2.5% fare increases each October beginning in 2009 (FY 2010), rounded up to the nearest nickel. This was assumed for future years through October 2024 (FY 2025). Beyond 2025, fares were assumed to increase with projected inflation, using the November 2007 projection produced by the Washington State Office of Financial Management (OFM) for the Implicit Price Deflector for Personal Consumption. The November 2007 projection for this index yields an average annual inflation rate of approximately 2.0% per year.

## Table 2.3a - Level-of-Service (LOS) Attributes Definition

**Base Year (2006) & 2010/2020/2030 Baseline Alternative**

| *Ferry Route* | *Headway (minutes)* | | | | *Crossing Time (minutes)* | | | | *Sailings (PM Peak Period)* | | | | *Average Vessel Capacity (vehicles)* | | | | *One-Way PASSENGER FARE for Modeling in Each Direction* [1] *(Constant 2006 Dollars)* | | | | *One-Way VEHICLE/DRIVER FARE for Modeling in Each Direction* [1] *(Constant 2006 Dollars)* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *2006* | *2010* | *2020* | *2030* | *2006* | *2010* | *2020* | *2030* | *2006* | *2010* | *2020* | *2030* | *2006* | *2010* | *2020* | *2030* | *2006* | *2010* | *2020* | *2030* | *2006* | *2010* | *2020* | *2030* |
| Pt. Defiance-Tahlequah | 55 | 55 | 55 | 55 | 15 | 15 | 15 | 15 | 5 | 5 | 5 | 5 | 48 | 50 | 50 | 50 | $1.69 | $1.66 | $1.81 | $1.88 | $6.29 | $6.14 | $6.63 | $6.85 |
| Southworth-Vashon | 61 | 61 | 61 | 61 | 10 | 10 | 10 | 10 | 4 | 4 | 4 | 4 | 65 | 73 | 73 | 73 | $1.70 | $1.67 | $1.82 | $1.89 | $6.41 | $6.26 | $6.76 | $6.98 |
| Fauntleroy-Vashon | 34 | 34 | 34 | 34 | 15 | 15 | 15 | 15 | 8 | 8 | 8 | 8 | 82 | 94 | 94 | 94 | $1.71 | $1.68 | $1.83 | $1.90 | $6.23 | $6.09 | $6.57 | $6.79 |
| Fauntleroy-Southworth | 40 | 40 | 40 | 40 | 30 | 30 | 30 | 30 | 6 | 6 | 6 | 6 | 54 | 67 | 67 | 67 | $2.07 | $2.05 | $2.24 | $2.32 | $8.35 | $8.13 | $8.76 | $9.08 |
| Seattle-Southworth Passenger-Only[2] | 85 | 85 | 85 | 85 | 55 | 55 | 55 | 55 | 2 | 2 | 2 | 2 | — | — | — | — | $3.63 | $5.18 | $5.42 | $5.52 | — | — | — | — |
| Seattle-Vashon Passenger-Only[3] | 85 | 85 | 85 | 85 | 30 | 30 | 30 | 30 | 2 | 2 | 2 | 2 | — | — | — | — | $3.63 | $3.51 | $3.60 | $3.63 | — | — | — | — |
| Seattle-Bremerton | 75 | 75 | 75 | 75 | 55 | 55 | 55 | 55 | 4 | 4 | 4 | 4 | 132 | 144 | 144 | 144 | $2.74 | $2.69 | $2.94 | $3.05 | $11.20 | $10.92 | $11.79 | $12.18 |
| Seattle-Bainbridge Island | 52 | 52 | 52 | 52 | 30 | 30 | 30 | 30 | 6 | 6 | 6 | 6 | 202 | 202 | 202 | 202 | $2.70 | $2.65 | $2.90 | $3.00 | $10.77 | $10.50 | $11.34 | $11.71 |
| Edmonds-Kingston | 41 | 41 | 41 | 41 | 25 | 25 | 25 | 25 | 6 | 6 | 6 | 6 | 196 | 196 | 196 | 196 | $2.68 | $2.63 | $2.88 | $2.98 | $11.22 | $10.94 | $11.82 | $12.20 |
| Mukilteo-Clinton | 30 | 30 | 30 | 30 | 15 | 15 | 15 | 15 | 9 | 9 | 9 | 9 | 124 | 136 | 136 | 136 | $1.57 | $1.55 | $1.69 | $1.75 | $6.23 | $6.06 | $6.57 | $6.77 |
| Pt. Townsend-Keystone | 45 | 45 | 45 | 45 | 30 | 30 | 30 | 30 | 6 | 6 | 6 | 6 | 64 | 60 | 60 | 60 | $2.13 | $2.11 | $2.30 | $2.38 | $9.55 | $9.29 | $10.02 | $10.38 |
| San Juan Islands Domestic Route | | | | | | | | | | | | | | | | | | | | | | | | |
| Anacortes-Lopez | 126 | 126 | 126 | 126 | 40 | 40 | 45 | 45 | 8 | 8 | 8 | 8 | 41 | 50 | 50 | 50 | $4.40 | $4.30 | $4.64 | $4.80 | $11.64 | $11.33 | $12.09 | $12.44 |
| Anacortes-Shaw | 178 | 178 | 178 | 178 | 68 | 68 | 62 | 62 | 6 | 6 | 6 | 6 | 9 | 9 | 9 | 9 | $4.23 | $4.13 | $4.46 | $4.61 | $13.34 | $12.97 | $13.84 | $14.24 |
| Anacortes-Orcas | 174 | 174 | 174 | 174 | 65 | 65 | 52 | 52 | 6 | 6 | 6 | 6 | 97 | 99 | 99 | 99 | $4.63 | $4.52 | $4.88 | $5.05 | $14.99 | $14.59 | $15.57 | $16.02 |
| Anacortes-Friday Harbor | 142 | 142 | 142 | 142 | 79 | 79 | 62 | 62 | 7 | 7 | 7 | 7 | 81 | 102 | 102 | 102 | $4.64 | $4.53 | $4.89 | $5.06 | $17.25 | $16.79 | $17.91 | $18.43 |
| Lopez-Shaw | 142 | 142 | 142 | 142 | 22 | 22 | 25 | 25 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | — | — | — | — | $7.26 | $7.07 | $7.54 | $7.76 |
| Lopez-Orcas | 131 | 131 | 131 | 131 | 29 | 29 | 28 | 28 | 6 | 6 | 6 | 6 | 27 | 35 | 35 | 35 | — | — | — | — | $7.26 | $7.07 | $7.54 | $7.76 |
| Lopez-Friday Harbor | 143 | 143 | 143 | 143 | 66 | 66 | 59 | 59 | 7 | 7 | 7 | 7 | 24 | 30 | 30 | 30 | — | — | — | — | $7.26 | $7.07 | $7.54 | $7.76 |
| Shaw-Orcas | 155 | 155 | 155 | 155 | 10 | 10 | 10 | 10 | 6 | 6 | 6 | 6 | 9 | 9 | 9 | 9 | — | — | — | — | $7.26 | $7.07 | $7.54 | $7.76 |
| Shaw-Friday Harbor | 172 | 172 | 172 | 172 | 61 | 61 | 68 | 68 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | — | — | — | — | $7.26 | $7.07 | $7.54 | $7.76 |
| Orcas-Friday Harbor | 157 | 157 | 157 | 157 | 46 | 46 | 49 | 49 | 6 | 6 | 6 | 6 | 42 | 57 | 57 | 57 | — | — | — | — | $7.26 | $7.07 | $7.54 | $7.76 |
| Sidney, B.C. International Route | | | | | | | | | | | | | *WB* | *EB* | *WB* | *EB* | *WB* | *EB* | *WB* | *EB* | | | | |
| Anacortes-Sidney B.C. | Daily (180) | Daily (180) | Daily (180) | Daily (180) | 183 | 183 | 183 | 183 | 1 | 1 | 1 | 1 | 72 | 72 | 62 | 62 | 62 | 62 | 62 | 62 | $13.36 | $13.04 | $14.04 | $14.50 | $47.15 | $45.88 | $48.91 | $50.33 |
| Orcas-Sidney, B.C. (westbound only) | Daily (180) | Daily (180) | Daily (180) | Daily (180) | 125 | 125 | 125 | 125 | 1 | 1 | 1 | 1 | 18 | — | 16 | — | 16 | — | 16 | — | $9.47 | $9.24 | $9.95 | $10.27 | $33.39 | $32.49 | $34.63 | $35.64 |
| Friday Harbor-Sidney, B.C. | Daily (180) | Daily (180) | Daily (180) | Daily (180) | 88 | 88 | 88 | 88 | 1 | 1 | 1 | 1 | 36 | 19 | 31 | 19 | 31 | 19 | 31 | 19 | $9.47 | $9.24 | $9.95 | $10.27 | $33.39 | $32.49 | $34.63 | $35.64 |

[1] Fares are one-way weighted averages reflecting each route's distribution of fare categories.

[2] Reflects a transfer connection on Vashon Island between the Seattle-Vashon Passenger-Only and Southworth-Vashon ferries in 2006 and 2010, with new King County passenger-only terminal at Southworth constructed in 2012. Fares in 2020 and 2030 are lower than those in 2010 because of direct passenger-only service between Seattle and Southworth starting in 2012.

[3] Assumes King County will take over Seattle - Vashon service in 2008. Fare escalation is assumed to be same as WSF.

**Baseline Ridership Demand Estimates**

Baseline PM peak ridership estimates for 2010, 2020, and 2030 are shown for the westbound and eastbound directions in Tables 2.3b and 2.3c, respectively. Implied growth in ridership relative to 2010 is also shown in Tables 2.3b and 2.3c. This reflects suggestion provided by the peer review team to compare change in Baseline ridership to 2010 rather than to 2006 for the purpose of consistency in the underlying processes.

Ridership estimates shown in Table 2.3b and 2.3c reflect a number of post-modeling steps subsequently applied to "raw" results from the WSF travel forecasting model:

- Implied growth relative to base year (2006) exhibited in "raw" model results were incrementally applied to "actual" ridership for each route. This was intended to establish a more streamlined Baseline demand estimates;
- Mode split estimates exhibited in ridership for the San Juan market did not seem realistic. This had primarily been caused by sparse survey data in the model database for the Inter-island market. The peer review team reached a consensus on post-processing of mode split for this market based on relying on implied growth in ridership in the WSF Revenue Model for this market. The post processing of daily vehicle-board and walk-board did not alter total ridership produced from the WSF travel forecasting.

## Table 2.3b - Year 2010, 2020 & 2030 PM Peak (3:00-7:00) Weekday Ferry Ridership Estimates[1] by Boarding Method (Westbound)

**- Baseline Alternative -**

| | 2010 | | | | 2020 | | | | | | | | | | 2030 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ferry Route** | **Total Veh.** | **Total Riders** | **Walk-On Pass.** | **Walk-On Share** | **Total Veh.** | Difference to 2010 | % Change to 2010 | **Total Riders** | Difference to 2010 | % Change to 2010 | **Walk-On Pass.** | Difference to 2010 | % Change to 2010 | **Walk-On Share** | **Total Veh.** | Difference to 2010 | % Change to 2010 | **Total Riders** | Difference to 2010 | % Change to 2010 | **Walk-On Pass.** | Difference to 2010 | % Change to 2010 | **Walk-On Share** |
| Point Defiance - Tahlequah | 240 | 320 | 70 | 22% | 260 | 20 | 8% | 360 | 40 | 13% | 80 | 10 | 14% | 22% | 260 | 20 | 8% | 370 | 50 | 16% | 100 | 30 | 43% | 27% |
| Vashon - Southworth | 50 | 70 | 10 | 14% | 70 | 20 | 40% | 100 | 30 | 43% | 20 | 10 | 100% | 20% | 100 | 50 | 100% | 150 | 80 | 114% | 20 | 10 | 100% | 13% |
| Fauntleroy - Vashon | 670 | 1,120 | 200 | 18% | 660 | -10 | -1% | 1,150 | 30 | 3% | 230 | 30 | 15% | 20% | 630 | -40 | -6% | 1,060 | -60 | -5% | 170 | -30 | -15% | 16% |
| Fauntleroy - Southworth | 460 | 960 | 260 | 27% | 590 | 130 | 28% | 1,250 | 290 | 30% | 320 | 60 | 23% | 26% | 590 | 130 | 28% | 1,370 | 410 | 43% | 420 | 160 | 62% | 31% |
| **Subtotal** | **1,420** | **2,470** | **540** | **22%** | **1,580** | 160 | 11% | **2,860** | 390 | 16% | **650** | 110 | 20% | **23%** | **1,580** | 160 | 11% | **2,950** | 480 | 19% | **710** | 170 | 31% | **24%** |
| Seattle - Southworth Passenger Only[2] | N/A | 20 | 20 | 100% | N/A | N/A | N/A | 30 | 10 | 50% | 30 | 10 | 50% | 100% | N/A | N/A | N/A | 30 | 10 | 50% | 30 | 10 | 50% | 100% |
| Seattle - Vashon Passenger Only | N/A | 90 | 90 | 100% | N/A | N/A | N/A | 120 | 30 | 33% | 120 | 30 | 33% | 100% | N/A | N/A | N/A | 220 | 130 | 144% | 220 | 130 | 144% | 100% |
| **Subtotal** | | **110** | **110** | **100%** | | | | **150** | 40 | 36% | **150** | 40 | 36% | **100%** | | | | **250** | 140 | 127% | **250** | 140 | 127% | **100%** |
| Seattle - Bremerton | 440 | 1,730 | 1,060 | 61% | 470 | 30 | 7% | 1,830 | 100 | 6% | 1,090 | 30 | 3% | 60% | 570 | 130 | 30% | 2,160 | 430 | 25% | 1,270 | 210 | 20% | 59% |
| Seattle - Bainbridge Island | 1,060 | 4,290 | 2,660 | 62% | 1,290 | 230 | 22% | 5,210 | 920 | 21% | 3,170 | 510 | 19% | 61% | 1,540 | 480 | 45% | 5,970 | 1,680 | 39% | 3,480 | 820 | 31% | 58% |
| Edmonds - Kingston | 1,340 | 2,450 | 390 | 16% | 1,400 | 60 | 4% | 2,650 | 200 | 8% | 490 | 100 | 26% | 18% | 1,380 | 40 | 3% | 2,780 | 330 | 13% | 670 | 280 | 72% | 24% |
| **Subtotal** | **2,840** | **8,470** | **4,110** | **49%** | **3,160** | 320 | 11% | **9,690** | 1,220 | 14% | **4,750** | 640 | 16% | **49%** | **3,490** | 650 | 23% | **10,910** | 2,440 | 29% | **5,420** | 1,310 | 32% | **50%** |
| Mukilteo - Clinton | 1,050 | 2,110 | 510 | 24% | 1,140 | 90 | 9% | 2,430 | 320 | 15% | 660 | 150 | 29% | 27% | 1,160 | 110 | 10% | 2,720 | 610 | 29% | 910 | 400 | 78% | 33% |
| Port Townsend - Keystone | 170 | 410 | 20 | 5% | 210 | 40 | 24% | 520 | 110 | 27% | 30 | 10 | 50% | 6% | 280 | 110 | 65% | 690 | 280 | 68% | 50 | 30 | 150% | 7% |
| **Subtotal** | **1,220** | **2,520** | **530** | **21%** | **1,350** | 130 | 11% | **2,950** | 430 | 17% | **690** | 160 | 30% | **23%** | **1,440** | 220 | 18% | **3,410** | 890 | 35% | **960** | 430 | 81% | **28%** |
| **Total** | **5,480** | **13,570** | **5,290** | **39%** | **6,090** | 610 | 11% | **15,650** | 2,080 | 15% | **6,240** | 950 | 18% | **40%** | **6,510** | 1,030 | 19% | **17,520** | 3,950 | 29% | **7,340** | 2,050 | 39% | **42%** |
| **Anacortes-San Juan Islands** | | | | | | | | | | | | | | | | | | | | | | | | |
| All Vessels To/From Anacortes[3] | 1,060 | 2,140 | 230 | 11% | 1,230 | 170 | 16% | 2,470 | 330 | 15% | 260 | 30 | 13% | 11% | 1,400 | 340 | 32% | 2,920 | 780 | 36% | 400 | 170 | 74% | 14% |
| Inter-Island Vessel Only[2] | 100 | 240 | 50 | 21% | 140 | 40 | 40% | 320 | 80 | 33% | 70 | 20 | 40% | 22% | 160 | 60 | 60% | 370 | 130 | 54% | 80 | 30 | 60% | 22% |
| Anacortes/San Juan islands-Sidney, B.C.[3] | 40 | 140 | 20 | 14% | 40 | 0 | 0% | 160 | 20 | 14% | 20 | 0 | 0% | 13% | 50 | 10 | 25% | 170 | 30 | 21% | 20 | 0 | 0% | 12% |
| | | | | | | | | | 0 | | | | | | | | | | | | | | | |
| **Total** | **1,200** | **2,520** | **300** | **12%** | **1,410** | 210 | 18% | **2,950** | 430 | 17% | **350** | 50 | 17% | **12%** | **1,610** | 410 | 34% | **3,460** | 940 | 37% | **500** | 200 | 67% | **14%** |
| **Grand Total** | **6,680** | **16,090** | **5,590** | **35%** | **7,500** | 820 | 12% | **18,600** | 2,510 | 16% | **6,590** | **1,000** | 18% | **35%** | **8,120** | 1,440 | 22% | **20,980** | 4,890 | 30% | **7,840** | **2,250** | 40% | **37%** |

[1]Ridership estimates were derived based on applying implied growth to actual base year (2006) ridership on each route. Mode split estimates for San Juan Islands routes required a post-processing step because of inadequate survey data for this market.
[2]This route reflects transfer connection on Vashon Island between Seattle-Vashon Passenger-Only and Southworth-Vashon routes.
[3]Represents daily ridership for the San Jaun routes.

## Table 2.3c - Year 2010, 2020 & 2030 PM Peak (3:00-7:00) Weekday Ferry Ridership Estimates[1] by Boarding Method (Eastbound)

**- Baseline Alternative -**

| | 2010 | | | | 2020 | | | | | | | | | | 2030 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ferry Route** | **Total Veh.** | **Total Riders** | **Walk-On Pass.** | **Walk-On Share** | **Total Veh.** | **Difference to 2010** | **% Change to 2010** | **Total Riders** | **Difference to 2010** | **% Change to 2010** | **Walk-On Pass.** | **Difference to 2010** | **% Change to 2010** | **Walk-On Share** | **Total Veh.** | **Difference to 2010** | **% Change to 2010** | **Total Riders** | **Difference to 2010** | **% Change to 2010** | **Walk-On Pass.** | **Difference to 2010** | **% Change to 2010** | **Walk-On Share** |
| Point Defiance - Tahlequah | 60 | 90 | 10 | 11% | 60 | 0 | 0% | 100 | 10 | 11% | 20 | 10 | 100% | 20% | 70 | 10 | 17% | 110 | 20 | 22% | 10 | 0 | 0% | 9% |
| Vashon - Southworth | 50 | 70 | 0 | 0% | 70 | 20 | 40% | 90 | 20 | 29% | 0 | 0 | N/A | 0% | 110 | 60 | 120% | 130 | 60 | 86% | 10 | 10 | N/A | 8% |
| Fauntleroy - Vashon | 610 | 1,100 | 180 | 16% | 640 | 30 | 5% | 1,170 | 70 | 6% | 180 | 0 | 0% | 15% | 700 | 90 | 15% | 1,270 | 170 | 15% | 180 | 0 | 0% | 14% |
| Fauntleroy - Southworth | 140 | 180 | 10 | 6% | 160 | 20 | 14% | 210 | 30 | 17% | 10 | 0 | 0% | 5% | 150 | 10 | 7% | 210 | 30 | 17% | 10 | 0 | 0% | 5% |
| **Subtotal** | **860** | **1,440** | **200** | **14%** | **930** | 70 | 8% | **1,570** | 130 | 9% | **210** | 10 | 5% | **13%** | **1,030** | 170 | 20% | **1,720** | 280 | 19% | **210** | 10 | 5% | **12%** |
| Seattle - Southworth Passenger Only[2] | N/A | 0 | 0 | N/A | N/A | N/A | N/A | 0 | 0 | N/A | 0 | 0 | N/A | N/A | N/A | N/A | N/A | 0 | 0 | N/A | 0 | 0 | N/A | N/A |
| Seattle - Vashon Passenger Only | N/A | 30 | 30 | 100% | N/A | N/A | N/A | 30 | 0 | 0% | 30 | 0 | 0% | 100% | N/A | N/A | N/A | 50 | 20 | 67% | 50 | 20 | 67% | 100% |
| **Subtotal** | | **30** | **30** | **100%** | | | | **30** | 0 | 0% | **30** | 0 | 0% | **100%** | | | | **50** | 20 | 67% | **50** | 20 | 67% | **100%** |
| Seattle - Bremerton | 330 | 600 | 180 | 30% | 350 | 20 | 6% | 640 | 40 | 7% | 200 | 20 | 11% | 31% | 400 | 70 | 21% | 730 | 130 | 22% | 210 | 30 | 17% | 29% |
| Seattle - Bainbridge Island | 630 | 1,060 | 150 | 14% | 660 | 30 | 5% | 1,120 | 60 | 6% | 170 | 20 | 13% | 15% | 770 | 140 | 22% | 1,330 | 270 | 25% | 200 | 50 | 33% | 15% |
| Edmonds - Kingston | 650 | 1,010 | 70 | 7% | 850 | 200 | 31% | 1,320 | 310 | 31% | 80 | 10 | 14% | 6% | 880 | 230 | 35% | 1,420 | 410 | 41% | 100 | 30 | 43% | 7% |
| **Subtotal** | **1,610** | **2,670** | **400** | **15%** | **1,860** | 250 | 16% | **3,080** | 410 | 15% | **450** | 50 | 13% | **15%** | **2,050** | 440 | 27% | **3,480** | 810 | 30% | **510** | 110 | 28% | **15%** |
| Mukilteo - Clinton | 670 | 1,010 | 30 | 3% | 780 | 110 | 16% | 1,170 | 160 | 16% | 40 | 10 | 33% | 3% | 880 | 210 | 31% | 1,310 | 300 | 30% | 40 | 10 | 33% | 3% |
| Port Townsend - Keystone | 190 | 410 | 40 | 10% | 240 | 50 | 26% | 520 | 110 | 27% | 50 | 10 | 25% | 10% | 310 | 120 | 63% | 700 | 290 | 71% | 100 | 60 | 150% | 14% |
| **Subtotal** | **860** | **1,420** | **70** | **5%** | **1,020** | 160 | 19% | **1,690** | 270 | 19% | **90** | 20 | 29% | **5%** | **1,190** | 330 | 38% | **2,010** | 590 | 42% | **140** | 70 | 100% | **7%** |
| **Total** | **3,330** | **5,560** | **700** | **13%** | **3,810** | 480 | 14% | **6,370** | 810 | 15% | **780** | 80 | 11% | **12%** | **4,270** | 940 | 28% | **7,260** | 1,700 | 31% | **910** | 210 | 30% | **13%** |
| **Anacortes-San Juan Islands** | | | | | | | | | | | | | | | | | | | | | | | | |
| All Vessels To/From Anacortes[3] | 1,060 | 2,140 | 230 | 11% | 1,230 | 170 | 16% | 2,470 | 330 | 15% | 260 | 30 | 13% | 11% | 1,400 | 340 | 32% | 2,920 | 780 | 36% | 400 | 170 | 74% | 14% |
| Inter-Island Vessel Only[2] | 100 | 240 | 50 | 21% | 140 | 40 | 40% | 320 | 80 | 33% | 70 | 20 | 40% | 22% | 160 | 60 | 60% | 370 | 130 | 54% | 80 | 30 | 60% | 22% |
| Anacortes/San Juan islands-Sidney, B.C.[3] | 40 | 140 | 20 | 14% | 40 | 0 | 0% | 160 | 20 | 14% | 20 | 0 | 0% | 13% | 50 | 10 | 25% | 170 | 30 | 21% | 20 | 0 | 0% | 12% |
| | | | | | | | | | 0 | | | | | | | | | | | | | | | |
| **Total** | **1,200** | **2,520** | **300** | **12%** | **1,410** | 210 | 18% | **2,950** | 430 | 17% | **350** | 50 | 17% | **12%** | **1,610** | 410 | 34% | **3,460** | 940 | 37% | **500** | 200 | 67% | **14%** |
| **Grand Total** | **4,530** | **8,080** | **1,000** | **12%** | **5,220** | 690 | 15% | **9,320** | 1,240 | 15% | **1,130** | **130** | 13% | **12%** | **5,880** | 1,350 | 30% | **10,720** | 2,640 | 33% | **1,410** | **410** | 41% | **13%** |

[1]Ridership estimates were derived based on applying implied growth to actual base year (2006) ridership on each route. Mode split estimates for San Juan Islands routes required a post-processing step because of inadequate survey data for this market.
[2]This route reflects transfer connection on Vashon Island between Seattle-Vashon Passenger-Only and Southworth-Vashon routes.
[3]Represents daily ridership for the San Jaun routes.

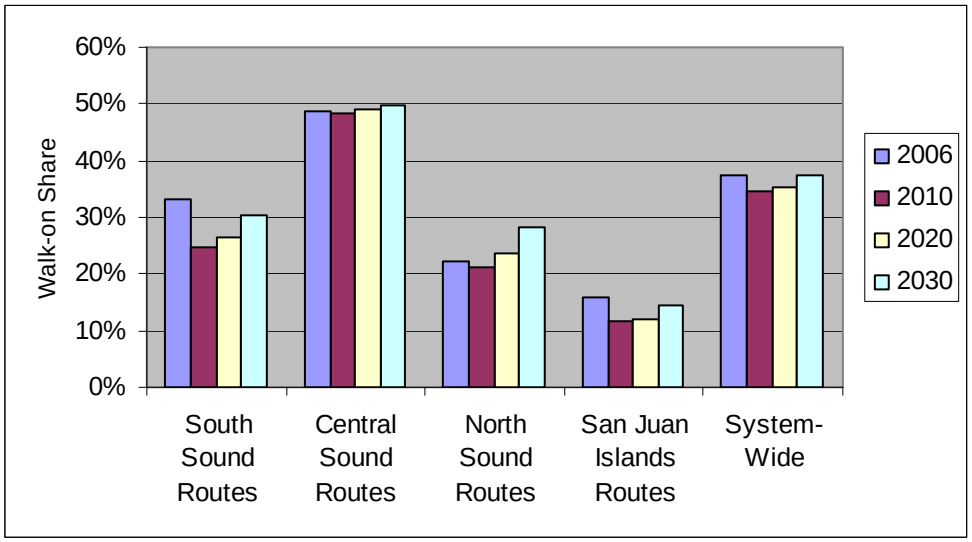
Table 2.3d highlights system-wide PM peak ridership demand and mode share estimates. Estimated system-wide walk-on share has slightly decreased in the intermediate 2010 and 2020 years and comes within 1% of base year 30% walk-on share in 2030.

**Table 2.3d - System-Wide PM Peak Baseline Ridership Demand & Mode Share Estimates**

| | | | | | 2006 - 2030 | | 2010 - 2030 | |
|---|---|---|---|---|---|---|---|---|
| | 2006 | 2010 | 2020 | 2030 | % Growth | % Annual Growth | % Growth | % Annual Growth |
| Walk-on | 6,960 | 6,565 | 7,720 | 9,270 | 33% | 1.20% | 41% | 1.74% |
| Auto-Board (Drivers+Passengers) | 16,240 | 17,635 | 20,280 | 22,630 | 39% | 1.39% | 28% | 1.25% |
| **Total Riders** | **23,200** | **24,200** | **28,000** | **31,900** | **38%** | **1.34%** | **32%** | **1.39%** |
| Walk-on Share | 30% | 27% | 28% | 29% | | | | |
| Auto-Board Share | 70% | 73% | 72% | 71% | | | | |
| **Average Auto Occupancy (AVO)** | **1.52** | **1.57** | **1.59** | **1.61** | **6%** | **0.24%** | **3%** | **0.13%** |

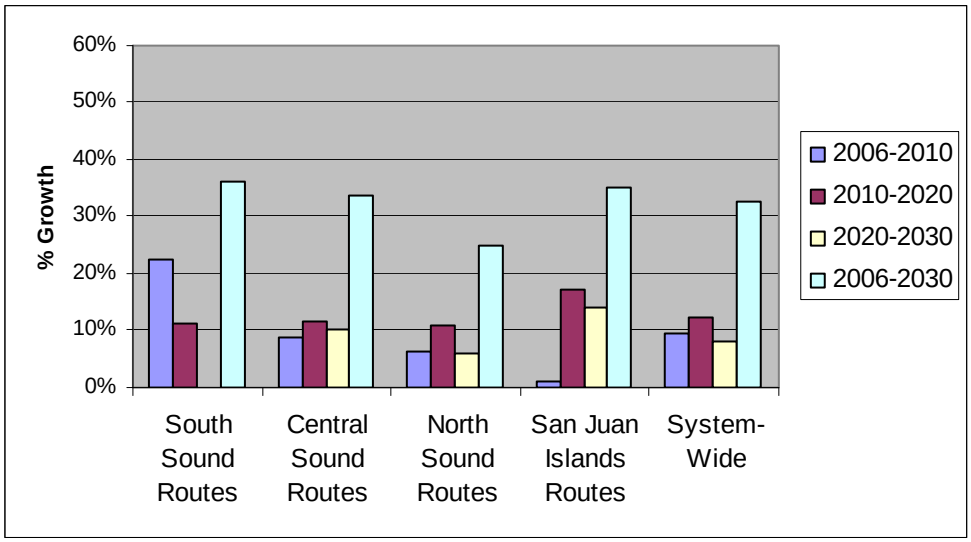
Westbound walk-on share estimates are highlighted in Figure 2.3a. Share of walk-on ridership is most pronounced for the Central Sound Routes (about 50%) and estimated to remain constant between 2006 and 2030. System-wide walk-on share in 2030 is estimated to be about 37%, similar to base year walk-on share as shown in Figure 2.3a.

**Figure 2.3a - Baseline PM Peak Walk-on Share Estimates - Westbound**




An estimate of growth profile in vehicle-board is shown in Figure 2.3b for the westbound direction. This figure indicated that the rate of growth in vehicle-board in peak direction is over 30% (or over 1% on the average annual basis) between 2006 and 2030 for each market, except for North Sound Routes, which is about 25% growth.

**Figure 2.3b - Baseline PM Peak Growth Estimates in Vehicle-Board (Westbound)**




Baseline ridership demand estimates presented above were thoroughly reviewed and evaluated by the peer review team members. Consensus was reached by the peer review team that they are reasonable to support the LRSP development process.

## 3.0 RIDERSHIP FORECASTING ANALYSIS - "RECONCILIATION" BETWEEN PLANNING & REVENUE MODELS

This section presents the methodology used to develop post-model factors for expanding weekday PM peak period baseline forecasts from the WSF Planning Model to monthly and annual ridership forecasts; in other words, a way to expand the results for peak period forecasts to a forecast of total ridership for all times and all routes. PM peak period-to-monthly expansion factors are provided, as well as total annual and average annual daily ridership forecasts by route. Finally, the annual ridership forecasts are compared with annual ridership forecasts derived from the WSF Revenue Model.

### 3.1 Expansion Factor Development and Application

Expansion factors were developed by calculating the ratios between Weekday PM Peak Period ridership from the 2006 Base Year model and historical monthly ridership for 2006, retrieved from WSF point-of-sale fare collection data. This was done for each month and for each route, by two broad fare categories (vehicle driver fares and walk-on / in-vehicle passenger fares), with both directions combined. An example of this calculation is shown below for the Seattle – Bainbridge Island route.

2006 "count" for typical weekday PM peak vehicles/drivers (westbound): 1,682

January 2006 actual vehicles/drivers: 162,002

Typical Weekday (to January) Expansion Factor for vehicles/drivers:

162,002 / 1,682 = 96.3

The expansion factors were then used to expand 2010, 2020, and 2030 Weekday PM Peak Period ridership forecasts to monthly forecasts, assuming that the expansion factors remain constant over time. An example of this calculation is shown below for the Seattle – Bainbridge Island route.

2020 forecast for typical weekday PM peak vehicles/drivers: 1,943

Estimated expanded forecast for January 2020 vehicles/drivers:

1,943 × 96.3 = 187,111 vehicle drivers

The resulting monthly ridership forecasts, summed for all fare categories, were then summed to estimate total annual ridership forecasts by route.

### 3.2 Results

Table 3.2a provides a comparison of the annual expanded ridership forecasts from the WSF Planning Model with annual ridership forecasts from the WSF Revenue Model, the latter from the June 2008 forecast. As shown in Table 3.2a, the total system-wide 2020 ridership forecasts produced by the two models are within 2% of each other.

It should be noted that while the two models compared in Table 3.2a reflect similar level of service attribute assumptions, the two models are intended to be used for different purposes. Key differences are illustrated in Table 3.2b, in which the two models are compared in the context of their relative resolution, forecast emphasis, horizon continuity, and update frequency.

The WSF Planning Model is designed to predict directional demand for travel for the PM peak period within a typical weekday, for two fare categories. Inputs to the forecast are limited to two or three horizon years. In contrast, the WSF Revenue Model is designed to forecast ridership and resulting revenue for monthly, quarterly and/or annual periods by six fare categories. It has more precision by fare category but its more aggregated time resolution does not identify any directional differences. The Revenue Model is designed to react to economic and demographic inputs that are updated quarterly, and the resolution of those inputs allows for projections for each month of the forecast horizon.

**Table 3.2b - Model Comparison: WSF Planning Model vs. Revenue Model**

| | WSF Planning Model | Revenue Model |
|---|---|---|
| Ridership estimate period | Typical weekday PM Peak by route | Monthly, quarterly, and annual ridership by route |
| Fares | 3 modes over 2 blended fare categories | 6 fare categories |
| Forecast Horizon | Every 10 years (2010, 2020,2030) | Monthly, Quarterly, Yearly |
| Forecast Frequency | Typically every 1 to 3 years | Every quarter |

## Table 3.2a - Ridership Forecast Comparison: WSF Planning Model vs. WSF Revenue Model (June 2008 Forecast)

| | Total Ridership | | | | Vehicle / Driver Fare Ridership | | | | Passenger Fare Ridership | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Ridership by Forecasting Model*** | ***CY 2006**** | ***FY 2010*** | ***FY 2020*** | ***FY 2030*** | ***CY 2006*** | ***FY 2010*** | ***FY 2020*** | ***FY 2030*** | ***CY 2006**** | ***FY 2010*** | ***FY 2020*** | ***FY 2030*** |
| Planning Model – PM Peak Total | 22,910 | 24,000 | 27,720 | 31,410 | 10,690 | 11,200 | 12,690 | 13,960 | 12,220 | 12,800 | 15,020 | 17,440 |
| Planning Model – Expanded Annual Totals | 23,809,700 | 25,113,000 | 29,011,000 | 32,693,000 | 10,855,500 | 11,441,000 | 12,904,000 | 14,082,000 | 12,954,200 | 13,672,000 | 16,107,000 | 18,611,000 |
| Revenue Model – Annual Totals | 23,809,700 | 24,391,700 | 28,716,800 | N/A | 10,855,500 | 10,624,800 | 12,368,000 | N/A | 12,954,200 | 13,766,900 | 16,348,900 | N/A |
| Revenue Model – Annual Totals (Unconstrained) | 23,809,700 | 24,618,000 | 29,491,000 | N/A | 10,855,500 | 10,710,900 | 12,990,000 | N/A | 12,954,200 | 13,907,100 | 16,501,000 | N/A |

| | Total Ridership | | | | Vehicle / Driver Fare Ridership | | | | Passenger Fare Ridership | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Percentage Growth from CY 2006 by Forecasting Model*** | ***% Change Relative to CY 2006 >*** | ***CY 2006 – FY 2010*** | ***CY 2006 – FY 2020*** | ***CY 2006 – FY 2030*** | ***% Change Relative to CY 2006 >*** | ***CY 2006 – FY 2010*** | ***CY 2006 – FY 2020*** | ***CY 2006 – FY 2030*** | ***% Change Relative to CY 2006 >*** | ***CY 2006 – FY 2010*** | ***CY 2006 – FY 2020*** | ***CY 2006 – FY 2030*** |
| Planning Model – PM Peak Total | | 4.8% | 21.0% | 37.1% | | 4.8% | 18.7% | 30.6% | | 4.7% | 22.9% | 42.7% |
| Planning Model – Expanded Annual Totals | | 5.5% | 21.8% | 37.3% | | 5.4% | 18.9% | 29.7% | | 5.5% | 24.3% | 43.7% |
| Revenue Model – Annual Totals | | 2.4% | 20.6% | N/A | | -2.1% | 13.9% | N/A | | 6.3% | 26.2% | N/A |
| Revenue Model – Annual Totals (Unconstrained) | | 3.4% | 23.9% | N/A | | -1.3% | 19.7% | N/A | | 7.4% | 27.4% | N/A |

| | Total Ridership | | | | Vehicle / Driver Fare Ridership | | | | Passenger Fare Ridership | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Planning Model Annual Differences from Revenue Model*** | ***Difference re: Revenue Model >*** | ***FY 2010*** | ***FY 2020*** | ***FY 2030*** | ***Difference re: Revenue Model >*** | ***FY 2010*** | ***FY 2020*** | ***FY 2030*** | ***Difference re: Revenue Model >*** | ***FY 2010*** | ***FY 2020*** | ***FY 2030*** |
| Planning vs. Revenue | | 721,300 | 294,200 | N/A | | 816,200 | 536,000 | N/A | | (94,900) | (241,900) | N/A |
| % Planning vs. Revenue | | 3.0% | 1.0% | N/A | | 7.7% | 4.3% | N/A | | (0.7%) | (1.5%) | N/A |
| Planning vs. Revenue (Unconstrained) | | 495,000 | (480,000) | N/A | | 730,100 | (86,000) | N/A | | (235,100) | (394,000) | N/A |
| % Planning vs. Revenue (Unconstrained) | | 2.0% | (1.6%) | N/A | | 6.8% | (0.7%) | N/A | | (1.7%) | (2.4%) | N/A |

**NOTES:**

* Excludes Seattle-Vashon passenger-only service riders, including those transferrring to/from Southworth at Vashon, since this service will not be operated by WSF after FY 2008.

— The Revenue Model produces a capacity-constrained demand forecast whereby some vehicles are not served during times when demand exceeds capacity. Unconstrained demand is also presented for comparison.

— The sum of ridership by fare categories by forecast year may not match total ridership due to rounding.

## 4.0 RIDERSHIP FORECASTING ANALYSIS - SUMMER PEAK PERIODS & RECREATIONAL TRAVEL

This section presents the methodology used to develop post-model factors for converting weekday PM peak period baseline forecasts from the WSF Planning Model to ridership demand for other peak travel times. In addition, it also covers the development of procedures for assessing growth in recreational travel and adjusting Planning Model forecasts to reflect the unique growth trend in recreational trips. Per a recommendation from the WSF forecasting review team, the adjusted forecasts accounting for the unique recreational travel trends are intended to be used as a sensitivity test to provide some additional context in WSF system planning as to the range of possible outcomes.

### 4.1 Analysis Objectives

This analysis included two major objectives:

1. Develop post-model factors for converting weekday PM peak period model forecasts to ridership demand for other peak travel times

2. Develop procedures for assessing growth in recreational travel and adjusting the Planning Model baseline forecasts to reflect unique growth trend(s) of recreational travel

    a. Estimate recreational share of total travel

    b. Estimate growth trend for recreational travel

### 4.2 Background

Engrossed Substitute House Bill (ESHB) 2358 requires that survey data be collected by WSF biennially to help inform level of service, operational, pricing, and investment decisions. Among other items, the survey must collect information on recreational use:

> *"The Commission must, with the involvement of the WSDOT, conduct a survey of ferry users to inform level of service, operational, pricing, planning, and investment decisions. Information is to be gathered on recreational users, vehicle and walk-on customers, freight movement, and reactions to possible operational strategies and pricing policies."*
>
> *Final Bill Report, ESHB 2358*

A WSF working group discussed what may constitute "recreational use." Ferry travel can be broadly categorized into two types of trips: "maintenance trips", e.g., commuting, appointments, regular shopping; and "discretionary trips". For the purpose of this analysis, recreational users, including tourists, were defined as a subset of the discretionary trip category.

The WSF Planning Model produces PM peak period ridership forecasts for a typical weekday. Given an interest in how various peak time periods differ from a typical weekday, the working group agreed that post-model conversion factors would be developed to provide ridership demand estimates for two categories of peak travel. The two categories are:

- A peak summer season weekday during the highest volume 4-hour PM peak period in each travel direction; and

- A peak summer season weekend day during the highest volume 4-hour peak period experienced on either a Saturday or Sunday in each travel direction.

## 4.3 Data Assembly and Analysis

### Summer Peak Travel Periods

To estimate summer peak period ridership demand, it is necessary to factor up from the typical weekday conditions. The WSF ridership database was mined to yield weekend and weekday ridership by route, direction and vessel sailing time. For summer weekdays, ticket sales data were assembled and summarized for all Tuesdays, Wednesdays, and Thursdays in the months of July and August 2006. For summer weekends, data were assembled and summarized for all Saturdays and Sundays for the same months.

*Identification of Peak Periods*

Based on the assembled ticket sales data, the highest four hours of ridership was identified for each route by direction for weekdays, Saturdays, and Sundays during the peak summer months of July and August 2006. Table 4.3a shows the 4-hour peak periods that were identified for each route for peak direction volumes.

**Table 4.3a - Summer Weekday and Weekend 4-hour Peak Periods**

| Route | Dir | 4-hr Peak Period* | | |
|---|---|---|---|---|
| | | Weekday | Saturday | Sunday |
| Point Defiance - Tahlequah | Westbound | 2:40pm - 6:40pm | 2:40pm - 6:40pm | |
| | Eastbound | n/a | | n/a |
| Vashon - Southworth | Westbound | n/a | | n/a |
| | Eastbound | 6:05am - 10:05am | 12:00pm - 4:00pm | |
| Fauntleroy - Vashon | Westbound | 4:00pm - 8:00pm | 10:10am - 2:10pm | |
| | Eastbound | n/a | | n/a |
| Fauntleroy - Southworth | Westbound | 3:35pm - 7:35pm | 8:35am - 12:35pm | |
| | Eastbound | 4:30am - 8:30am | | 1:10pm - 5:10pm |
| Seattle - Bremerton | Westbound | 3:00pm - 7:00pm | 3:00pm - 7:00pm | |
| | Eastbound | 6:20am - 10:20am | | 3:00pm - 7:00pm |
| Seattle - Bainbridge Island | Westbound | 3:00pm - 7:00pm | 10:40am - 2:40pm | |
| | Eastbound | 6:20am - 10:20am | | 6:30pm - 10:30pm |
| Edmonds - Kingston | Westbound | 2:30pm - 6:30pm | 10:45am - 2:45pm | |
| | Eastbound | 2:15pm - 6:15pm | | 10:50am - 2:50pm |
| Mukilteo - Clinton | Westbound | 3:00pm - 7:00pm | 10:30am - 2:30pm | |
| | Eastbound | 7:00am - 11:00am | | 3:30pm - 7:30pm |
| Port Townsend - Keystone | Westbound | 11:15am - 3:15pm | 11:15am - 3:15pm | |
| | Eastbound | 1:30pm - 5:30pm | | 2:15pm - 6:15pm |
| San Juan Domestic Routes | Westbound | All Day | All Day | |
| | Eastbound | All Day | | All Day |
| Anacortes/San Juans-Sidney, B.C. | Westbound | All Day | All Day | |
| | Eastbound | All Day | | All Day |

Note: "n/a" indicates that TCC ticket sales information was not available for this direction

* Peak period for San Juan Island routes is all day

*Estimation of Missing Data*

Vehicle/driver fares are generally collected in both directions except for Vashon Island and the San Juan Island destinations, where they are collected in the “to island” (generally westbound) direction for a round-trip. Passenger fares are typically collected in the westbound or to island direction for a round trip. As a result, there is no passenger, in some cases, no vehicle/driver ridership data collected for the eastbound / from island vessel sailings. For cases where such ridership data are not available, ridership demand must be estimated. These cases included:

- Eastbound / From Island Weekday Peak Periods: For the Vashon Island routes, from-island ridership data is not collected, so the from island peak period volumes were assumed to be equal to the to island peak period volumes. For other routes, vehicle/driver fare data is available, so eastbound peak period passenger volumes were assumed to have the same proportional relationship to peak vehicle/driver volumes as in the westbound peak period.

- Eastbound Sunday Peak: Similar to the weekday case, for Vashon Island routes, from-island data is not collected, so Sunday from island peak period volumes were assumed to be equal to Saturday to island peak period volumes. For other routes, vehicle/driver fare data is available, so Sunday eastbound peak passenger volumes were assumed to have the same proportional relationship to peak vehicle/driver volumes as in the Saturday westbound peak period.

- Anacortes - San Juan Island routes: From-island or eastbound ridership data are not generally collected. Sunday eastbound daily ridership was assumed to be 20% greater than Saturday westbound daily ridership. For these routes, the peak period was defined as the entire day.

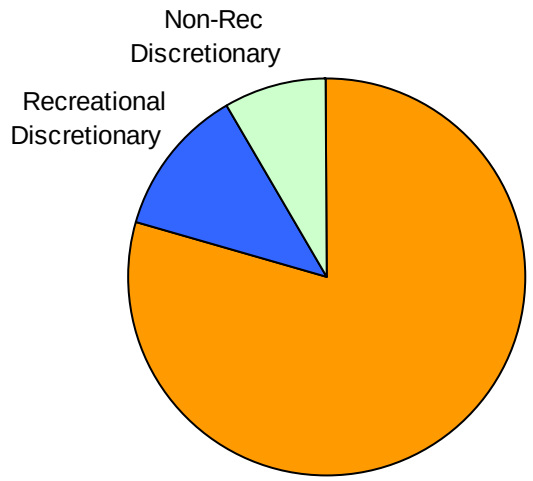
### Recreational Travel Adjustment Sensitivity Test

The WSF Planning Model forecasts are driven from land use projections about where population growth, housing and employment will be located in the future. Arguably, recreational travel may not be as closely related to future land use as other discretionary and maintenance (or non-discretionary) trip purposes, defined in Table 4.3a. As such, an alternative method for extracting recreational trips, applying growth and recombining them with the Planning Model projections for other trip purposes was developed. Adjustments to reflect growth in recreational travel involved two major steps: 1) identification of the recreational share of total travel; and, 2) development of a growth rate to apply to that portion of ferry users.

*Recreational Share of Total Travel*

For the purpose of this analysis, recreational travel was assumed to be a subset of discretionary travel, which, along with maintenance trips, comprises total WSF ridership. Figure 4.3a illustrates the breakdown of WSF trip use types into maintenance and discretionary, and, further, the breakdown of discretionary travel into recreational and non-recreational.

**Figure 4.3a - Illustration of Recreational Travel Relative to Total Travel**




Data from the 2006 WSF travel survey were used to assess discretionary and the recreational subset shares of typical weekday PM peak period ridership as identified from existing 2006 ridership data. Table 4.3b shows how trip purpose categories from the 2006 travel survey instrument were defined for the purpose of this analysis.

**Table 4.3a - Definition of Discretionary and Recreational**

| Survey Response | Trip Purpose Category | | |
|---|---|---|---|
| | Maintenance | Discretionary (Recreational) | Discretionary (Non-Recreational) |
| I am going to/from my regular workplace | ✓ | | |
| Business-related activity | ✓ | | |
| School | ✓ | | |
| Medical appointment | ✓ | | |
| Sightseeing | | ✓ | |
| Special Event | | ✓ | |
| Shopping | | | ✓ |
| Social or recreational activity | | ✓* | ✓* |
| Personal business/errand | ✓ | | |

Source: 2006 WSF Travel Survey

* Responses marked "social or recreational" were split evenly between Recreational and Non-Recreational

Note: if respondent indicated both a Maintenance and Discretionary trip purpose, then Maintenance was assumed

Due to limited sample sizes at the route level, data were grouped by routes into Vashon Island, South/Central Kitsap, Central/North Kitsap, North Sound, San Juans domestic, and International route groups. The weekday survey data was analyzed to determine a discretionary share and a recreational share for each route group.

The discretionary share of total trips and the recreational share of discretionary trips were ultimately used to arrive at recreational share of total trip. However, equivalent trip purpose data were not available for the summer peak periods of interest. Therefore, assumptions were made and procedures were developed to estimate the recreational travel shares for summer weekend peak periods and summer weekday peak periods.

Specifically, the percentage increase in ridership paying the full posted fare from average annual (typical) to summer (July/August) was used as a proxy for the summer increase in the discretionary travel share of total ridership. The assumption here is that any change in maintenance trips would be more likely than not to involve a discounted fare available to frequent users, especially during the summer when the peak season surcharge creates an extra incentive for relatively frequent users to avoid the full fare. A review of the limited summer survey data available from 1993 and 1999 supported and corroborated the use of the increase in full fare ticket sales as a proxy for the increase in discretionary trips. Furthermore, it was assumed that the summer growth in discretionary travel is composed predominantly of recreational trips, especially on weekends.

Table 4.3b shows the shares of total trips that are discretionary, Table 4.3c shows the shares of discretionary trips that are recreational, and Table 4.3d summarizes the resulting shares of total trips that represent recreational travel. Readily available data from the existing customer survey data could not provide appropriate information to facilitate identifying differences in discretionary and maintenance trips during all peak periods. This analysis, however, provided relevant feedback to collect such information with future (customer) surveys.

**Table 4.3b - Percent Discretionary of Total Users**

| Route | % Discretionary of Total | | |
|---|---|---|---|
| | Typical Weekday PM Peak | Summer Weekday Peak | Summer Weekend Peak |
| Point Defiance - Tahlequah | 19% | 28% | 28% |
| Vashon - Southworth | 19% | 28% | 28% |
| Fauntleroy - Vashon | 19% | 28% | 28% |
| Fauntleroy - Southworth | 7% | 10% | 10% |
| Seattle - Bremerton | 7% | 10% | 10% |
| Seattle - Bainbridge Island | 16% | 22% | 22% |
| Edmonds - Kingston | 16% | 22% | 22% |
| Mukilteo - Clinton | 28% | 42% | 42% |
| Port Townsend - Keystone | 28% | 42% | 42% |
| San Juan Domestic Routes | 34% | 67% | 67% |
| Anacortes/San Juans-Sidney, B.C. | 54% | 81% | 81% |

Source: 2006 WSF Travel Survey, 2006 WSF TSS ticket sales data

**Table 4.3c - Percent Recreational of Discretionary Users**

| Route | % Recreational of Discretionary | | |
|---|---|---|---|
| | Typical Weekday PM Peak | Summer Weekday Peak | Summer Weekend Peak |
| Point Defiance - Tahlequah | 58% | 64% | 73% |
| Vashon - Southworth | 58% | 64% | 73% |
| Fauntleroy - Vashon | 58% | 64% | 73% |
| Fauntleroy - Southworth | 73% | 81% | 92% |
| Seattle - Bremerton | 73% | 81% | 92% |
| Seattle - Bainbridge Island | 61% | 67% | 76% |
| Edmonds - Kingston | 61% | 67% | 76% |
| Mukilteo - Clinton | 52% | 58% | 65% |
| Port Townsend - Keystone | 52% | 58% | 65% |
| San Juan Domestic Routes | 62% | 68% | 78% |
| Anacortes/San Juans-Sidney, B.C. | 74% | 81% | 92% |

Source: 2006 WSF Travel Survey, 2006 WSF TSS ticket sales data

**Table 4.3d - Percent Recreational of Total Users**

| Route | % Recreational of Total | | |
|---|---|---|---|
| | Typical Weekday PM Peak | Summer Weekday Peak | Summer Weekend Peak |
| Point Defiance - Tahlequah | 11% | 18% | 20% |
| Vashon - Southworth | 11% | 18% | 20% |
| Fauntleroy - Vashon | 11% | 18% | 20% |
| Fauntleroy - Southworth | 5% | 8% | 9% |
| Seattle - Bremerton | 5% | 8% | 9% |
| Seattle - Bainbridge Island | 10% | 15% | 17% |
| Edmonds - Kingston | 10% | 15% | 17% |
| Mukilteo - Clinton | 14% | 24% | 27% |
| Port Townsend - Keystone | 14% | 24% | 27% |
| San Juan Domestic Routes | 21% | 46% | 52% |
| Anacortes/San Juans-Sidney, B.C. | 40% | 66% | 75% |

Source: 2006 WSF Travel Survey, 2006 WSF TSS ticket sales data

*Recreational Travel Growth*

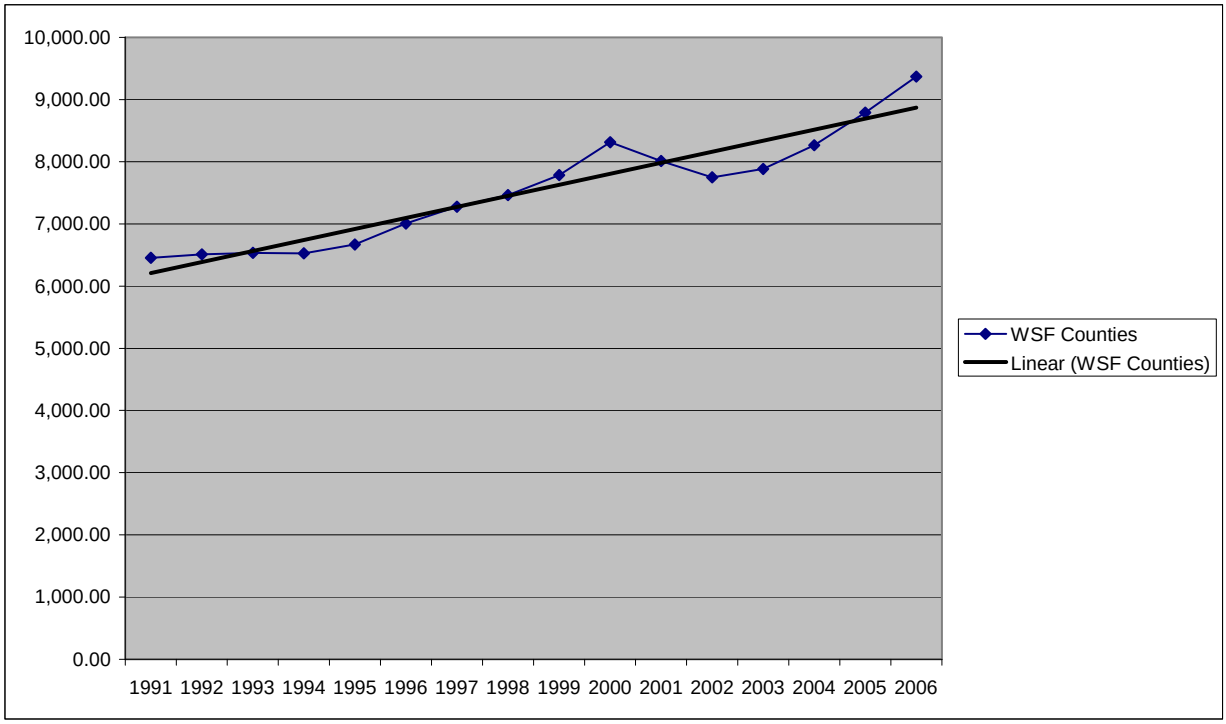
A recreational travel growth trend for ferry riders system-wide was estimated using data from the Washington State Tourism Office.[2] A growth trend for real expenditures in the tourism sector after accounting for inflation was identified from 1991-2006 for the eight counties served by WSF.[3] This was accomplished by calculating total travel spending for the eight counties for each year, converting the amounts to constant 2006 dollars to assess the real changes, and identifying the real growth trend. As described later in more detail, the resulting average annual growth rate for recreational travel of 2.41% per year was then applied to the recreational share of total ridership for each route.

Similar trend analyses were also conducted using travel spending data for just King County and the entire state of Washington. The resulting average annual growth rates of 2.37% and 2.31%, respectively, are similar to the growth rate calculated for the eight counties served by WSF, suggesting that data from King County, by far the largest of the eight counties, is not skewing the results.

[2] Washington State Travel Impacts & Visitor Volume (Dean Runyan Associates, December 2007)

[3] King, Snohomish, Pierce, Kitsap, Island, San Juan, Skagit, Jefferson

**Figure 4.3b - Growth in Travel Spending in Counties Served by WSF 1991-2006 (millions of $)**




Source: Washington State Travel Impacts & Visitor Volume (Dean Runyan Associates, December 2007)
Note: Spending amounts adjusted for inflation

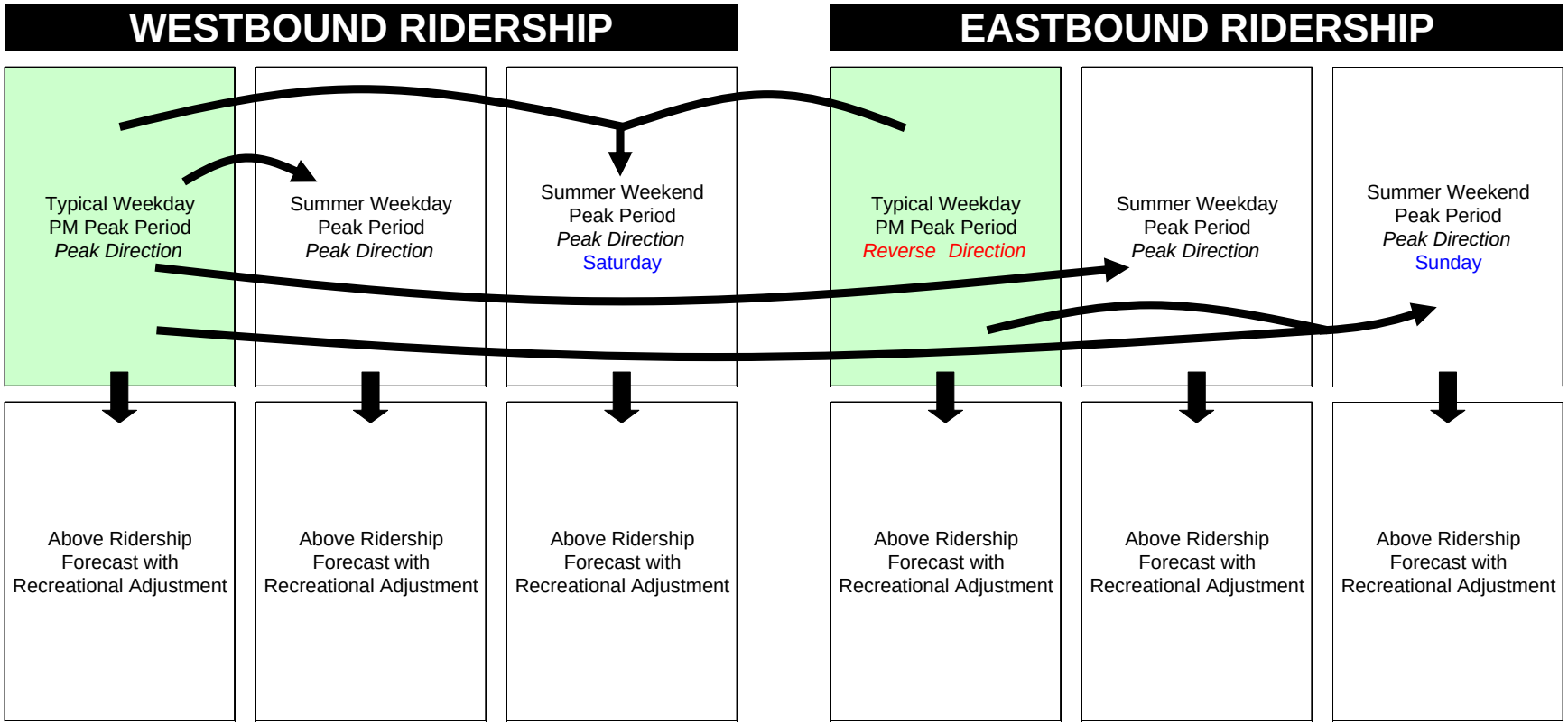
## 4.4 Forecast Processing For Summer Peak Periods and Recreational Travel

This section describes the methodology used to develop conversion factors for factoring from the typical weekday PM peak period (3-7pm) ridership forecasts — as produced by the WSF Planning Model — to Summer Weekday and Summer Weekend peak period ridership. The sensitivity test process to account for a unique growth rate in recreational travel is also documented in this section.

Figure 4.4a on the next page provides an illustration of the general approach taken in typical summer peak periods conversion process as well as for the recreational travel sensitivity test forecast adjustment.

As indicated by the arrows in Figure 4.4a, the conversion to summer peak periods was performed first in all cases, and the recreational travel adjustment is then applied to the periods of interest, as applicable.

**Figure 4.4a - Ridership Conversion and Recreational Adjustment Analysis Flow Chart**




The chart above shows the general approach taken in developing conversion factors for converting from the period modeled in the WSF Planning Model (Typical weekday PM peak period - shown in green boxes) to Summer Weekday and Summer Weekend peak periods. It also shows the approach in adjusting ridership forecasts to reflect growth in recreational travel. As illustrated in the chart, the westbound Typical weekday PM peak period volumes in the Planning Model are in the peak direction of travel, while eastbound PM peak period volumes are in the *reverse* direction of travel. However, the Summer Weekday and Summer Weekend volumes are all peak direction volumes. Therefore, conversion factors for Summer Weekday eastbound (peak direction) volumes were derived from Typical weekday westbound (peak direction) volumes, while conversion factors for Summer Weekend volumes in both directions were derived from an average of westbound and eastbound Typical weekday volumes.

**Conversion to Summer Peak Periods**

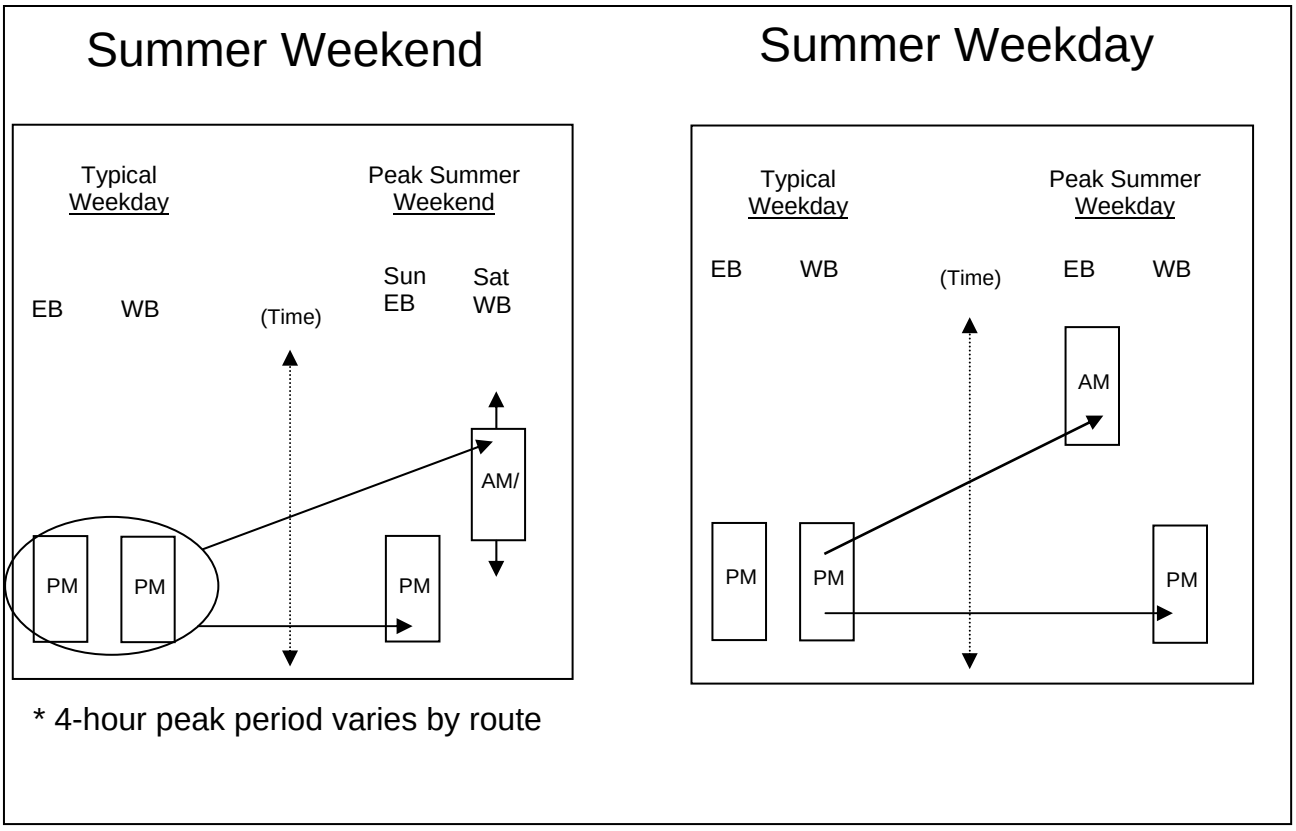
As stated previously, conversion factors were developed for each route, direction, and fare category. Figure 4.4b illustrates the general approach taken for development of conversion factors for peak direction volumes.

The average of eastbound and westbound forecasted ridership in the typical weekday PM peak period were used to derive conversion factors for summer weekend periods, as shown in the left-hand side of Figure 4.4b.

Westbound ridership for the typical weekday PM peak period (the peak travel direction during this time) were used to derive conversion factors for the summer weekday 4-hour peak periods in both directions, as illustrated in the right-hand side of Figure 4.4b.

In converting to the various summer peak periods, the time of day, and for weekends, the day of week were allowed to vary in identifying the 4 hour peak period in each travel direction (see Table 4.4b).

**Figure 4.4b - Development of Conversion Factors for Summer Peak Period Demand**




An example of the development and application of these conversion factors, using passenger fare ridership from the Edmonds - Kingston route, is provided below.

2006 Typical weekday PM peak westbound: 942

2006 Summer Weekday 4 hr peak westbound: 1,106

Typical Weekday-to-Summer Weekday Conversion Factor:

1,106 / 942 = 1.17

2030 Model Forecast for Typical Weekday PM Peak Westbound: 1,405

Estimated 2030 Summer Weekday Peak Westbound:

1,405 × 1.17 = 1,644 passengers

Table 4.4a and Table 4.4b provide the conversion factors used to estimate summer weekday and weekend peak period ridership demand, respectively, from the typical weekday PM peak period ridership forecasts.

**Table 4.4a - Conversion Factors – Typical Weekday PM Peak Period to Summer Weekday 4-Hour Peak**

| | Westbound | | | Eastbound* | | |
|---|---|---|---|---|---|---|
| Route | Vehicles/ Drivers | Passenger Fares | Total Riders | Vehicles/ Drivers | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | 1.33 | 1.59 | 1.43 | 1.33 | 1.59 | 1.43 |
| Vashon - Southworth | 1.44 | 0.39 | 1.09 | 1.44 | 0.39 | 1.09 |
| Fauntleroy - Vashon | 1.28 | 1.51 | 1.39 | 1.28 | 1.51 | 1.39 |
| Fauntleroy - Southworth | 1.08 | 1.13 | 1.11 | 1.12 | 1.17 | 1.15 |
| Seattle - Bremerton | 1.03 | 1.19 | 1.15 | 1.00 | 1.14 | 1.11 |
| Seattle - Bainbridge Island | 1.07 | 1.17 | 1.15 | 0.98 | 1.07 | 1.04 |
| Edmonds - Kingston | 1.10 | 1.17 | 1.14 | 0.98 | 1.05 | 1.01 |
| Mukilteo - Clinton | 1.13 | 1.21 | 1.17 | 1.13 | 1.21 | 1.17 |
| Port Townsend - Keystone | 1.64 | 2.21 | 1.94 | 1.50 | 1.93 | 1.73 |
| San Juan Domestic Routes | 1.30 | 1.99 | 1.64 | 1.30 | 1.99 | 1.64 |
| Anacortes/San Juans-Sidney, B.C. | 3.95 | 4.19 | 4.11 | 3.65 | 3.86 | 3.79 |

* Based on comparison with 2006 Typical Weekday PM Peak Westbound ridership

**Table 4.4b - Conversion Factors – Typical Weekday PM Peak Period to Summer Weekend 4-Hour Peak**

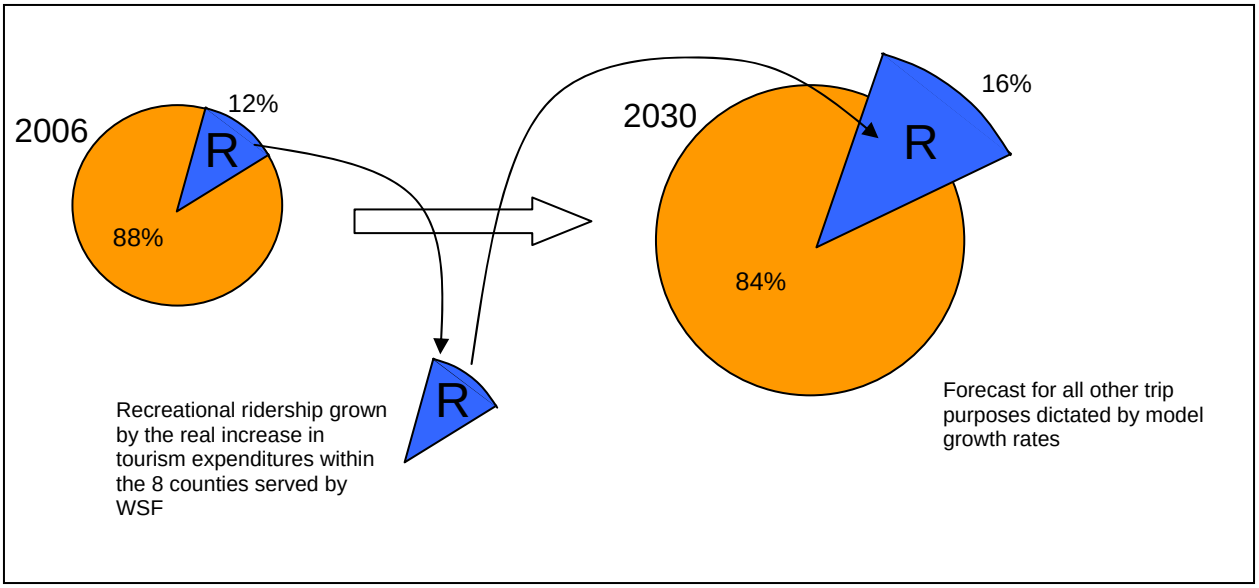
| | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Route | Vehicles/ Drivers | Passenger Fares | Total Riders | Vehicles/ Drivers | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | 1.67 | 3.56 | 2.35 | 1.67 | 3.56 | 2.35 |
| Vashon - Southworth | 1.13 | 2.41 | 1.45 | 1.13 | 2.41 | 1.45 |
| Fauntleroy - Vashon | 1.01 | 1.46 | 1.22 | 1.01 | 1.46 | 1.22 |
| Fauntleroy - Southworth | 1.08 | 1.46 | 1.25 | 1.18 | 1.60 | 1.37 |
| Seattle - Bremerton | 0.88 | 1.62 | 1.39 | 1.50 | 2.75 | 2.35 |
| Seattle - Bainbridge Island | 1.37 | 1.35 | 1.36 | 1.29 | 1.27 | 1.27 |
| Edmonds - Kingston | 1.26 | 2.89 | 1.93 | 1.28 | 2.94 | 1.96 |
| Mukilteo - Clinton | 1.36 | 2.99 | 2.03 | 1.34 | 2.93 | 1.99 |
| Port Townsend - Keystone | 2.16 | 3.15 | 2.69 | 2.68 | 3.49 | 3.12 |
| San Juan Domestic Routes | 1.46 | 3.12 | 2.27 | 1.75 | 3.75 | 2.72 |
| Anacortes/San Juans-Sidney, B.C. | 5.32 | 5.56 | 5.48 | 6.12 | 6.28 | 6.23 |

* Based on comparison with average of 2006 Typical Weekday PM Peak Westbound and Eastbound ridership

## Recreational Travel

The recreational growth factor developed in the analysis described previously was used to adjust the various peak period ridership forecasts for each route. Figure 4.4c illustrates the application of the recreational growth adjustment. As shown in the figure, the recreational growth rate was used as a replacement for model-predicted growth for recreational users only. This was done by removing the recreational trips from the total ferry ridership before forecasting (using the percentages shown previously in Table 4.3d), applying the unique recreational growth rate to that subset, and then combining them back with the ridership forecast for non-recreational trips. Growth for the remainder of the ferry travel (non-recreational trips) was dictated by the Planning Model growth rates.

**Figure 4.4c - Illustration of Recreational Growth Adjustment Process**




The impact of this procedure on total system-wide ridership growth between 2006 and 2030 was an increase from 37% without the recreational adjustment to 42% with the adjustment. Tables 4.4c, 4.4d, and 4.4e show the impact of the recreational growth adjustment for each route for the three categories of peak travel — typical weekday PM peak period, summer weekday peak periods, and summer weekend peak periods, respectively. The percentage changes shown in these tables reflect the recreational adjustments only, independent of the conversion to summer peak periods.

**Table 4.4c - Percent Change with Recreational Adjustment — Typical Weekday PM Peak Period 2030**

| | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Route | Vehicles/ Drivers | Passenger Fares | Total Riders | Vehicles/ Drivers | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | + 5% | + 11% | + 7% | + 11% | + 4% | + 8% |
| Vashon - Southworth | – 2% | – 2% | – 2% | – 0% | – 4% | – 1% |
| Fauntleroy - Vashon | + 6% | + 11% | + 8% | + 4% | + 6% | + 5% |
| Fauntleroy - Southworth | + 0% | – 0% | – 0% | + 5% | – 1% | + 3% |
| Seattle - Bremerton | + 3% | + 3% | + 3% | + 2% | + 1% | + 2% |
| Seattle - Bainbridge Island | + 3% | + 3% | + 3% | + 3% | + 1% | + 2% |
| Edmonds - Kingston | + 3% | + 2% | + 2% | + 7% | + 1% | + 5% |
| Mukilteo - Clinton | + 7% | + 1% | + 4% | + 5% | – 5% | + 1% |
| Port Townsend - Keystone | + 1% | – 3% | – 1% | – 1% | – 2% | – 2% |
| All Vessels To/From Anacortes | + 7% | + 4% | + 5% | + 7% | + 4% | + 5% |
| Inter-Island Vessel Only | + 3% | + 1% | + 1% | + 3% | + 1% | + 1% |
| Anacortes/San Juans-Sidney, B.C. | + 16% | + 5% | + 8% | + 16% | + 5% | + 8% |

**Table 4.4d - Percent Change with Recreational Adjustment — Summer Weekday Peak Period 2030**

| | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Route | Vehicles/ Drivers | Passenger Fares | Total Riders | Vehicles/ Drivers | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | + 9% | + 18% | + 12% | + 9% | + 18% | + 12% |
| Vashon - Southworth | – 3% | – 3% | – 3% | – 3% | – 3% | – 3% |
| Fauntleroy - Vashon | + 9% | + 17% | + 13% | + 9% | + 17% | + 13% |
| Fauntleroy - Southworth | + 1% | – 1% | – 0% | + 1% | – 1% | – 0% |
| Seattle - Bremerton | + 4% | + 5% | + 5% | + 4% | + 5% | + 5% |
| Seattle - Bainbridge Island | + 4% | + 5% | + 5% | + 4% | + 5% | + 5% |
| Edmonds - Kingston | + 4% | + 3% | + 3% | + 4% | + 3% | + 3% |
| Mukilteo - Clinton | + 12% | + 2% | + 6% | + 12% | + 2% | + 6% |
| Port Townsend - Keystone | + 2% | – 5% | – 2% | + 2% | – 5% | – 2% |
| All Vessels To/From Anacortes | + 15% | + 8% | + 10% | + 15% | + 8% | + 10% |
| Inter-Island Vessel Only | + 6% | + 1% | + 3% | + 6% | + 1% | + 3% |
| Anacortes/San Juans-Sidney, B.C. | + 27% | + 8% | + 13% | + 27% | + 8% | + 13% |

**Table 4.4e - Percent Change with Recreational Adjustment — Summer Weekend Peak Period 2030**

| | Westbound | | | Eastbound | | |
|---|---|---|---|---|---|---|
| Route | Vehicles/ Drivers | Passenger Fares | Total Riders | Vehicles/ Drivers | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | + 12% | + 17% | + 15% | + 12% | + 17% | + 15% |
| Vashon - Southworth | – 2% | – 4% | – 3% | – 2% | – 4% | – 3% |
| Fauntleroy - Vashon | + 9% | + 14% | + 12% | + 9% | + 14% | + 12% |
| Fauntleroy - Southworth | + 2% | – 1% | + 0% | + 2% | – 1% | + 0% |
| Seattle - Bremerton | + 4% | + 5% | + 5% | + 4% | + 5% | + 5% |
| Seattle - Bainbridge Island | + 5% | + 5% | + 5% | + 5% | + 5% | + 5% |
| Edmonds - Kingston | + 7% | + 3% | + 4% | + 7% | + 3% | + 4% |
| Mukilteo - Clinton | + 12% | – 0% | + 4% | + 12% | – 0% | + 4% |
| Port Townsend - Keystone | + 0% | – 5% | – 3% | + 0% | – 5% | – 3% |
| All Vessels To/From Anacortes | + 17% | + 9% | + 11% | + 17% | + 9% | + 11% |
| Inter-Island Vessel Only | + 6% | + 1% | + 3% | + 6% | + 1% | + 3% |
| Anacortes/San Juans-Sidney, B.C. | + 31% | + 9% | + 15% | + 31% | + 9% | + 15% |

## 4.5 Results

The tables on the following pages present the ridership forecast results for years 2006, 2020, and 2030, reflecting conversion to the summer peak periods as well as the sensitivity test adjustments for recreational growth. Tables 4.5a, 4.5b, and 4.5c reflect the conversion to summer peak periods only, while Tables 4.5d, 4.5e, 4.5f, and 4.5g show both conversion to summer peak periods and the adjustments for recreational growth.

### Observations

*Data Limitations*

A key assumption in this analysis is the use of fare data to estimate the recreational share of total ferry travel during the summer peak periods. If there is continued interest in understanding if and how recreational travel growth differs from general land use driven trip generation, it is recommended that survey data collected during summer peak travel periods over time be used to provide a better understanding of the true recreational share of total travel by route.

*Impact of Recreational Adjustment*

System-wide, the recreational travel adjustment increases total 2030 model-predicted ridership by the following:

+ 3% (+1,050 on 31,406 riders) for Typical Weekday PM Peak

+ 6% (+3,103 on 50,252 riders) for Summer Weekday 4 hr Peak

+ 6% (+3,810 on 61,595 riders) for Summer Weekend 4 hr Peak

The recreational growth impact varies more widely on a route-level basis. In fact, while most routes show a positive increase in the ridership volume forecast, two routes (Vashon – Southworth and Port Townsend – Keystone) show a reduction in the ridership volume as a result of the recreational growth adjustment. This is because the model-predicted overall ridership growth rates for those routes are higher than the growth trends identified for recreational travel.

## Table 4.5a - 2006 Base Year Ridership Volumes by Fare Category with Conversions to Summer Weekday and Weekend Peak Periods

### WESTBOUND

| Ferry Route | Typical (May) Weekday PM Peak Period / Peak Direction | | | | Summer Weekday Peak Period / Peak Direction | | | | | | Summer Weekend Peak / Peak Direction (Saturday) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | Passenger Fares | % Change from Typical ← | Total Riders | % Change from Typical ← | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | 3-7 pm | 220 | 130 | 350 | 2:40pm - 6:40pm | 290 | *32%* | 210 | *62%* | 500 | *43%* | 2:40pm - 6:40pm | 250 | 290 | 540 |
| Vashon - Southworth | 3-7 pm | 50 | 20 | 70 | PM Peak[3] | 70 | *40%* | 10 | *-50%* | 70 | *0%* | Unknown[4] | 60 | 40 | 100 |
| Fauntleroy - Vashon | 3-7 pm | 540 | 470 | 1,010 | 4:00pm - 8:00pm | 690 | *28%* | 710 | *51%* | 1,400 | *39%* | 10:10am - 2:10pm | 540 | 700 | 1,240 |
| Fauntleroy - Southworth | 3-7 pm | 360 | 400 | 760 | 3:35pm - 7:35pm | 390 | *8%* | 450 | *13%* | 840 | *11%* | 8:35am - 12:35pm | 280 | 310 | 590 |
| **South Sound Routes** | | **1,170** | **1,020** | **2,190** | | **1,440** | ***23%*** | **1,380** | ***35%*** | **2,810** | ***28%*** | | **1,130** | **1,340** | **2,470** |
| Seattle - Bremerton | 3-7 pm | 500 | 1,500 | 2,000 | 3:00pm - 7:00pm | 510 | *2%* | 1,780 | *19%* | 2,290 | *15%* | 3:00pm - 7:00pm | 360 | 1,400 | 1,760 |
| Seattle - Bainbridge Island | 3-7 pm | 1,110 | 3,380 | 4,490 | 3:00pm - 7:00pm | 1,190 | *7%* | 3,950 | *17%* | 5,140 | *14%* | 10:40am - 2:40pm | 1,160 | 2,510 | 3,670 |
| Edmonds - Kingston | 3-7 pm | 1,000 | 940 | 1,940 | 2:30pm - 6:30pm | 1,100 | *10%* | 1,110 | *18%* | 2,210 | *14%* | 10:45am - 2:45pm | 1,160 | 1,850 | 3,010 |
| **Central Sound Routes** | | **2,610** | **5,820** | **8,430** | | **2,800** | ***7%*** | **6,840** | ***18%*** | **9,640** | ***14%*** | | **2,680** | **5,760** | **8,440** |
| Mukilteo - Clinton | 3-7 pm | 970 | 970 | 1,940 | 3:00pm - 7:00pm | 1,100 | *13%* | 1,170 | *21%* | 2,280 | *18%* | 10:30am - 2:30pm | 1,120 | 1,680 | 2,800 |
| Port Townsend - Keystone | 3-7 pm | 170 | 190 | 360 | 11:15am - 3:15pm | 280 | *65%* | 420 | *121%* | 700 | *94%* | 11:15am - 3:15pm | 360 | 600 | 960 |
| **North Sound Routes** | | **1,140** | **1,160** | **2,300** | | **1,380** | ***21%*** | **1,590** | ***37%*** | **2,980** | ***30%*** | | **1,480** | **2,280** | **3,760** |
| **Subtotal for Peak Periods** | | **4,920** | **8,000** | **12,920** | | **5,620** | ***14%*** | **9,810** | ***23%*** | **15,430** | ***19%*** | | **5,290** | **9,380** | **14,670** |
| All Vessels To/From Anacortes[1] | Daily | 1,050 | 1,000 | 2,050 | Daily | 1,370 | *30%* | 1,990 | *99%* | 3,360 | *64%* | Daily | 1,530 | 3,130 | 4,660 |
| Inter-Island Vessel Only[1] | Daily | 100 | 120 | 220 | Daily | 130 | *30%* | 240 | *100%* | 380 | *73%* | Daily | 150 | 380 | 530 |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 40 | 80 | 120 | Daily | 150 | *275%* | 330 | *313%* | 480 | *300%* | Daily | 200 | 440 | 640 |
| **San Juan Island Routes Subtotal[1]** | | **1,190** | **1,200** | **2,390** | | **1,650** | ***39%*** | **2,560** | ***113%*** | **4,220** | ***77%*** | | **1,880** | **3,950** | **5,830** |
| **Total Ridership[2]** | | **6,110** | **9,200** | **15,310** | | **7,270** | ***19%*** | **12,370** | ***34%*** | **19,650** | ***28%*** | | **7,170** | **13,330** | **20,500** |

### EASTBOUND

| Ferry Route | Typical (May) Weekday PM Peak Period / Reverse Direction | | | | Summer Weekday Peak Period / Peak Direction | | | | | | Summer Weekend Peak / Peak Direction (Sunday) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from WB ↑ | Passenger Fares | % Change from WB ↑ | Total Riders | % Change from WB ↑ | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from WB ↑ | Passenger Fares | % Change from WB ↑ | Total Riders | % Change from WB ↑ |
| Point Defiance - Tahlequah | 3-7 pm | 80 | 30 | 110 | AM Peak[3] | 290 | *0%* | 210 | *0%* | 500 | *0%* | Unknown[4] | 250 | *0%* | 290 | *0%* | 540 | *0%* |
| Vashon - Southworth | 3-7 pm | 60 | 10 | 70 | 6:05am - 10:05am | 70 | *0%* | 10 | *0%* | 70 | *0%* | 0 | 60 | *0%* | 40 | *0%* | 100 | *0%* |
| Fauntleroy - Vashon | 3-7 pm | 550 | 490 | 1,030 | AM Peak[3] | 690 | *0%* | 710 | *0%* | 1,400 | *0%* | Unknown[4] | 540 | *0%* | 700 | *0%* | 1,240 | *0%* |
| Fauntleroy - Southworth | 3-7 pm | 160 | 30 | 190 | 4:30am - 8:30am | 410 | *5%* | 470 | *4%* | 870 | *4%* | 1:10pm - 5:10pm | 310 | *11%* | 340 | *10%* | 650 | *10%* |
| **South Sound Routes** | | **850** | **560** | **1,400** | | **1,460** | ***1%*** | **1,400** | ***1%*** | **2,840** | ***1%*** | | **1,160** | ***3%*** | **1,370** | ***2%*** | **2,530** | ***2%*** |
| Seattle - Bremerton | 3-7 pm | 320 | 220 | 540 | 6:20am - 10:20am | 490 | *-4%* | 1,710 | *-4%* | 2,210 | *-3%* | 3:00pm - 7:00pm | 610 | *69%* | 2,370 | *69%* | 2,980 | *69%* |
| Seattle - Bainbridge Island | 3-7 pm | 570 | 350 | 920 | 6:20am - 10:20am | 1,080 | *-9%* | 3,600 | *-9%* | 4,680 | *-9%* | 6:30pm - 10:30pm | 1,090 | *-6%* | 2,360 | *-6%* | 3,450 | *-6%* |
| Edmonds - Kingston | 3-7 pm | 850 | 340 | 1,180 | 2:15pm - 6:15pm | 980 | *-11%* | 990 | *-11%* | 1,970 | *-11%* | 10:50am - 2:50pm | 1,180 | *2%* | 1,880 | *2%* | 3,060 | *2%* |
| **Central Sound Routes** | | **1,740** | **910** | **2,640** | | **2,550** | ***-9%*** | **6,300** | ***-8%*** | **8,860** | ***-8%*** | | **2,880** | ***7%*** | **6,610** | ***15%*** | **9,490** | ***12%*** |
| Mukilteo - Clinton | 3-7 pm | 660 | 150 | 820 | 7:00am - 11:00am | 1,100 | *0%* | 1,170 | *0%* | 2,280 | *0%* | 3:30pm - 7:30pm | 1,100 | *-2%* | 1,650 | *-2%* | 2,750 | *-2%* |
| Port Townsend - Keystone | 3-7 pm | 160 | 190 | 350 | 1:30pm - 5:30pm | 260 | *-7%* | 370 | *-12%* | 620 | *-11%* | 2:15pm - 6:15pm | 440 | *22%* | 660 | *10%* | 1,110 | *16%* |
| **North Sound Routes** | | **820** | **340** | **1,170** | | **1,360** | ***-1%*** | **1,540** | ***-3%*** | **2,900** | ***-3%*** | | **1,540** | ***4%*** | **2,310** | ***1%*** | **3,860** | ***3%*** |
| **Subtotal for Peak Periods** | | **3,410** | **1,810** | **5,210** | | **5,370** | ***-4%*** | **9,240** | ***-6%*** | **14,600** | ***-5%*** | | **5,580** | ***5%*** | **10,290** | ***10%*** | **15,880** | ***8%*** |
| All Vessels To/From Anacortes[1] | Daily | 1,050 | 1,000 | 2,050 | Daily | 1,370 | *0%* | 1,990 | *0%* | 3,360 | *0%* | Daily | 1,840 | *20%* | 3,750 | *20%* | 5,590 | *20%* |
| Inter-Island Vessel Only[1] | Daily | 100 | 120 | 230 | Daily | 130 | *0%* | 240 | *0%* | 380 | *0%* | Daily | 180 | *20%* | 460 | *21%* | 640 | *21%* |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 40 | 80 | 120 | Daily | 140 | *-7%* | 310 | *-6%* | 440 | *-8%* | Daily | 230 | *15%* | 500 | *14%* | 720 | *13%* |
| **San Juan Island Routes Subtotal[1]** | | **1,190** | **1,200** | **2,400** | | **1,640** | ***-1%*** | **2,540** | ***-1%*** | **4,180** | ***-1%*** | | **2,250** | ***20%*** | **4,710** | ***19%*** | **6,950** | ***19%*** |
| **Total Ridership[2]** | | **4,600** | **3,010** | **7,610** | | **7,010** | ***-4%*** | **11,780** | ***-5%*** | **18,780** | ***-4%*** | | **7,830** | ***9%*** | **15,000** | ***13%*** | **22,830** | ***11%*** |

Note: Typical Weekday volumes are produced from the WSF Planning Model; Summer Weekday and Weekend volumes represent a post-processing conversion

[1] Represents daily ridership forecasts.

[2] Represents combination of PM peak period and daily ridership volumes

[3] Assumption; actual period unknown due to lack of ticket sales data

[4] Actual period unknown due to lack of ticket sales data

## Table 4.5b - 2020 Baseline Ridership Volumes by Fare Category with Conversions to Summer Weekday and Weekend Peak Periods

### WESTBOUND

| Ferry Route | Typical (May) Weekday PM Peak Period / Peak Direction: 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | Summer Weekday Peak Period / Peak Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | Passenger Fares | % Change from Typical ← | Total Riders | % Change from Typical ← | Summer Weekend Peak / Peak Direction (Saturday): 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Point Defiance - Tahlequah | 3-7 pm | 260 | 100 | 360 | 2:40pm - 6:40pm | 350 | *35%* | 150 | *50%* | 500 | *39%* | 2:40pm - 6:40pm | 270 | 240 | 510 |
| Vashon - Southworth | 3-7 pm | 70 | 30 | 100 | PM Peak[3] | 90 | *29%* | 10 | *-67%* | 110 | *10%* | Unknown[4] | 70 | 70 | 150 |
| Fauntleroy - Vashon | 3-7 pm | 660 | 490 | 1,150 | 4:00pm - 8:00pm | 850 | *29%* | 740 | *51%* | 1,580 | *37%* | 10:10am - 2:10pm | 660 | 740 | 1,400 |
| Fauntleroy - Southworth | 3-7 pm | 590 | 660 | 1,250 | 3:35pm - 7:35pm | 640 | *8%* | 740 | *12%* | 1,380 | *10%* | 8:35am - 12:35pm | 400 | 520 | 920 |
| **South Sound Routes** | | **1,580** | **1,280** | **2,860** | | **1,930** | ***22%*** | **1,640** | ***28%*** | **3,570** | ***25%*** | | **1,400** | **1,570** | **2,980** |
| Seattle - Bremerton | 3-7 pm | 470 | 1,350 | 1,830 | 3:00pm - 7:00pm | 490 | *4%* | 1,610 | *19%* | 2,100 | *15%* | 3:00pm - 7:00pm | 360 | 1,340 | 1,700 |
| Seattle - Bainbridge Island | 3-7 pm | 1,290 | 3,930 | 5,210 | 3:00pm - 7:00pm | 1,380 | *7%* | 4,600 | *17%* | 5,970 | *15%* | 10:40am - 2:40pm | 1,330 | 2,960 | 4,290 |
| Edmonds - Kingston | 3-7 pm | 1,400 | 1,250 | 2,650 | 2:30pm - 6:30pm | 1,530 | *9%* | 1,470 | *18%* | 3,000 | *13%* | 10:45am - 2:45pm | 1,410 | 2,490 | 3,910 |
| **Central Sound Routes** | | **3,160** | **6,530** | **9,690** | | **3,400** | ***8%*** | **7,680** | ***18%*** | **11,070** | ***14%*** | | **3,100** | **6,790** | **9,900** |
| Mukilteo - Clinton | 3-7 pm | 1,140 | 1,290 | 2,430 | 3:00pm - 7:00pm | 1,290 | *13%* | 1,560 | *21%* | 2,840 | *17%* | 10:30am - 2:30pm | 1,300 | 2,510 | 3,820 |
| Port Townsend - Keystone | 3-7 pm | 210 | 300 | 520 | 11:15am - 3:15pm | 350 | *67%* | 670 | *123%* | 1,020 | *96%* | 11:15am - 3:15pm | 480 | 920 | 1,400 |
| **North Sound Routes** | | **1,350** | **1,590** | **2,950** | | **1,640** | ***21%*** | **2,230** | ***40%*** | **3,860** | ***31%*** | | **1,780** | **3,430** | **5,220** |
| **Subtotal for Peak Periods** | | **6,090** | **9,400** | **15,500** | | **6,970** | ***14%*** | **11,550** | ***23%*** | **18,500** | ***19%*** | | **6,280** | **11,790** | **18,100** |
| All Vessels To/From Anacortes[1] | Daily | 1,230 | 1,240 | 2,470 | Daily | 1,600 | *30%* | 2,470 | *99%* | 4,070 | *65%* | Daily | 1,790 | 3,880 | 5,670 |
| Inter-Island Vessel Only[1] | Daily | 140 | 180 | 320 | Daily | 180 | *29%* | 360 | *100%* | 540 | *69%* | Daily | 200 | 560 | 760 |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 40 | 120 | 160 | Daily | 180 | *350%* | 480 | *300%* | 660 | *313%* | Daily | 240 | 640 | 880 |
| **San Juan Island Routes Subtotal[1]** | | **1,410** | **1,540** | **2,950** | | **1,960** | ***39%*** | **3,310** | ***115%*** | **5,270** | ***79%*** | | **2,230** | **5,080** | **7,310** |
| **Total Ridership[2]** | | **7,500** | **10,940** | **18,450** | | **8,930** | ***19%*** | **14,860** | ***36%*** | **23,770** | ***29%*** | | **8,510** | **16,870** | **25,410** |

### EASTBOUND

| Ferry Route | Typical (May) Weekday PM Peak Period / Reverse Direction: 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | Summer Weekday Peak Period / Peak Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from WB ↑ | Passenger Fares | % Change from WB ↑ | Total Riders | % Change from WB ↑ | Summer Weekend Peak / Peak Direction (Sunday): 4-hr Peak Period | Vehicle/ Driver Fares | % Change from WB ↑ | Passenger Fares | % Change from WB ↑ | Total Riders | % Change from WB ↑ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Point Defiance - Tahlequah | 3-7 pm | 60 | 40 | 100 | AM Peak[3] | 350 | *0%* | 150 | *0%* | 500 | *0%* | Unknown[4] | 270 | *0%* | 240 | *0%* | 510 | *0%* |
| Vashon - Southworth | 3-7 pm | 70 | 30 | 90 | 6:05am - 10:05am | 90 | *0%* | 10 | *0%* | 110 | *0%* | 0 | 70 | *0%* | 70 | *0%* | 150 | *0%* |
| Fauntleroy - Vashon | 3-7 pm | 640 | 530 | 1,170 | AM Peak[3] | 850 | *0%* | 740 | *0%* | 1,580 | *0%* | Unknown[4] | 660 | *0%* | 740 | *0%* | 1,400 | *0%* |
| Fauntleroy - Southworth | 3-7 pm | 160 | 50 | 210 | 4:30am - 8:30am | 660 | *3%* | 770 | *4%* | 1,430 | *4%* | 1:10pm - 5:10pm | 440 | *10%* | 570 | *10%* | 1,010 | *10%* |
| **South Sound Routes** | | **930** | **650** | **1,570** | | **1,950** | ***1%*** | **1,670** | ***2%*** | **3,620** | ***1%*** | | **1,440** | ***3%*** | **1,620** | ***3%*** | **3,070** | ***3%*** |
| Seattle - Bremerton | 3-7 pm | 350 | 300 | 640 | 6:20am - 10:20am | 470 | *-4%* | 1,550 | *-4%* | 2,020 | *-4%* | 3:00pm - 7:00pm | 610 | *69%* | 2,270 | *69%* | 2,890 | *70%* |
| Seattle - Bainbridge Island | 3-7 pm | 660 | 460 | 1,120 | 6:20am - 10:20am | 1,250 | *-9%* | 4,190 | *-9%* | 5,440 | *-9%* | 6:30pm - 10:30pm | 1,250 | *-6%* | 2,780 | *-6%* | 4,030 | *-6%* |
| Edmonds - Kingston | 3-7 pm | 850 | 480 | 1,320 | 2:15pm - 6:15pm | 1,370 | *-10%* | 1,310 | *-11%* | 2,670 | *-11%* | 10:50am - 2:50pm | 1,440 | *2%* | 2,540 | *2%* | 3,970 | *2%* |
| **Central Sound Routes** | | **1,860** | **1,240** | **3,080** | | **3,090** | ***-9%*** | **7,050** | ***-8%*** | **10,130** | ***-8%*** | | **3,300** | ***6%*** | **7,590** | ***12%*** | **10,890** | ***10%*** |
| Mukilteo - Clinton | 3-7 pm | 780 | 390 | 1,170 | 7:00am - 11:00am | 1,290 | *0%* | 1,560 | *0%* | 2,840 | *0%* | 3:30pm - 7:30pm | 1,280 | *-2%* | 2,470 | *-2%* | 3,750 | *-2%* |
| Port Townsend - Keystone | 3-7 pm | 240 | 280 | 520 | 1:30pm - 5:30pm | 320 | *-9%* | 580 | *-13%* | 900 | *-12%* | 2:15pm - 6:15pm | 600 | *25%* | 1,020 | *11%* | 1,620 | *16%* |
| **North Sound Routes** | | **1,020** | **670** | **1,690** | | **1,610** | ***-2%*** | **2,140** | ***-4%*** | **3,740** | ***-3%*** | | **1,880** | ***6%*** | **3,490** | ***2%*** | **5,370** | ***3%*** |
| **Subtotal for Peak Periods** | | **3,810** | **2,560** | **6,340** | | **6,650** | ***-5%*** | **10,860** | ***-6%*** | **17,490** | ***-5%*** | | **6,620** | ***5%*** | **12,700** | ***8%*** | **19,330** | ***7%*** |
| All Vessels To/From Anacortes[1] | Daily | 1,230 | 1,240 | 2,470 | Daily | 1,600 | *0%* | 2,470 | *0%* | 4,070 | *0%* | Daily | 2,150 | *20%* | 4,660 | *20%* | 6,800 | *20%* |
| Inter-Island Vessel Only[1] | Daily | 140 | 180 | 320 | Daily | 180 | *0%* | 360 | *0%* | 540 | *0%* | Daily | 240 | *20%* | 680 | *21%* | 920 | *21%* |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 40 | 120 | 160 | Daily | 160 | *-11%* | 450 | *-6%* | 610 | *-8%* | Daily | 270 | *13%* | 730 | *14%* | 1,000 | *14%* |
| **San Juan Island Routes Subtotal[1]** | | **1,410** | **1,540** | **2,950** | | **1,940** | ***-1%*** | **3,280** | ***-1%*** | **5,220** | ***-1%*** | | **2,660** | ***19%*** | **6,070** | ***19%*** | **8,720** | ***19%*** |
| **Total Ridership[2]** | | **5,220** | **4,100** | **9,290** | | **8,590** | ***-4%*** | **14,140** | ***-5%*** | **22,710** | ***-4%*** | | **9,280** | ***9%*** | **18,770** | ***11%*** | **28,050** | ***10%*** |

Note: Typical Weekday volumes are produced from the WSF Planning Model; Summer Weekday and Weekend volumes represent a post-processing conversion

[1] Represents daily ridership forecasts.

[2] Represents combination of PM peak period and daily ridership volumes

[3] Assumption; actual period unknown due to lack of ticket sales data

[4] Actual period unknown due to lack of ticket sales data

## Table 4.5c - 2030 Baseline Ridership Volumes by Fare Category with Conversions to Summer Weekday and Weekend Peak Periods

### WESTBOUND

| Ferry Route | Typical (May) Weekday PM Peak Period / Peak Direction | | | | Summer Weekday Peak Period / Peak Direction | | | | | | Summer Weekend Peak / Peak Direction (Saturday) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | Passenger Fares | % Change from Typical ← | Total Riders | % Change from Typical ← | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | 3-7 pm | 260 | 120 | 370 | 2:40pm - 6:40pm | 350 | *35%* | 180 | *50%* | 530 | *43%* | 2:40pm - 6:40pm | 280 | 280 | 550 |
| Vashon - Southworth | 3-7 pm | 100 | 50 | 150 | PM Peak[3] | 140 | *40%* | 20 | *-60%* | 160 | *7%* | Unknown[4] | 120 | 90 | 210 |
| Fauntleroy - Vashon | 3-7 pm | 630 | 430 | 1,060 | 4:00pm - 8:00pm | 810 | *29%* | 640 | *49%* | 1,450 | *37%* | 10:10am - 2:10pm | 670 | 730 | 1,400 |
| Fauntleroy - Southworth | 3-7 pm | 590 | 770 | 1,370 | 3:35pm - 7:35pm | 640 | *8%* | 870 | *13%* | 1,510 | *10%* | 8:35am - 12:35pm | 400 | 610 | 1,010 |
| **South Sound Routes** | | **1,580** | **1,370** | **2,950** | | **1,940** | ***23%*** | **1,710** | ***25%*** | **3,650** | ***24%*** | | **1,470** | **1,710** | **3,170** |
| Seattle - Bremerton | 3-7 pm | 570 | 1,600 | 2,160 | 3:00pm - 7:00pm | 590 | *4%* | 1,890 | *18%* | 2,480 | *15%* | 3:00pm - 7:00pm | 430 | 1,560 | 1,990 |
| Seattle - Bainbridge Island | 3-7 pm | 1,540 | 4,430 | 5,970 | 3:00pm - 7:00pm | 1,650 | *7%* | 5,180 | *17%* | 6,830 | *14%* | 10:40am - 2:40pm | 1,590 | 3,360 | 4,950 |
| Edmonds - Kingston | 3-7 pm | 1,380 | 1,410 | 2,780 | 2:30pm - 6:30pm | 1,510 | *9%* | 1,650 | *17%* | 3,160 | *14%* | 10:45am - 2:45pm | 1,420 | 2,800 | 4,220 |
| **Central Sound Routes** | | **3,490** | **7,440** | **10,910** | | **3,750** | ***7%*** | **8,720** | ***17%*** | **12,470** | ***14%*** | | **3,440** | **7,720** | **11,160** |
| Mukilteo - Clinton | 3-7 pm | 1,160 | 1,570 | 2,720 | 3:00pm - 7:00pm | 1,310 | *13%* | 1,890 | *20%* | 3,200 | *18%* | 10:30am - 2:30pm | 1,390 | 3,000 | 4,380 |
| Port Townsend - Keystone | 3-7 pm | 280 | 420 | 690 | 11:15am - 3:15pm | 450 | *61%* | 920 | *119%* | 1,370 | *99%* | 11:15am - 3:15pm | 630 | 1,270 | 1,900 |
| **North Sound Routes** | | **1,440** | **1,990** | **3,410** | | **1,760** | ***22%*** | **2,810** | ***41%*** | **4,570** | ***34%*** | | **2,020** | **4,270** | **6,280** |
| **Subtotal for Peak Periods** | | **6,510** | **10,800** | **17,270** | | **7,450** | ***14%*** | **13,240** | ***23%*** | **20,690** | ***20%*** | | **6,930** | **13,700** | **20,610** |
| All Vessels To/From Anacortes[1] | Daily | 1,400 | 1,520 | 2,920 | Daily | 1,820 | *30%* | 3,020 | *99%* | 4,850 | *66%* | Daily | 2,040 | 4,750 | 6,780 |
| Inter-Island Vessel Only[1] | Daily | 160 | 210 | 370 | Daily | 210 | *31%* | 420 | *100%* | 630 | *70%* | Daily | 240 | 660 | 900 |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 120 | 170 | Daily | 180 | *260%* | 520 | *333%* | 710 | *318%* | Daily | 250 | 690 | 940 |
| **San Juan Island Routes Subtotal[1]** | | **1,610** | **1,850** | **3,460** | | **2,210** | ***37%*** | **3,960** | ***114%*** | **6,190** | ***79%*** | | **2,530** | **6,100** | **8,620** |
| **Total Ridership[2]** | | **8,120** | **12,650** | **20,730** | | **9,660** | ***19%*** | **17,200** | ***36%*** | **26,880** | ***30%*** | | **9,460** | **19,800** | **29,230** |

### EASTBOUND

| Ferry Route | Typical (May) Weekday PM Peak Period / Reverse Direction | | | | Summer Weekday Peak Period / Peak Direction | | | | | | Summer Weekend Peak / Peak Direction (Sunday) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from WB ↑ | Passenger Fares | % Change from WB ↑ | Total Riders | % Change from WB ↑ | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from WB ↑ | Passenger Fares | % Change from WB ↑ | Total Riders | % Change from WB ↑ |
| Point Defiance - Tahlequah | 3-7 pm | 70 | 40 | 110 | AM Peak[3] | 350 | *0%* | 180 | *0%* | 530 | *0%* | Unknown[4] | 280 | *0%* | 280 | *0%* | 550 | *0%* |
| Vashon - Southworth | 3-7 pm | 110 | 30 | 130 | 6:05am - 10:05am | 140 | *0%* | 20 | *0%* | 160 | *0%* | 0 | 120 | *0%* | 90 | *0%* | 210 | *0%* |
| Fauntleroy - Vashon | 3-7 pm | 700 | 570 | 1,270 | AM Peak[3] | 810 | *0%* | 640 | *0%* | 1,450 | *0%* | Unknown[4] | 670 | *0%* | 730 | *0%* | 1,400 | *0%* |
| Fauntleroy - Southworth | 3-7 pm | 150 | 60 | 210 | 4:30am - 8:30am | 660 | *3%* | 900 | *3%* | 1,570 | *4%* | 1:10pm - 5:10pm | 440 | *10%* | 670 | *10%* | 1,100 | *9%* |
| **South Sound Routes** | | **1,030** | **700** | **1,720** | | **1,960** | ***1%*** | **1,740** | ***2%*** | **3,710** | ***2%*** | | **1,510** | ***3%*** | **1,770** | ***4%*** | **3,260** | ***3%*** |
| Seattle - Bremerton | 3-7 pm | 400 | 330 | 730 | 6:20am - 10:20am | 560 | *-5%* | 1,820 | *-4%* | 2,390 | *-4%* | 3:00pm - 7:00pm | 730 | *70%* | 2,650 | *70%* | 3,370 | *69%* |
| Seattle - Bainbridge Island | 3-7 pm | 770 | 560 | 1,330 | 6:20am - 10:20am | 1,500 | *-9%* | 4,720 | *-9%* | 6,220 | *-9%* | 6:30pm - 10:30pm | 1,490 | *-6%* | 3,160 | *-6%* | 4,650 | *-6%* |
| Edmonds - Kingston | 3-7 pm | 880 | 530 | 1,420 | 2:15pm - 6:15pm | 1,350 | *-11%* | 1,470 | *-11%* | 2,820 | *-11%* | 10:50am - 2:50pm | 1,450 | *2%* | 2,850 | *2%* | 4,300 | *2%* |
| **Central Sound Routes** | | **2,050** | **1,420** | **3,480** | | **3,410** | ***-9%*** | **8,010** | ***-8%*** | **11,430** | ***-8%*** | | **3,670** | ***7%*** | **8,660** | ***12%*** | **12,320** | ***10%*** |
| Mukilteo - Clinton | 3-7 pm | 880 | 440 | 1,310 | 7:00am - 11:00am | 1,310 | *0%* | 1,890 | *0%* | 3,200 | *0%* | 3:30pm - 7:30pm | 1,360 | *-2%* | 2,940 | *-2%* | 4,300 | *-2%* |
| Port Townsend - Keystone | 3-7 pm | 310 | 400 | 700 | 1:30pm - 5:30pm | 410 | *-9%* | 800 | *-13%* | 1,210 | *-12%* | 2:15pm - 6:15pm | 780 | *24%* | 1,420 | *12%* | 2,190 | *15%* |
| **North Sound Routes** | | **1,190** | **840** | **2,010** | | **1,720** | ***-2%*** | **2,690** | ***-4%*** | **4,410** | ***-4%*** | | **2,140** | ***6%*** | **4,360** | ***2%*** | **6,490** | ***3%*** |
| **Subtotal for Peak Periods** | | **4,270** | **2,960** | **7,210** | | **7,090** | ***-5%*** | **12,440** | ***-6%*** | **19,550** | ***-6%*** | | **7,320** | ***6%*** | **14,790** | ***8%*** | **22,070** | ***7%*** |
| All Vessels To/From Anacortes[1] | Daily | 1,400 | 1,520 | 2,920 | Daily | 1,820 | *0%* | 3,020 | *0%* | 4,850 | *0%* | Daily | 2,450 | *20%* | 5,690 | *20%* | 8,140 | *20%* |
| Inter-Island Vessel Only[1] | Daily | 160 | 210 | 370 | Daily | 210 | *0%* | 420 | *0%* | 630 | *0%* | Daily | 280 | *17%* | 800 | *21%* | 1,080 | *20%* |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 120 | 170 | Daily | 170 | *-6%* | 480 | *-8%* | 650 | *-8%* | Daily | 280 | *12%* | 780 | *13%* | 1,070 | *14%* |
| **San Juan Island Routes Subtotal[1]** | | **1,610** | **1,850** | **3,460** | | **2,200** | ***0%*** | **3,920** | ***-1%*** | **6,130** | ***-1%*** | | **3,010** | ***19%*** | **7,270** | ***19%*** | **10,290** | ***19%*** |
| **Total Ridership[2]** | | **5,880** | **4,810** | **10,670** | | **9,290** | ***-4%*** | **16,360** | ***-5%*** | **25,680** | ***-4%*** | | **10,330** | ***9%*** | **22,060** | ***11%*** | **32,360** | ***11%*** |

Note: Typical Weekday volumes are produced from the WSF Planning Model; Summer Weekday and Weekend volumes represent a post-processing conversion

[1] Represents daily ridership forecasts.

[2] Represents combination of PM peak period and daily ridership volumes

[3] Assumption; actual period unknown due to lack of ticket sales data

[4] Actual period unknown due to lack of ticket sales data

## Table 4.5d - 2020 Baseline Ridership Forecasts by Fare Category with Conversions to Summer Peak Periods and Adjustments for Recreational Travel - WESTBOUND

### Baseline Ridership Forecast

| Ferry Route | Typical (May) Weekday PM Peak Period / Peak Direction | | | | Summer Weekday Peak Period / Peak Direction | | | | | | | Summer Weekend Peak / Peak Direction (Saturday) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | Passenger Fares | % Change from Typical ← | Total Riders | % Change from Typical ← | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | 3-7 pm | 260 | 100 | 360 | 2:40pm - 6:40pm | 350 | 35% | 150 | 50% | 500 | 39% | 2:40pm - 6:40pm | 270 | 240 | 510 |
| Vashon - Southworth | 3-7 pm | 70 | 30 | 100 | PM Peak[3] | 90 | 29% | 10 | -67% | 110 | 10% | Unknown[4] | 70 | 70 | 150 |
| Fauntleroy - Vashon | 3-7 pm | 660 | 490 | 1,150 | 4:00pm - 8:00pm | 850 | 29% | 740 | 51% | 1,580 | 37% | 10:10am - 2:10pm | 660 | 740 | 1,400 |
| Fauntleroy - Southworth | 3-7 pm | 590 | 660 | 1,250 | 3:35pm - 7:35pm | 640 | 8% | 740 | 12% | 1,380 | 10% | 8:35am - 12:35pm | 400 | 520 | 920 |
| **South Sound Routes** | | **1,580** | **1,280** | **2,860** | | **1,930** | **22%** | **1,640** | **28%** | **3,570** | **25%** | | **1,400** | **1,570** | **2,980** |
| Seattle - Bremerton | 3-7 pm | 470 | 1,350 | 1,830 | 3:00pm - 7:00pm | 490 | 4% | 1,610 | 19% | 2,100 | 15% | 3:00pm - 7:00pm | 360 | 1,340 | 1,700 |
| Seattle - Bainbridge Island | 3-7 pm | 1,290 | 3,930 | 5,210 | 3:00pm - 7:00pm | 1,380 | 7% | 4,600 | 17% | 5,970 | 15% | 10:40am - 2:40pm | 1,330 | 2,960 | 4,290 |
| Edmonds - Kingston | 3-7 pm | 1,400 | 1,250 | 2,650 | 2:30pm - 6:30pm | 1,530 | 9% | 1,470 | 18% | 3,000 | 13% | 10:45am - 2:45pm | 1,410 | 2,490 | 3,910 |
| **Central Sound Routes** | | **3,160** | **6,530** | **9,690** | | **3,400** | **8%** | **7,680** | **18%** | **11,070** | **14%** | | **3,100** | **6,790** | **9,900** |
| Mukilteo - Clinton | 3-7 pm | 1,140 | 1,290 | 2,430 | 3:00pm - 7:00pm | 1,290 | 13% | 1,560 | 21% | 2,840 | 17% | 10:30am - 2:30pm | 1,300 | 2,510 | 3,820 |
| Port Townsend - Keystone | 3-7 pm | 210 | 300 | 520 | 11:15am - 3:15pm | 350 | 67% | 670 | 123% | 1,020 | 96% | 11:15am - 3:15pm | 480 | 920 | 1,400 |
| **North Sound Routes** | | **1,350** | **1,590** | **2,950** | | **1,640** | **21%** | **2,230** | **40%** | **3,860** | **31%** | | **1,780** | **3,430** | **5,220** |
| **Subtotal for Peak Periods** | | **6,090** | **9,400** | **15,500** | | **6,970** | **14%** | **11,550** | **23%** | **18,500** | **19%** | | **6,280** | **11,790** | **18,100** |
| All Vessels To/From Anacortes[1] | Daily | 1,230 | 1,240 | 2,470 | Daily | 1,600 | 30% | 2,470 | 99% | 4,070 | 65% | Daily | 1,790 | 3,880 | 5,670 |
| Inter-Island Vessel Only[1] | Daily | 140 | 180 | 320 | Daily | 180 | 29% | 360 | 100% | 540 | 69% | Daily | 200 | 560 | 760 |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 40 | 120 | 160 | Daily | 180 | 350% | 480 | 300% | 660 | 313% | Daily | 240 | 640 | 880 |
| **San Juan Island Routes Subtotal[1]** | | **1,410** | **1,540** | **2,950** | | **1,960** | **39%** | **3,310** | **115%** | **5,270** | **79%** | | **2,230** | **5,080** | **7,310** |
| **Total Ridership[2]** | | **7,500** | **10,940** | **18,450** | | **8,930** | **19%** | **14,860** | **36%** | **23,770** | **29%** | | **8,510** | **16,870** | **25,410** |

### Baseline Ridership Forecast - Adjusted for Recreational Travel

| Ferry Route | Typical (May) Weekday PM Peak Period / Peak Direction | | | | | | Summer Weekday Peak Period / Peak Direction | | | | | | | | | Summer Weekend Peak / Peak Direction (Saturday) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | % Change from Base ↑ | Passenger Fares | % Change from Typical ← | % Change from Base ↑ | Total Riders | % Change from Typical ← | % Change from Base ↑ | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ |
| Point Defiance - Tahlequah | 3-7 pm | 260 | 0% | 110 | 10% | 370 | 3% | 2:40pm - 6:40pm | 360 | 38% | 3% | 180 | 64% | 20% | 530 | 43% | 6% | 2:40pm - 6:40pm | 280 | 4% | 280 | 17% | 560 | 10% |
| Vashon - Southworth | 3-7 pm | 70 | 0% | 30 | 0% | 100 | 0% | PM Peak[3] | 90 | 29% | 0% | 10 | -67% | 0% | 110 | 10% | 0% | Unknown[4] | 80 | 14% | 70 | 0% | 150 | 0% |
| Fauntleroy - Vashon | 3-7 pm | 670 | 2% | 500 | 2% | 1,180 | 3% | 4:00pm - 8:00pm | 870 | 30% | 2% | 780 | 56% | 5% | 1,650 | 40% | 4% | 10:10am - 2:10pm | 680 | 3% | 790 | 7% | 1,470 | 5% |
| Fauntleroy - Southworth | 3-7 pm | 590 | 0% | 650 | -2% | 1,240 | -1% | 3:35pm - 7:35pm | 630 | 7% | -2% | 730 | 12% | -1% | 1,370 | 10% | -1% | 8:35am - 12:35pm | 400 | 0% | 510 | -2% | 910 | -1% |
| **South Sound Routes** | | **1,590** | **1%** | **1,290** | **1%** | **2,890** | **1%** | | **1,950** | **23%** | **1%** | **1,700** | **32%** | **4%** | **3,660** | **27%** | **3%** | | **1,440** | **3%** | **1,650** | **5%** | **3,090** | **4%** |
| Seattle - Bremerton | 3-7 pm | 480 | 2% | 1,390 | 3% | 1,880 | 3% | 3:00pm - 7:00pm | 510 | 6% | 4% | 1,670 | 20% | 4% | 2,180 | 16% | 4% | 3:00pm - 7:00pm | 370 | 3% | 1,390 | 4% | 1,770 | 4% |
| Seattle - Bainbridge Island | 3-7 pm | 1,310 | 2% | 4,000 | 2% | 5,310 | 2% | 3:00pm - 7:00pm | 1,420 | 8% | 3% | 4,730 | 18% | 3% | 6,150 | 16% | 3% | 10:40am - 2:40pm | 1,380 | 4% | 3,050 | 3% | 4,430 | 3% |
| Edmonds - Kingston | 3-7 pm | 1,400 | 0% | 1,260 | 1% | 2,650 | 0% | 2:30pm - 6:30pm | 1,530 | 9% | 0% | 1,480 | 17% | 1% | 3,010 | 14% | 0% | 10:45am - 2:45pm | 1,450 | 3% | 2,510 | 1% | 3,950 | 1% |
| **Central Sound Routes** | | **3,190** | **1%** | **6,650** | **2%** | **9,840** | **2%** | | **3,460** | **8%** | **2%** | **7,880** | **18%** | **3%** | **11,340** | **15%** | **2%** | | **3,200** | **3%** | **6,950** | **2%** | **10,150** | **3%** |
| Mukilteo - Clinton | 3-7 pm | 1,170 | 3% | 1,300 | 1% | 2,470 | 2% | 3:00pm - 7:00pm | 1,350 | 15% | 5% | 1,580 | 22% | 1% | 2,920 | 18% | 3% | 10:30am - 2:30pm | 1,370 | 5% | 2,470 | -2% | 3,840 | 1% |
| Port Townsend - Keystone | 3-7 pm | 220 | 5% | 300 | 0% | 510 | -2% | 11:15am - 3:15pm | 360 | 64% | 3% | 650 | 117% | -3% | 1,010 | 98% | -1% | 11:15am - 3:15pm | 490 | 2% | 890 | -3% | 1,380 | -1% |
| **North Sound Routes** | | **1,390** | **3%** | **1,600** | **1%** | **2,980** | **1%** | | **1,710** | **23%** | **4%** | **2,230** | **39%** | **0%** | **3,930** | **32%** | **2%** | | **1,860** | **4%** | **3,360** | **-2%** | **5,220** | **0%** |
| **Subtotal for Peak Periods** | | **6,170** | **1%** | **9,540** | **1%** | **15,710** | **1%** | | **7,120** | **15%** | **2%** | **11,810** | **24%** | **2%** | **18,930** | **20%** | **2%** | | **6,500** | **4%** | **11,960** | **1%** | **18,460** | **2%** |
| All Vessels To/From Anacortes[1] | Daily | 1,280 | 4% | 1,280 | 3% | 2,550 | 3% | Daily | 1,740 | 36% | 9% | 2,610 | 104% | 6% | 4,350 | 71% | 7% | Daily | 1,970 | 10% | 4,130 | 6% | 6,100 | 8% |
| Inter-Island Vessel Only[1] | Daily | 140 | 0% | 180 | 0% | 320 | 0% | Daily | 180 | 29% | 0% | 350 | 94% | -3% | 530 | 66% | -2% | Daily | 200 | 0% | 550 | -2% | 750 | -1% |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 25% | 110 | -8% | 160 | 0% | Daily | 190 | 280% | 6% | 470 | 327% | -2% | 660 | 313% | 0% | Daily | 270 | 13% | 620 | -3% | 890 | 1% |
| **San Juan Island Routes Subtotal[1]** | | **1,470** | **4%** | **1,570** | **2%** | **3,030** | **3%** | | **2,110** | **44%** | **8%** | **3,430** | **118%** | **4%** | **5,540** | **83%** | **5%** | | **2,440** | **9%** | **5,300** | **4%** | **7,740** | **6%** |
| **Total Ridership[2]** | | **7,640** | **2%** | **11,110** | **2%** | **18,740** | **2%** | | **9,230** | **21%** | **3%** | **15,240** | **37%** | **3%** | **24,470** | **31%** | **3%** | | **8,940** | **5%** | **17,260** | **2%** | **26,200** | **3%** |

Note: Typical Weekday volumes are produced from the WSF Planning Model; Summer Weekday and Weekend volumes represent a post-processing conversion

[1] Represents daily ridership forecasts.

[2] Represents combination of PM peak period and daily ridership volumes

[3] Assumption; actual period unknown due to lack of ticket sales data

[4] Actual period unknown due to lack of ticket sales data

## Table 4.5e - 2020 Baseline Ridership Forecasts by Fare Category with Conversions to Summer Peak Periods and Adjustments for Recreational Travel - EASTBOUND

### Baseline Ridership Forecast

| Ferry Route | Typical (May) Weekday PM Peak Period / Reverse Direction: 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | Summer Weekday Peak Period / Peak Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | Passenger Fares | % Change from Typical ← | Total Riders | % Change from Typical ← | Summer Weekend Peak / Peak Direction (Sunday): 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Point Defiance - Tahlequah | 3-7 pm | 60 | 40 | 100 | AM Peak[3] | 350 | 483% | 150 | 275% | 500 | 400% | Unknown[4] | 270 | 240 | 510 |
| Vashon - Southworth | 3-7 pm | 70 | 30 | 90 | 6:05am - 10:05am | 90 | 29% | 10 | -67% | 110 | 22% | 0 | 70 | 70 | 150 |
| Fauntleroy - Vashon | 3-7 pm | 640 | 530 | 1,170 | AM Peak[3] | 850 | 33% | 740 | 40% | 1,580 | 35% | Unknown[4] | 660 | 740 | 1,400 |
| Fauntleroy - Southworth | 3-7 pm | 160 | 50 | 210 | 4:30am - 8:30am | 660 | 313% | 770 | 1440% | 1,430 | 581% | 1:10pm - 5:10pm | 440 | 570 | 1,010 |
| **South Sound Routes** | | **930** | **650** | **1,570** | | **1,950** | **110%** | **1,670** | **157%** | **3,620** | **131%** | | **1,440** | **1,620** | **3,070** |
| Seattle - Bremerton | 3-7 pm | 350 | 300 | 640 | 6:20am - 10:20am | 470 | 34% | 1,550 | 417% | 2,020 | 216% | 3:00pm - 7:00pm | 610 | 2,270 | 2,890 |
| Seattle - Bainbridge Island | 3-7 pm | 660 | 460 | 1,120 | 6:20am - 10:20am | 1,250 | 89% | 4,190 | 811% | 5,440 | 386% | 6:30pm - 10:30pm | 1,250 | 2,780 | 4,030 |
| Edmonds - Kingston | 3-7 pm | 850 | 480 | 1,320 | 2:15pm - 6:15pm | 1,370 | 61% | 1,310 | 173% | 2,670 | 102% | 10:50am - 2:50pm | 1,440 | 2,540 | 3,970 |
| **Central Sound Routes** | | **1,860** | **1,240** | **3,080** | | **3,090** | **66%** | **7,050** | **469%** | **10,130** | **229%** | | **3,300** | **7,590** | **10,890** |
| Mukilteo - Clinton | 3-7 pm | 780 | 390 | 1,170 | 7:00am - 11:00am | 1,290 | 65% | 1,560 | 300% | 2,840 | 143% | 3:30pm - 7:30pm | 1,280 | 2,470 | 3,750 |
| Port Townsend - Keystone | 3-7 pm | 240 | 280 | 520 | 1:30pm - 5:30pm | 320 | 33% | 580 | 107% | 900 | 73% | 2:15pm - 6:15pm | 600 | 1,020 | 1,620 |
| **North Sound Routes** | | **1,020** | **670** | **1,690** | | **1,610** | **58%** | **2,140** | **219%** | **3,740** | **121%** | | **1,880** | **3,490** | **5,370** |
| **Subtotal for Peak Periods** | | **3,810** | **2,560** | **6,340** | | **6,650** | **75%** | **10,860** | **324%** | **17,490** | **176%** | | **6,620** | **12,700** | **19,330** |
| All Vessels To/From Anacortes[1] | Daily | 1,230 | 1,240 | 2,470 | Daily | 1,600 | 30% | 2,470 | 99% | 4,070 | 65% | Daily | 2,150 | 4,660 | 6,800 |
| Inter-Island Vessel Only[1] | Daily | 140 | 180 | 320 | Daily | 180 | 29% | 360 | 100% | 540 | 69% | Daily | 240 | 680 | 920 |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 40 | 120 | 160 | Daily | 160 | 300% | 450 | 275% | 610 | 281% | Daily | 270 | 730 | 1,000 |
| **San Juan Island Routes Subtotal[1]** | | **1,410** | **1,540** | **2,950** | | **1,940** | **38%** | **3,280** | **113%** | **5,220** | **77%** | | **2,660** | **6,070** | **8,720** |
| **Total Ridership[2]** | | **5,220** | **4,100** | **9,290** | | **8,590** | **65%** | **14,140** | **245%** | **22,710** | **144%** | | **9,280** | **18,770** | **28,050** |

### Baseline Ridership Forecast - Adjusted for Recreational Travel

| Ferry Route | Typical (May) Weekday PM Peak Period / Reverse Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ | Summer Weekday Peak Period / Peak Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | % Change from Base ↑ | Passenger Fares | % Change from Typical ← | % Change from Base ↑ | Total Riders | % Change from Typical ← | % Change from Base ↑ | Summer Weekend Peak / Peak Direction (Sunday): 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Point Defiance - Tahlequah | 3-7 pm | 70 | 17% | 40 | 0% | 110 | 10% | AM Peak[3] | 360 | 414% | 3% | 180 | 350% | 20% | 530 | 382% | 6% | Unknown[4] | 280 | 4% | 280 | 17% | 560 | 10% |
| Vashon - Southworth | 3-7 pm | 70 | 0% | 20 | -33% | 90 | 0% | 6:05am - 10:05am | 90 | 29% | 0% | 10 | -50% | 0% | 110 | 22% | 0% | 0 | 80 | 14% | 70 | 0% | 150 | 0% |
| Fauntleroy - Vashon | 3-7 pm | 660 | 3% | 540 | 2% | 1,200 | 3% | AM Peak[3] | 870 | 32% | 2% | 780 | 44% | 5% | 1,650 | 38% | 4% | Unknown[4] | 680 | 3% | 790 | 7% | 1,470 | 5% |
| Fauntleroy - Southworth | 3-7 pm | 160 | 0% | 50 | 0% | 210 | 0% | 4:30am - 8:30am | 660 | 313% | 0% | 760 | 1420% | -1% | 1,420 | 576% | -1% | 1:10pm - 5:10pm | 440 | 0% | 560 | -2% | 1,000 | -1% |
| **South Sound Routes** | | **960** | **3%** | **650** | **0%** | **1,610** | **3%** | | **1,980** | **106%** | **2%** | **1,730** | **166%** | **4%** | **3,710** | **130%** | **2%** | | **1,480** | **3%** | **1,700** | **5%** | **3,180** | **4%** |
| Seattle - Bremerton | 3-7 pm | 350 | 0% | 300 | 0% | 650 | 2% | 6:20am - 10:20am | 490 | 40% | 4% | 1,610 | 437% | 4% | 2,100 | 223% | 4% | 3:00pm - 7:00pm | 630 | 3% | 2,360 | 4% | 3,000 | 4% |
| Seattle - Bainbridge Island | 3-7 pm | 670 | 2% | 460 | 0% | 1,130 | 1% | 6:20am - 10:20am | 1,290 | 93% | 3% | 4,310 | 837% | 3% | 5,600 | 396% | 3% | 6:30pm - 10:30pm | 1,300 | 4% | 2,870 | 3% | 4,160 | 3% |
| Edmonds - Kingston | 3-7 pm | 880 | 4% | 480 | 0% | 1,350 | 2% | 2:15pm - 6:15pm | 1,370 | 56% | 0% | 1,320 | 175% | 1% | 2,680 | 99% | 0% | 10:50am - 2:50pm | 1,470 | 2% | 2,550 | 0% | 4,020 | 1% |
| **Central Sound Routes** | | **1,900** | **2%** | **1,240** | **0%** | **3,130** | **2%** | | **3,150** | **66%** | **2%** | **7,240** | **484%** | **3%** | **10,380** | **232%** | **2%** | | **3,400** | **3%** | **7,780** | **3%** | **11,180** | **3%** |
| Mukilteo - Clinton | 3-7 pm | 800 | 3% | 360 | -8% | 1,160 | -1% | 7:00am - 11:00am | 1,350 | 69% | 5% | 1,580 | 339% | 1% | 2,920 | 152% | 3% | 3:30pm - 7:30pm | 1,350 | 5% | 2,420 | -2% | 3,770 | 1% |
| Port Townsend - Keystone | 3-7 pm | 230 | -4% | 280 | 0% | 510 | -2% | 1:30pm - 5:30pm | 330 | 43% | 3% | 570 | 104% | -2% | 890 | 75% | -1% | 2:15pm - 6:15pm | 610 | 2% | 990 | -3% | 1,600 | -1% |
| **North Sound Routes** | | **1,030** | **1%** | **640** | **-4%** | **1,670** | **-1%** | | **1,680** | **63%** | **4%** | **2,150** | **236%** | **0%** | **3,810** | **128%** | **2%** | | **1,960** | **4%** | **3,410** | **-2%** | **5,370** | **0%** |
| **Subtotal for Peak Periods** | | **3,890** | **2%** | **2,530** | **-1%** | **6,410** | **1%** | | **6,810** | **75%** | **2%** | **11,120** | **340%** | **2%** | **17,900** | **179%** | **2%** | | **6,840** | **3%** | **12,890** | **1%** | **19,730** | **2%** |
| All Vessels To/From Anacortes[1] | Daily | 1,280 | 4% | 1,280 | 3% | 2,550 | 3% | Daily | 1,740 | 36% | 9% | 2,610 | 104% | 6% | 4,350 | 71% | 7% | Daily | 2,360 | 10% | 4,950 | 6% | 7,320 | 8% |
| Inter-Island Vessel Only[1] | Daily | 140 | 0% | 180 | 0% | 320 | 0% | Daily | 180 | 29% | 0% | 350 | 94% | -3% | 530 | 66% | -2% | Daily | 250 | 4% | 660 | -3% | 900 | -2% |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 25% | 110 | -8% | 160 | 0% | Daily | 180 | 260% | 13% | 430 | 291% | -4% | 610 | 281% | 0% | Daily | 300 | 11% | 700 | -4% | 1,010 | 1% |
| **San Juan Island Routes Subtotal[1]** | | **1,470** | **4%** | **1,570** | **2%** | **3,030** | **3%** | | **2,100** | **43%** | **8%** | **3,390** | **116%** | **3%** | **5,490** | **81%** | **5%** | | **2,910** | **9%** | **6,310** | **4%** | **9,230** | **6%** |
| **Total Ridership[2]** | | **5,360** | **3%** | **4,100** | **0%** | **9,440** | **2%** | | **8,910** | **66%** | **4%** | **14,510** | **254%** | **3%** | **23,390** | **148%** | **3%** | | **9,750** | **5%** | **19,200** | **2%** | **28,960** | **3%** |

Note: Typical Weekday volumes are produced from the WSF Planning Model; Summer Weekday and Weekend volumes represent a post-processing conversion

[1] Represents daily ridership forecasts.

[2] Represents combination of PM peak period and daily ridership volumes

[3] Assumption; actual period unknown due to lack of ticket sales data

[4] Actual period unknown due to lack of ticket sales data

## Table 4.5f - 2030 Baseline Ridership Forecasts by Fare Category with Conversions to Summer Peak Periods and Adjustments for Recreational Travel - WESTBOUND

### Baseline Ridership Forecast

| Ferry Route | Typical (May) Weekday PM Peak Period / Peak Direction | | | | Summer Weekday Peak Period / Peak Direction | | | | | | | | Summer Weekend Peak / Peak Direction (Saturday) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | Passenger Fares | % Change from Typical ← | Total Riders | % Change from Typical ← | | 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders |
| Point Defiance - Tahlequah | 3-7 pm | 260 | 120 | 370 | 2:40pm - 6:40pm | 350 | 35% | 180 | 50% | 530 | 43% | | 2:40pm - 6:40pm | 280 | 280 | 550 |
| Vashon - Southworth | 3-7 pm | 100 | 50 | 150 | PM Peak[3] | 140 | 40% | 20 | -60% | 160 | 7% | | Unknown[4] | 120 | 90 | 210 |
| Fauntleroy - Vashon | 3-7 pm | 630 | 430 | 1,060 | 4:00pm - 8:00pm | 810 | 29% | 640 | 49% | 1,450 | 37% | | 10:10am - 2:10pm | 670 | 730 | 1,400 |
| Fauntleroy - Southworth | 3-7 pm | 590 | 770 | 1,370 | 3:35pm - 7:35pm | 640 | 8% | 870 | 13% | 1,510 | 10% | | 8:35am - 12:35pm | 400 | 610 | 1,010 |
| **South Sound Routes** | | **1,580** | **1,370** | **2,950** | | **1,940** | **23%** | **1,710** | **25%** | **3,650** | **24%** | | | **1,470** | **1,710** | **3,170** |
| Seattle - Bremerton | 3-7 pm | 570 | 1,600 | 2,160 | 3:00pm - 7:00pm | 590 | 4% | 1,890 | 18% | 2,480 | 15% | | 3:00pm - 7:00pm | 430 | 1,560 | 1,990 |
| Seattle - Bainbridge Island | 3-7 pm | 1,540 | 4,430 | 5,970 | 3:00pm - 7:00pm | 1,650 | 7% | 5,180 | 17% | 6,830 | 14% | | 10:40am - 2:40pm | 1,590 | 3,360 | 4,950 |
| Edmonds - Kingston | 3-7 pm | 1,380 | 1,410 | 2,780 | 2:30pm - 6:30pm | 1,510 | 9% | 1,650 | 17% | 3,160 | 14% | | 10:45am - 2:45pm | 1,420 | 2,800 | 4,220 |
| **Central Sound Routes** | | **3,490** | **7,440** | **10,910** | | **3,750** | **7%** | **8,720** | **17%** | **12,470** | **14%** | | | **3,440** | **7,720** | **11,160** |
| Mukilteo - Clinton | 3-7 pm | 1,160 | 1,570 | 2,720 | 3:00pm - 7:00pm | 1,310 | 13% | 1,890 | 20% | 3,200 | 18% | | 10:30am - 2:30pm | 1,390 | 3,000 | 4,380 |
| Port Townsend - Keystone | 3-7 pm | 280 | 420 | 690 | 11:15am - 3:15pm | 450 | 61% | 920 | 119% | 1,370 | 99% | | 11:15am - 3:15pm | 630 | 1,270 | 1,900 |
| **North Sound Routes** | | **1,440** | **1,990** | **3,410** | | **1,760** | **22%** | **2,810** | **41%** | **4,570** | **34%** | | | **2,020** | **4,270** | **6,280** |
| **Subtotal for Peak Periods** | | **6,510** | **10,800** | **17,270** | | **7,450** | **14%** | **13,240** | **23%** | **20,690** | **20%** | | | **6,930** | **13,700** | **20,610** |
| All Vessels To/From Anacortes[1] | Daily | 1,400 | 1,520 | 2,920 | Daily | 1,820 | 30% | 3,020 | 99% | 4,850 | 66% | | Daily | 2,040 | 4,750 | 6,780 |
| Inter-Island Vessel Only[1] | Daily | 160 | 210 | 370 | Daily | 210 | 31% | 420 | 100% | 630 | 70% | | Daily | 240 | 660 | 900 |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 120 | 170 | Daily | 180 | 260% | 520 | 333% | 710 | 318% | | Daily | 250 | 690 | 940 |
| **San Juan Island Routes Subtotal[1]** | | **1,610** | **1,850** | **3,460** | | **2,210** | **37%** | **3,960** | **114%** | **6,190** | **79%** | | | **2,530** | **6,100** | **8,620** |
| **Total Ridership[2]** | | **8,120** | **12,650** | **20,730** | | **9,660** | **19%** | **17,200** | **36%** | **26,880** | **30%** | | | **9,460** | **19,800** | **29,230** |

### Baseline Ridership Forecast - Adjusted for Recreational Travel

| Ferry Route | Typical (May) Weekday PM Peak Period / Peak Direction | | | | | | Summer Weekday Peak Period / Peak Direction | | | | | | | | | Summer Weekend Peak / Peak Direction (Saturday) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | % Change from Base ↑ | Passenger Fares | % Change from Typical ← | % Change from Base ↑ | Total Riders | % Change from Typical ← | % Change from Base ↑ | | 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ |
| Point Defiance - Tahlequah | 3-7 pm | 270 | 4% | 130 | 8% | 400 | 8% | 2:40pm - 6:40pm | 370 | 37% | 6% | 220 | 69% | 22% | 590 | 48% | 11% | | 2:40pm - 6:40pm | 310 | 11% | 330 | 18% | 630 | 15% |
| Vashon - Southworth | 3-7 pm | 100 | 0% | 50 | 0% | 140 | -7% | PM Peak[3] | 140 | 40% | 0% | 20 | -60% | 0% | 150 | 7% | -6% | | Unknown[4] | 110 | -8% | 90 | 0% | 200 | -5% |
| Fauntleroy - Vashon | 3-7 pm | 670 | 6% | 470 | 9% | 1,140 | 8% | 4:00pm - 8:00pm | 880 | 31% | 9% | 750 | 60% | 17% | 1,640 | 44% | 13% | | 10:10am - 2:10pm | 730 | 9% | 830 | 14% | 1,560 | 11% |
| Fauntleroy - Southworth | 3-7 pm | 590 | 0% | 770 | 0% | 1,360 | -1% | 3:35pm - 7:35pm | 640 | 8% | 0% | 870 | 13% | 0% | 1,510 | 11% | 0% | | 8:35am - 12:35pm | 410 | 3% | 600 | -2% | 1,010 | 0% |
| **South Sound Routes** | | **1,630** | **3%** | **1,420** | **4%** | **3,040** | **3%** | | **2,030** | **25%** | **5%** | **1,860** | **31%** | **9%** | **3,890** | **28%** | **7%** | | | **1,560** | **6%** | **1,850** | **8%** | **3,400** | **7%** |
| Seattle - Bremerton | 3-7 pm | 580 | 2% | 1,650 | 3% | 2,230 | 3% | 3:00pm - 7:00pm | 610 | 5% | 3% | 1,990 | 21% | 5% | 2,600 | 17% | 5% | | 3:00pm - 7:00pm | 450 | 5% | 1,640 | 5% | 2,090 | 5% |
| Seattle - Bainbridge Island | 3-7 pm | 1,580 | 3% | 4,580 | 3% | 6,150 | 3% | 3:00pm - 7:00pm | 1,710 | 8% | 4% | 5,450 | 19% | 5% | 7,160 | 16% | 5% | | 10:40am - 2:40pm | 1,660 | 4% | 3,540 | 5% | 5,210 | 5% |
| Edmonds - Kingston | 3-7 pm | 1,420 | 3% | 1,430 | 1% | 2,850 | 3% | 2:30pm - 6:30pm | 1,580 | 11% | 5% | 1,690 | 18% | 2% | 3,270 | 15% | 3% | | 10:45am - 2:45pm | 1,530 | 8% | 2,880 | 3% | 4,410 | 5% |
| **Central Sound Routes** | | **3,580** | **3%** | **7,660** | **3%** | **11,230** | **3%** | | **3,900** | **9%** | **4%** | **9,130** | **19%** | **5%** | **13,030** | **16%** | **4%** | | | **3,640** | **6%** | **8,060** | **4%** | **11,710** | **5%** |
| Mukilteo - Clinton | 3-7 pm | 1,240 | 7% | 1,590 | 1% | 2,830 | 4% | 3:00pm - 7:00pm | 1,460 | 18% | 11% | 1,940 | 22% | 3% | 3,400 | 20% | 6% | | 10:30am - 2:30pm | 1,550 | 12% | 2,990 | 0% | 4,540 | 4% |
| Port Townsend - Keystone | 3-7 pm | 280 | 0% | 400 | -5% | 680 | -1% | 11:15am - 3:15pm | 460 | 64% | 2% | 870 | 118% | -5% | 1,330 | 96% | -3% | | 11:15am - 3:15pm | 630 | 0% | 1,220 | -4% | 1,840 | -3% |
| **North Sound Routes** | | **1,520** | **6%** | **1,990** | **0%** | **3,510** | **3%** | | **1,920** | **26%** | **9%** | **2,810** | **41%** | **0%** | **4,730** | **35%** | **4%** | | | **2,180** | **8%** | **4,210** | **-1%** | **6,380** | **2%** |
| **Subtotal for Peak Periods** | | **6,730** | **3%** | **11,070** | **3%** | **17,780** | **3%** | | **7,850** | **17%** | **5%** | **13,800** | **25%** | **4%** | **21,650** | **22%** | **5%** | | | **7,380** | **6%** | **14,120** | **3%** | **21,490** | **4%** |
| All Vessels To/From Anacortes[1] | Daily | 1,500 | 7% | 1,570 | 3% | 3,070 | 5% | Daily | 2,090 | 39% | 15% | 3,250 | 107% | 8% | 5,350 | 74% | 10% | | Daily | 2,390 | 17% | 5,150 | 8% | 7,540 | 11% |
| Inter-Island Vessel Only[1] | Daily | 170 | 6% | 210 | 0% | 380 | 3% | Daily | 220 | 29% | 5% | 430 | 105% | 2% | 650 | 71% | 3% | | Daily | 250 | 4% | 670 | 2% | 920 | 2% |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 0% | 130 | 8% | 180 | 6% | Daily | 230 | 360% | 28% | 560 | 331% | 8% | 800 | 344% | 13% | | Daily | 320 | 28% | 760 | 10% | 1,080 | 15% |
| **San Juan Island Routes Subtotal[1]** | | **1,720** | **7%** | **1,910** | **3%** | **3,630** | **5%** | | **2,540** | **48%** | **15%** | **4,240** | **122%** | **7%** | **6,800** | **87%** | **10%** | | | **2,960** | **17%** | **6,580** | **8%** | **9,540** | **11%** |
| **Total Ridership[2]** | | **8,450** | **4%** | **12,980** | **3%** | **21,410** | **3%** | | **10,390** | **23%** | **8%** | **18,040** | **39%** | **5%** | **28,450** | **33%** | **6%** | | | **10,340** | **9%** | **20,700** | **5%** | **31,030** | **6%** |

Note: Typical Weekday volumes are produced from the WSF Planning Model; Summer Weekday and Weekend volumes represent a post-processing conversion

[1] Represents daily ridership forecasts.

[2] Represents combination of PM peak period and daily ridership volumes

[3] Assumption; actual period unknown due to lack of ticket sales data

[4] Actual period unknown due to lack of ticket sales data

## Table 4.5g - 2030 Baseline Ridership Forecasts by Fare Category with Conversions to Summer Peak Periods and Adjustments for Recreational Travel - EASTBOUND

### Baseline Ridership Forecast

| Ferry Route | Typical (May) Weekday PM Peak Period / Reverse Direction: 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders | Summer Weekday Peak Period / Peak Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | Passenger Fares | % Change from Typical ← | Total Riders | % Change from Typical ← | Summer Weekend Peak / Peak Direction (Sunday): 4-hr Peak Period | Vehicle/ Driver Fares | Passenger Fares | Total Riders |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Point Defiance - Tahlequah | 3-7 pm | 70 | 40 | 110 | AM Peak[3] | 350 | 400% | 180 | 350% | 530 | 382% | Unknown[4] | 280 | 280 | 550 |
| Vashon - Southworth | 3-7 pm | 110 | 30 | 130 | 6:05am - 10:05am | 140 | 27% | 20 | -33% | 160 | 23% | Unknown[4] | 120 | 90 | 210 |
| Fauntleroy - Vashon | 3-7 pm | 700 | 570 | 1,270 | AM Peak[3] | 810 | 16% | 640 | 12% | 1,450 | 14% | Unknown[4] | 670 | 730 | 1,400 |
| Fauntleroy - Southworth | 3-7 pm | 150 | 60 | 210 | 4:30am - 8:30am | 660 | 340% | 900 | 1400% | 1,570 | 648% | 1:10pm - 5:10pm | 440 | 670 | 1,100 |
| **South Sound Routes** | | **1,030** | **700** | **1,720** | | **1,960** | **90%** | **1,740** | **149%** | **3,710** | **116%** | | **1,510** | **1,770** | **3,260** |
| Seattle - Bremerton | 3-7 pm | 400 | 330 | 730 | 6:20am - 10:20am | 560 | 40% | 1,820 | 452% | 2,390 | 227% | 3:00pm - 7:00pm | 730 | 2,650 | 3,370 |
| Seattle - Bainbridge Island | 3-7 pm | 770 | 560 | 1,330 | 6:20am - 10:20am | 1,500 | 95% | 4,720 | 743% | 6,220 | 368% | 6:30pm - 10:30pm | 1,490 | 3,160 | 4,650 |
| Edmonds - Kingston | 3-7 pm | 880 | 530 | 1,420 | 2:15pm - 6:15pm | 1,350 | 53% | 1,470 | 177% | 2,820 | 99% | 10:50am - 2:50pm | 1,450 | 2,850 | 4,300 |
| **Central Sound Routes** | | **2,050** | **1,420** | **3,480** | | **3,410** | **66%** | **8,010** | **464%** | **11,430** | **228%** | | **3,670** | **8,660** | **12,320** |
| Mukilteo - Clinton | 3-7 pm | 880 | 440 | 1,310 | 7:00am - 11:00am | 1,310 | 49% | 1,890 | 330% | 3,200 | 144% | 3:30pm - 7:30pm | 1,360 | 2,940 | 4,300 |
| Port Townsend - Keystone | 3-7 pm | 310 | 400 | 700 | 1:30pm - 5:30pm | 410 | 32% | 800 | 100% | 1,210 | 73% | 2:15pm - 6:15pm | 780 | 1,420 | 2,190 |
| **North Sound Routes** | | **1,190** | **840** | **2,010** | | **1,720** | **45%** | **2,690** | **220%** | **4,410** | **119%** | | **2,140** | **4,360** | **6,490** |
| **Subtotal for Peak Periods** | | **4,270** | **2,960** | **7,210** | | **7,090** | **66%** | **12,440** | **320%** | **19,550** | **171%** | | **7,320** | **14,790** | **22,070** |
| All Vessels To/From Anacortes[1] | Daily | 1,400 | 1,520 | 2,920 | Daily | 1,820 | 30% | 3,020 | 99% | 4,850 | 66% | Daily | 2,450 | 5,690 | 8,140 |
| Inter-Island Vessel Only[1] | Daily | 160 | 210 | 370 | Daily | 210 | 31% | 420 | 100% | 630 | 70% | Daily | 280 | 800 | 1,080 |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 120 | 170 | Daily | 170 | 240% | 480 | 300% | 650 | 282% | Daily | 280 | 780 | 1,070 |
| **San Juan Island Routes Subtotal[1]** | | **1,610** | **1,850** | **3,460** | | **2,200** | **37%** | **3,920** | **112%** | **6,130** | **77%** | | **3,010** | **7,270** | **10,290** |
| **Total Ridership[2]** | | **5,880** | **4,810** | **10,670** | | **9,290** | **58%** | **16,360** | **240%** | **25,680** | **141%** | | **10,330** | **22,060** | **32,360** |

### Baseline Ridership Forecast - Adjusted for Recreational Travel

| Ferry Route | Typical (May) Weekday PM Peak Period / Reverse Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ | Summer Weekday Peak Period / Peak Direction: 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Typical ← | % Change from Base ↑ | Passenger Fares | % Change from Typical ← | % Change from Base ↑ | Total Riders | % Change from Typical ← | % Change from Base ↑ | Summer Weekend Peak / Peak Direction (Sunday): 4-hr Peak Period | Vehicle/ Driver Fares | % Change from Base ↑ | Passenger Fares | % Change from Base ↑ | Total Riders | % Change from Base ↑ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Point Defiance - Tahlequah | 3-7 pm | 80 | 14% | 40 | 0% | 120 | 9% | AM Peak[3] | 370 | 363% | 6% | 220 | 450% | 22% | 590 | 392% | 11% | Unknown[4] | 310 | 11% | 330 | 18% | 630 | 15% |
| Vashon - Southworth | 3-7 pm | 110 | 0% | 30 | 0% | 130 | 0% | 6:05am - 10:05am | 140 | 27% | 0% | 20 | -33% | 0% | 150 | 15% | -6% | Unknown[4] | 110 | -8% | 90 | 0% | 200 | -5% |
| Fauntleroy - Vashon | 3-7 pm | 730 | 4% | 600 | 5% | 1,330 | 5% | AM Peak[3] | 880 | 21% | 9% | 750 | 25% | 17% | 1,640 | 23% | 13% | Unknown[4] | 730 | 9% | 830 | 14% | 1,560 | 11% |
| Fauntleroy - Southworth | 3-7 pm | 150 | 0% | 60 | 0% | 220 | 5% | 4:30am - 8:30am | 670 | 347% | 2% | 900 | 1400% | 0% | 1,570 | 614% | 0% | 1:10pm - 5:10pm | 450 | 2% | 660 | -1% | 1,110 | 1% |
| **South Sound Routes** | | **1,070** | **4%** | **730** | **4%** | **1,800** | **5%** | | **2,060** | **93%** | **5%** | **1,890** | **159%** | **9%** | **3,950** | **119%** | **6%** | | **1,600** | **6%** | **1,910** | **8%** | **3,500** | **7%** |
| Seattle - Bremerton | 3-7 pm | 410 | 3% | 330 | 0% | 740 | 1% | 6:20am - 10:20am | 590 | 44% | 5% | 1,920 | 482% | 5% | 2,500 | 238% | 5% | 3:00pm - 7:00pm | 760 | 4% | 2,780 | 5% | 3,540 | 5% |
| Seattle - Bainbridge Island | 3-7 pm | 800 | 4% | 560 | 0% | 1,360 | 2% | 6:20am - 10:20am | 1,560 | 95% | 4% | 4,960 | 786% | 5% | 6,520 | 379% | 5% | 6:30pm - 10:30pm | 1,560 | 5% | 3,330 | 5% | 4,890 | 5% |
| Edmonds - Kingston | 3-7 pm | 940 | 7% | 540 | 2% | 1,480 | 4% | 2:15pm - 6:15pm | 1,410 | 50% | 4% | 1,510 | 180% | 3% | 2,920 | 97% | 4% | 10:50am - 2:50pm | 1,550 | 7% | 2,930 | 3% | 4,480 | 4% |
| **Central Sound Routes** | | **2,150** | **5%** | **1,430** | **1%** | **3,580** | **3%** | | **3,560** | **66%** | **4%** | **8,390** | **487%** | **5%** | **11,940** | **234%** | **4%** | | **3,870** | **5%** | **9,040** | **4%** | **12,910** | **5%** |
| Mukilteo - Clinton | 3-7 pm | 920 | 5% | 410 | -7% | 1,330 | 2% | 7:00am - 11:00am | 1,460 | 59% | 11% | 1,940 | 373% | 3% | 3,400 | 156% | 6% | 3:30pm - 7:30pm | 1,520 | 12% | 2,940 | 0% | 4,460 | 4% |
| Port Townsend - Keystone | 3-7 pm | 300 | -3% | 390 | -3% | 690 | -1% | 1:30pm - 5:30pm | 420 | 40% | 2% | 760 | 95% | -5% | 1,190 | 72% | -2% | 2:15pm - 6:15pm | 780 | 0% | 1,350 | -5% | 2,130 | -3% |
| **North Sound Routes** | | **1,220** | **3%** | **800** | **-5%** | **2,020** | **0%** | | **1,880** | **54%** | **9%** | **2,700** | **238%** | **0%** | **4,590** | **127%** | **4%** | | **2,300** | **7%** | **4,290** | **-2%** | **6,590** | **2%** |
| **Subtotal for Peak Periods** | | **4,440** | **4%** | **2,960** | **0%** | **7,400** | **3%** | | **7,500** | **69%** | **6%** | **12,980** | **339%** | **4%** | **20,480** | **177%** | **5%** | | **7,770** | **6%** | **15,240** | **3%** | **23,000** | **4%** |
| All Vessels To/From Anacortes[1] | Daily | 1,500 | 7% | 1,570 | 3% | 3,070 | 5% | Daily | 2,090 | 39% | 15% | 3,250 | 107% | 8% | 5,350 | 74% | 10% | Daily | 2,870 | 17% | 6,180 | 9% | 9,050 | 11% |
| Inter-Island Vessel Only[1] | Daily | 170 | 6% | 210 | 0% | 380 | 3% | Daily | 220 | 29% | 5% | 430 | 105% | 2% | 650 | 71% | 3% | Daily | 300 | 7% | 810 | 1% | 1,110 | 3% |
| Anacortes/San Juans-Sidney, B.C.[1] | Daily | 50 | 0% | 130 | 8% | 180 | 6% | Daily | 220 | 340% | 29% | 520 | 300% | 8% | 730 | 306% | 12% | Daily | 370 | 32% | 850 | 9% | 1,230 | 15% |
| **San Juan Island Routes Subtotal[1]** | | **1,720** | **7%** | **1,910** | **3%** | **3,630** | **5%** | | **2,530** | **47%** | **15%** | **4,200** | **120%** | **7%** | **6,730** | **85%** | **10%** | | **3,540** | **18%** | **7,840** | **8%** | **11,390** | **11%** |
| **Total Ridership[2]** | | **6,160** | **5%** | **4,870** | **1%** | **11,030** | **3%** | | **10,030** | **63%** | **8%** | **17,180** | **253%** | **5%** | **27,210** | **147%** | **6%** | | **11,310** | **9%** | **23,080** | **5%** | **34,390** | **6%** |

Note: Typical Weekday volumes are produced from the WSF Planning Model; Summer Weekday and Weekend volumes represent a post-processing conversion

[1] Represents daily ridership forecasts.

[2] Represents combination of PM peak period and daily ridership volumes

[3] Assumption; actual period unknown due to lack of ticket sales data

[4] Actual period unknown due to lack of ticket sales data

## 5.0 TIME-OF-DAY/FARE ELASTICITY ESTIMATION

### 5.1 Summary

This section describes the work that was undertaken using recently-collected survey data to estimate the likely response of ferry customer volumes to changes in fare amounts and time-of-day pricing policies. The work was based on survey data that was collected in July 2008 by Opinion Research Northwest ("ORC-NW", Boise, Idaho). The survey included a set of questions that asked current peak drive-on ferry customers to choose among five options under different service conditions:

1. Drive-on the sailing chosen for the most recent trip
2. Drive-on an earlier sailing
3. Drive-on a later sailing,
4. Walk-on the sailing chosen for the most recent trip or
5. Make the trip some other way or not at all

The responses to those questions were used to statistically estimate the likelihood of an individual choosing each of these options under different fare policies and service conditions.

ORC-NW prepared a dataset that included all of the relevant data in a form suitable for analysis and conducted some initial statistical and simulation modeling. The work described here refined and extended that initial modeling. First, the survey data were reviewed and found to represent reasonable ranges of travel behavior. The survey data provides a rich description of customers' current travel and of their responses to a wide range of different service conditions.

As a second task, the choice models developed by the ORC-NW team were refined in two specific ways: 1) standard econometric methods were used to test different model forms and 2) the models were adapted to be consistent with standard travel mode choice modeling practices. The sensitivity of traffic volumes to fare in the resulting models is very close to that in the current Washington State Ferries forecasting model and also to the observed historical changes in actual customer volumes in response to past fare changes.

Finally, the travel choice models were imported into an Excel spreadsheet to allow direct analysis by Washington State Ferries staff and consultants of the numerous fare and service scenarios that will be analyzed as part of the current planning effort. The models are implemented in a form that is consistent with standard practice in travel mode choice modeling and in particular in a probabilistic form – estimating the probabilities of individuals choosing different options with different fare structures and service conditions. The spreadsheet is used to calculate elasticities by route group, fare class and time period. Several scenarios were evaluated and the results indicate, as did the initial work by the ORC-NW team, that fare changes can significantly affect both overall demand and, even more so, the time-of-day distribution of demand.

## 5.2 Introduction

This section describes the statistical and simulation modeling work that was undertaken to estimate the elasticity of ferry customer volumes to changes in fare amounts and time-of-day pricing policies. The work was based on survey data that were collected in July 2008 by ORC-NW. Details of the survey design and administration are available from ORC-NW but the element of direct relevance to this work is the survey's choice-based conjoint exercise. A conjoint survey is one in which respondents are given a choice between several alternatives, each described by a different set of features.

The structure of the choice-based conjoint exercise was developed collaboratively among ORC-NW, the Transportation Commission, Washington State Ferries and other consultants working for those entities. It was designed to follow the general approach commonly used for transportation choice modeling, also known as a stated preference (SP) survey. In this approach, respondents are asked to describe their most recent trip using the mode of interest. They are then presented with realistic alternatives for making that trip and asked to select the one that they would most likely choose under those circumstances. The use of a specific past trip as a point of reference is important in these surveys because travel decisions are commonly quite context specific – travelers have specific needs and constraints that vary considerably from day-to-day and from trip to trip and an average or typical trip does not reflect those real needs and constraints.[4]

The choice-based conjoint experiments for the Washington State Ferries survey were administered to drive-on customers who were asked to choose among five alternatives:

1. Drive-on the sailing chosen for the most recent trip
2. Drive-on an earlier sailing
3. Drive-on a later sailing,
4. Walk-on the sailing chosen for the most recent trip or
5. Make the trip some other way or not at all

Each of the alternatives was described by a fare, a waiting time and an actual sailing departure time. The fares, waiting times and departure times for the earlier and later sailings were varied across the experiments. An example screen from ORC-NW's online questionnaire is shown below in Figure 5.2a.

[4] The use of a specific past trip as a point of reference is important in these surveys because travel decisions are commonly quite context specific travelers have specific needs and constraints that vary considerably from day-to-day and from trip to trip and an average or typical trip does not reflect those real needs and constraints. By sampling across all trips made by respondents, a representative mix of these needs and constraints will be represented in the sample.

**Figure 5.2a – Example Screen from Online Questionnaire**


A total of eight such screens were shown to each respondent, with the values of the variables changing according to an experimental design that was aimed at extracting the best possible set of useful observations. The data from the 838 respondents who completed the choice-based conjoint exercises provide sufficient information to allow estimation of system-wide elasticities for current drive-on customers, and in particular to determine how those customers would likely change their use of the system in response to changes in fare levels and policies.

The remainder of this discussion describes the general approach that was used to estimate these elasticities and the values that were estimated for alternative policies to be evaluated in the current Washington State Ferries Long Range Plan.

### 5.3 Project Approach

Washington State Ferries currently uses a travel mode/route choice forecasting model that was developed using data from a 1999 on-board origin-destination and stated preference survey effort.[5] That model used a joint estimation approach with both actual travel data as well as stated preference survey data. This is generally regarded among practicing travel choice

[5] TECHNICAL MEMORANDUM: Results of WSF Mode Choice and Route Choice Model Estimation, prepared by Mark Bradley Research Consulting with consultation from Parsons Brinckerhoff Quade Douglas, Inc., 2001.

modelers as the most preferable approach for choice model estimation but it is possible only when there is sufficient variation in the variables of interest among the available mode and route alternatives. For example, the 1999 survey provides no information about possible changes in rider behavior because of peak vs. off-peak fares, because fares didn't vary between peak and off-peak periods. In order to analyze this issue as well as others, we used the more recent data gathered by ORC-NW that did address this variable.

The work described here was designed specifically to complement the existing WSF model, by providing estimates of the elasticity of drive-on volumes to changes in fares across departure times. The model structure and general approach to statistical estimation of the model coefficients were selected to be consistent with the existing WSFmodel where appropriate. In particular, segment-level multinomial logit models were estimated using classical econometric methods and the model scales were set to be consistent with those models. A multinomial logit model is typically used when there is a variety of choices or outcomes, and its output is an estimate of how the odds of a particular choice or outcome vary with changes in the inputs (the independent variables), in this case fares, minutes of wait time, fare differences between vehicles and walk-ons, and so forth. Individual respondent-level models were also developed to allow random heterogeneity across the sample. In other words, the model attempts to capture both individual preferences and the distribution of preferences across respondents. The resulting models were normalized so that the scale of the coefficient estimates was consistent with that estimated for the segment-level multinomial logit models, which also is very close to the scale of the existing WSF mode/route choice models.

The resulting individual-level ferry mode/time-of-day choice models were incorporated into a spreadsheet-based simulator that was designed to calculate elasticities at the route group level under different fare policies. The simulator calculates the likelihood of each individual in the survey sample choosing each of the available travel alternatives under different fare conditions. These likelihoods are then totaled to produce estimates of the alternatives' market shares under these fares. Finally, the changes in market shares from base conditions are used to calculate fare elasticities.

### 5.4 Model Specification and Estimation Results

Data for the model estimation work was provided by ORC-NW. The choice-based conjoint data was merged with demographic and trip data from the associated respondents. Together, these two sets of data allowed estimation of models that incorporated both systematic and random heterogeneity.[6] The models were specified to include all the variables that were varied among the choice-based conjoint experiments, in addition to selected demographic and trip characteristics. Fare and waiting/departure time differences (for the earlier and later sailings) were specified as nominal variables in dollars and minutes respectively and were treated as continuous rather than categorical variables.[7] In addition, the models were specified to include

[6] It has been shown that some differences in preferences are systematic effects of demographic variables such as income and it is important to incorporate those effects in the model structure before modeling random differences in preferences. See, for example, Bhat, C., V. Warburg and T. Adler, "Modeling Demographic and Unobserved Heterogeneity in Air Passengers Sensitivity to Service Attributes in Itinerary Choice," *Transportation Research Record 1951*, Transportation Research Board, Washington D. C., 2006.

[7] Initial work conducted previously by others treated fare and time shift as categorical variables with seven and four levels, respectively. However, the resulting individual-level models displayed significant non-monotonicity well over three-quarters of the individuals in the sample had estimated values that suggested that higher prices were preferred to lower prices. This was simply a result of stretching the data to estimate more fare and time shift coefficients than it could reasonably support.

only the number of terms that could be supported by the experimental design and that followed econometric identification rules.[8]

In addition to reviewing the data for outliers, several specification tests were conducted to determine the type of travel behavior represented by the data. In general, these tests indicated that the travelers who completed the survey responded carefully to the choice experiments; in other words, the responses given by a single traveler were not inconsistent with each other.

The general form of the specifications has the four conjoint variables: fare, time between the sailing used and an earlier sailing time, time between the sailing used and a later sailing time, and waiting time. In addition, constants were added for the walk-on and drive-on alternatives to represent additional factors that might affect choice between these alternatives and the no-trip option. Separate constants were not specified for the earlier and later sailing options because those constants were not significantly different from the one for the sailing time that was actually selected, the time shift variable adequately represents those differences. As a result, only two constants were specified for the five alternatives.[9]

As noted above, fare and the time variables were treated as continuous variables and a number of linear and nonlinear functions were tested to determine the relationship between these variables and the utility[10] of the ferry alternatives. These tests indicated that the effects on utility are not significantly different from linear within the range of fare values tested and similar tests indicated linearity in the effects of time shifts to earlier or later sailings. As a result, general linear specifications were used for these variables in all of the subsequent work.[11]

Also as noted above, systematic effects of demographic and other variables were also explored through specification tests. The most consistent effect was found to be an income effect on price sensitivity. This effect has been noted in many other travel choice models and was incorporated here.[12] This effect reflects the fact that higher income individuals are generally less sensitive to fares.

As expected, systematic differences were found in the responses between discretionary and non-discretionary trips. The sample was also segmented along three other dimensions to identify any other systematic variations in preference. The dimensions tested included:

1. **Payment type** – Multi-ride discounted fare or full fare
2. **Actual sailing time** – Peak period or off-peak

[8] Some models developed previously were significantly over-specified meaning that more coefficients were included in the models than could be independently estimated given the structure of the data. When too many variables are included in a model for the size of the data set, the results are not meaningful. Previous models had approximately 60 individual terms (coefficients) that were estimated for each of the 838 respondents in the sample.

[9] Note that only n-1 constants can be independently identified for n alternatives because choices depend only on the difference in utilities between alternatives. If they have read this far, they already know this.

[10] Utility is the economic term to describe the general attractiveness of an alternative. In market research, the terms worth and part worth (for the contribution of a particular attribute) are more commonly used to describe this same quantity.

[11] Note that the overall effect of utility in the multinomial logit model used for this work is nonlinear even with a linear representation within the utility function.

[12] An additional exponent representing the elasticity of price sensitivity to income was estimated using a nonlinear search method. This is as opposed to a simple multiplicative interaction form commonly used in these models. See, for example, Axhausen, K.W., Hess, S., Knig, A., Abay, G., Bates, J.J. Bierlaire, M., "State of the art estimates of the Swiss value of travel time savings," *Transport Policy*, forthcoming, 2008.

3. **Route group** – North, Central, South or Island

Although some differences in price sensitivity were found between multi-ride and full fare passengers, the most significant differences were found among the route groups (North, South, Central and Island). While the sample sizes for the individual line groups were not sufficient to support detailed model estimation at that level, this segmentation structure was carried into the simulation modeling described in the next section.

The final estimated models and associated statistics are given in Table 5.4a and Table 5.4b below.

**Table 5.4a - Logit Model Coefficients for Discretionary Trips**

| | Coefficient | T-Stat |
|---|---|---|
| *Fare ($)* | -0.136 | -25.4 |
| *Shift earlier (min.)* | -0.0101 | -19.9 |
| *Shift later (min.)* | -0.00962 | -19.0 |
| *Wait time (min.)* | -0.0205 | -14.5 |
| *Drive-on constant* | 3.04 | 33.5 |
| *Walk-on constant* | 0.679 | 11.5 |
| *Fare-income elast.* | -0.166 | -5.0 |

| | |
|---|---|
| Observations: | 4170 |
| Initial log likelihood: | -6711 |
| Final log likelihood: | -5954 |

**Table 5.4b - Logit Model Coefficients for Non-Discretionary Trips**

| | Coefficient | T-Stat |
|---|---|---|
| *Fare ($)* | -0.126 | -18.7 |
| *Shift earlier (min.)* | -0.0139 | -19.6 |
| *Shift later (min.)* | -0.0136 | -19.5 |
| *Wait time (min.)* | -0.0184 | -12.0 |
| *Drive-on constant* | 2.9 | 25.8 |
| *Walk-on constant* | 0.87 | 13.1 |
| *Fare-income elast.* | -0.0918 | -1.8 |

| | |
|---|---|
| Observations: | 2526 |
| Initial log likelihood: | -4065 |
| Final log likelihood: | -3606 |

These coefficients can be used to calculate the change in odds that a traveler would choose a different sailing time or walk vs. drive given a change in fares and/or a change in the time variables. The large constant term for drive-on means that if a traveler chooses to drive on, given the fare structure and sailing times, a large change in those variables is necessary to shift his or her travel choice away from drive-on. This is shown by the size of the drive-on constant

relative to the other coefficients. The constant term serves to capture all the other variables that might go into a choice to drive on. Those other variables are at least partially captured in the survey done by ORC-NW. For example, the survey respondents indicated that availability of transit service on either side of the trip affected their travel choice, as well as total travel time and lack of flexibility.

All of the coefficient values are intuitively reasonable when compared to other travel choice models. The fare and time coefficients are all negative, meaning that utility values decline with increasing fares and wait time and all are highly statistically significant. The fare-income elasticities are negative, meaning that price sensitivity declines with higher incomes, as would be expected. Also as would be expected, these models indicate that travelers on non-discretionary trips are less willing to shift to earlier or later sailings and are less cost-sensitive than those making discretionary trips.

These results were compared with the model that is currently being used in the WSF forecasting system. The coefficient of fare is common between that model and the ones described in the tables above (travel time was not varied in this conjoint survey and so there is not a comparable value estimated here).[13] Also, the fare coefficients estimated here are remarkably similar to those developed in 1999 for the current Ferries model; -0.129 in that model vs. -0.136 for discretionary and -0.126 for non-discretionary trips.

These models describe the systematic differences that are most important in affecting choice among the ferry options but there are also random differences among individuals that may be important. There are several ways to represent these random differences, the most common of which are use of mixed logit and hierarchical Bayes (HB) estimation. These methods use a combination of data from the aggregate sample and from a given individual to estimate the sensitivities of that individual to changes in service conditions. To maintain consistency with the previous work that was conducted with these data, HB estimation was conducted using the model specifications described above. This process results in model coefficients for each of the individuals in the sample, representing their unique preferences. The results across the sample were similar to those shown in Tables 5.4a and 5.4b above but with a different scale to the coefficient values. Because the scale of the resulting HB coefficients is dependent on the type of normalization used and other controls on the estimation process, the average scale was post-normalized to the aggregate multinomial logit coefficient scales.

### 5.5 Elasticity Estimates

The price elasticity of demand is defined in economics as the ratio of the percent change in demand to the percent change in price. It is a measure of the relative responsiveness of demand to changes in price. Price elasticities are generally negative meaning that as price for a service increases, demand for that service decreases. Services with price elasticities with an absolute value greater than one are termed “elastic” and any increases in price for those services will result in decreases in both demand and gross revenue. Services with price elasticities with an absolute value less than one are called “inelastic” and increases in price for these services will result in reduced demand but higher gross revenue. The elasticities that

[13] The Ferries model uses a non-normalized nested logit structure and has a specification in which fare is divided by vehicle occupancy. The value of -0.126 was derived from the original coefficient by multiplying it by the nest theta and adjusting for an average occupancy as estimated in the ORC-NW 2008 Washington State Ferries Customer Survey report of September 10, 2008.

result from the mutinomial logit model used here[14] are not constant but, rather, increase in absolute value with increasing prices. This means that at some price, a service with inelastic demand will switch to elastic demand at some point, implying that there exists a maximum gross revenue price point.

The elasticity of ferry demand can be calculated by simulating the mode choice behavior of the population (as represented by the survey sample) with different fare structures. The individual-level HB models as described above were used in a spreadsheet simulation model to calculate elasticities under different fare policies. The individuals were weighted to be representative of the overall ferry population using weights calculated and supplied by ORC-NW. Two pricing tests were conducted:

1. Ferry drive-on fares were increased by 10% and

2. The drive-on fares for the later and earlier sailings were decreased by 20%

The arc price elasticities[15] were calculated for the drive-on ferry population as whole and separately for each of the ferry route groups. The resulting arc elasticities are shown in Tables 5.5a and 5.5b below.

**Table 5.5a - Calculated Elasticities for Discretionary Trips**

| | **Elasticity of Drive-on Volume to Drive-on Fares (10% fare increase)** | **Elasticity of Peak Drive-on Volume to Off-peak Fares (20% off-peak fare decrease)** |
|---|---|---|
| *North Routes* | -0.40 | 0.74 |
| *Central Routes* | -0.31 | 0.65 |
| *South Routes* | -0.26 | 0.49 |
| *Island Routes* | -0.20 | 0.91 |
| ***Overall*** | **-0.30** | **0.64** |

Note: The samples for the South and particularly the Island routes are too small to support reliable estimates of elasticities for those groups. For that reason, the results shown here for those routes should not be relied upon for any route-level fare policy decisions.

[14] Note that previous work with these conjoint data by others used a simpler model assuming that individuals always choose the alternative with highest utility. This is different from the multinomial logit model which is widely used for travel mode choice applications and which assumes that higher utility implies only a higher choice probability rather than a certain choice.

[15] Arc price elasticities in effect average the elasticities at the two points on the demand curve represented by the two price points.

**Table 5.5b - Calculated Elasticities for Non-Discretionary Trips**

| | Elasticity of Drive-on Volume to Drive-on Fares (10% fare increase) | Elasticity of Peak Drive-on Volume to Off-peak Fares (20% off-peak fare decrease) |
|---|---|---|
| *North Routes* | -0.43 | 0.59 |
| *Central Routes* | -0.37 | 0.52 |
| *South Routes* | -0.22 | 0.34 |
| *Island Routes* | -0.39 | 0.97 |
| ***Overall*** | **-0.34** | **0.51** |

Note: The samples for the South and particularly the Island routes are too small to support reliable estimates of elasticities for those groups. For that reason, the results shown here for those routes should not be relied upon for any route-level fare policy decisions.

Based on these calculations, drive-on ferry demand is inelastic at current fare levels (first numerical column in Tables 5.5a and 5.5b). This means that drive-on fares could be increased by at least small amounts and while the resulting demand would decrease somewhat, gross revenues would continue to increase. Elasticities of non-discretionary trips are generally higher, and in particular they are more likely to shift to walk-on in response to drive-on higher prices.

The elasticities of peak drive-on sailings to reductions in off-peak fares[16] (second numerical column in Tables 5.5a and 5.5b) are somewhat greater in absolute value, though still reflecting overall inelastic conditions.[17] Here, as expected, the elasticity of non-discretionary trips is somewhat lower than for discretionary trips, likely because there is less time-of-day flexibility in these trips.

In general, these results suggest the demand for drive-on boardings is somewhat sensitive to general increases in drive-on fares – a 10% increase would result in a more than 3% decline in drive-on boardings. However, the demand for peak drive-on sailings is even more sensitive to changes in fares for off-peak drive-in fares – a 10% decrease in off-peak sailing fares would result in a decline in peak sailing drive-ons of between 5% and 6%. This suggests in particular that a differential time-of-day fare policy could result in significant reductions in peak drive-on demand levels. These results reflect the relatively low sensitivity to shifting times as indicated by the logit model coefficients. Model Applications

A spreadsheet-based simulation model was developed to allow testing of a full range of pricing scenarios. The spreadsheet model allows fares to be specified by mode, traveler segment, by time-of-day and by route groups. It also is set up to facilitate comparisons among alternative scenarios in either current or future years. The spreadsheet model was used to calculate elasticities for a wide range of possible pricing scenarios to support the development of the Long Range Plan. The resulting elasticities were intuitively reasonable and provided a reasonable empirical basis for evaluation of those scenarios.

[16] These are cross-elasticities – the change in demand for one service as a result of a change in price of another service – which is why the signs are positive.

[17] These elasticities were compared to the results reported in Parametric Marketing's "Washington State Ferries Price Sensitivity Study: Conjoint Analysis Overview" WAS004 15-Aug-2008. For the off-peak fare reduction scenario reported there, the elasticity in that study was calculated to be 0.79, compared to 0.54 in the models used to construct Table 4 above, with the assumed sailing headways adjusted to be comparable.

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## FINAL LONG-RANGE PLAN

## APPENDIX G
## ANNUALIZATION FACTORS FOR RIDERSHIP ANALYSIS

# ANNUALIZATION FACTORS FOR RIDERSHIP ANALYSIS

The annual ridership projections used for long range planning purposes were developed using the methodology described below.

## PROJECTION METHODOLOGY

### Projecting PM Peak Ridership

PM Peak Ridership was projected using the WSF Travel Forecasting (Planning) EMME Model. For technical and methodology details about this model, please see Appendix D: Ridership Forecasting Technical Report.

The EMME Model projects total vehicle ridership and total ridership for the four-hour afternoon peak period during a typical Wednesday in the month of May, for the years 2020 and 2030. Given that the San Juan Islands routes don't experience an afternoon commute peak traffic pattern, it projects average daily ridership for these routes. These peak period and daily ridership numbers were forecasted separately for Eastbound and Westbound traffic and then combined to create a total peak period traffic count for each route.

### Annualizing PM Peak Ridership

Since the EMME Model supplied PM Peak Ridership, it was necessary to scale this traffic count up into an annual ridership figure.

First, an "Annualization Factor" for each route was calculated that gives a ratio between actual annual Ridership in 2006, and the actual PM Peak Period Ridership for a typical weekday in May 2006. This factor was calculated as follows:

(**2006 Total Ridership**) ÷ (**2006 May PM Peak Ridership**) = **Annualization Factor**

This factor was then used to calculate annual ridership for 2020 and 2030 which corresponded with the EMME Model May PM Peak Ridership projections for those years. The PM peak vehicle ridership for each year was multiplied by the vehicle annualization factor, and the PM Peak total ridership was multiplied by the total ridership annualization factor. This resulted in annual vehicle and total ridership figures for 2020 and 2030. Annual passenger ridership was calculated as the difference between total and vehicle ridership.

Annual ridership for each individual year in the Plan was calculated using the assumption that ridership would grow at a linear rate between the estimated data points (2006, 2020, 2030). An annual average growth rate between the 2006 and 2020 annual ridership points was calculated, and applied to all years between 2006 and 2020. A separate annual average growth rate was calculated and applied to the years between 2020 and 2030.

Exhibit 1 below shows all of the calculated Annualization Factors by Route.

## ANNUALIZATION FACTORS BY ROUTE

**Exhibit 1**
**Annualization Factors by Route**

| Route | Vehicle Factor | Total Ridership Factor |
|---|---|---|
| **Pt. Defiance-Tahlequah** | 1,363 | 1,510 |
| **Southworth-Vashon** | 1,168 | 1,427 |
| **Fauntleroy-Vashon** | 1,076 | 1,010 |
| **Fauntleroy-Southworth** | 1,066 | 1,033 |
| **Seattle-Bremerton** | 876 | 922 |
| **Seattle-Bainbridge Island** | 1,260 | 1,186 |
| **Edmonds-Kingston** | 1,225 | 1,362 |
| **Mukilteo-Clinton** | 1,359 | 1,471 |
| **Pt. Townsend-Keystone** | 1,118 | 1,087 |
| **Anacortes-San Juans** | 358 | 399 |
| **San Juans Inter-Island*** | 478 | 478 |
| **Sidney, B.C. Int'l Route Legs** | 590 | 572 |
| **Total Weighted Average** | **1,012** | **1,043** |

## OTHER CONSIDERATIONS

The methodology described above overestimated 2008 annual ridership when compared to actual ridership for all routes but Sidney. This is likely because the methodology assumes a slow, steady increase between 2006 and 2020. 2008 annual ridership was below 2006 ridership levels and deviated from this trend. For this reason, Exhibits presented in the Final Long Range Plan that reference 2008 annual ridership use actual ridership in lieu of projected 2008 numbers.

In addition to assuming the May peak to annual ridership relationship will not change over the 22 year planning horizon, this methodology assumes that there is no seasonal fluctuation in the peak to annual ridership relationship throughout the year. For routes that have a high proportion of recreational riders may not hold true.

During development of the long range plan, ridership data for a week in January, May, and August 2006 was analyzed to help understand seasonal peak to daily ridership relationships and evaluate seasonal pricing strategies. Ultimately, the method described above (which does not include seasonal differentiation) was used for planning purposes. However, to the extent that WSF chooses to pursue more targeted demand management strategies focused on times of day or seasons, this annualization methodology may need to be refined.

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## FINAL LONG-RANGE PLAN

## APPENDIX H
## OPERATING STRATEGIES EVALUATION

# OPERATING STRATEGIES EVALUATION

This Appendix is comprised of four working papers as follows:

1. **Operational Strategies: Situation Assessment**. This doument was written at the outset of the long range planning process. It explains the legislative context of this work and includes a preliminary list of strategies to be studied with challenges and considerations for the ferry system.

2. **Evaluative Framework and Criteria**: This document summarizes the criteria against which opertional and pricing strategies are evaluated.

3. **Summary of Operational and Pricing Strategy Best Practices**. This document details the review of international transportation best practices that was undertaken to identify strategies that WSF should be considering, highlight successful examples of the adaptive management strategies identifed by legislation in action, and discuss applicability of the strategies identified to the ferry system.

4. **Strategy Screening Worksheets**. These worksheets analyze each of the operating strategies identified against the evaluative criteria.

On their own, these papers do not constitute a recommendation on operating strategies. They reflect the process that was undertaken to identify the strategies that are proposed in the Draft Long-Range Plan.

Washington State Department of Transportation

Washington State Ferries

# WASHINGTON STATE FERRIES

## Operational Strategies: Situation Assessment

In the 2007 legislative session, the Legislature passed ESHB 2358 ("the Ferry Bill") and its biennial transportation budget which contain specific policy and operational directives related to how WSF is currently providing services and how it should be planning to meet the needs of the organization in the future. The legislation identifies specific work that needs to be completed and requires new levels of cooperation and collaboration among the Legislature (through the JTC and the new JTC working group), the Transportation Commission, WSF and WSDOT. These directives follow from the JTC's Ferry Financing Study and are the next steps in the process of developing a policy framework to address the long-term sustainability of Washington State Ferries.

The Legislation specifically spells out a list of tasks and a rough timeline that are designed to begin to address the questions raised in the Ferry Financing Study and to develop an information base that can support the ultimate question of how to address the long-term WSF funding requirements. Specifically ESHB 2358 and many of the Budget Provisos are designed to:

1. **Provide new, improved and "audited" information** – Ridership forecast reconciliation, life cycle cost model (LCCM), customer survey, cost allocation methodology, JTC Ferry Policy Working Group Studies, Pre-design study requirements
2. **Develop strategies to minimize costs or increase revenues** – Terminal design standards, operational strategies, pricing policy changes, Co-development study, evaluate 1-point toll collection, re-establish vehicle LOS

This situation assessment provides a foundation for the identification, analysis and adoption of **operational strategies** as required by ESHB 2358. This component of the work plan is the key element of a pivotal shift in how WSF plans for its service and investment needs. Historically, ferry investments were driven by changes in demand and the objective was to maintain a reasonable level of service. This approach suggested that WSF was a passive participant in the process and would simply adjust investments and services to keep pace with changes in demand. The new approach requires WSF to try to proactively manage the demand for ferry services through the use of operational and pricing strategies to maximize the use of existing assets and minimize the need for additional investments. The balance of this memo addresses the following key issues:

- Legislative direction
- Work that has already been done
- Preliminary identification of operational strategies
- Potential operational issues
- Key evaluative criteria for potential strategies
- Relationship to other work elements
- Next steps

## Legislation Direction

In the Ferry Bill, the Washington Legislature requested a significant review and possible development of new Washington State Ferries' operational strategies in order "to ensure that existing assets are fully utilized and to guide future investments" (Section 7). This examination is part of a larger directive, with the intent that:

- "Washington state ferries be given the tools necessary to maximize the utilization of existing capacity and to make the most efficient use of existing assets and tax dollars…
- Department of transportation adopts adaptive management practices in its operating and capital program so as to keep the costs of the Washington state ferries system as low as possible while continuously improving the quality and timeliness of service" (Section 1).

The intent and language of the Ferry Bill recognizes the tension between the continued growing demand and finite capacity and resources of the Washington State Ferries system. Operational strategies can be seen as tools to manage this demand and make the most of existing capacity. According to the Ferry Bill, the following nine strategy areas must be reviewed:

- "The feasibility of using reservation systems;
- Methods of shifting vehicular traffic to other modes of transportation;
- Methods of improving on-dock operations to maximize efficiency and minimize operating and capital costs;
- A cost-benefit analysis of remote holding versus over-water holding;
- Methods of reorganizing holding areas and minimizing on-dock employee parking to maximize the dock size available for customer vehicles;
- Schedule modifications;
- Efficiencies in exit queuing and metering;
- Interoperability with other transportation services;
- Options for leveling vehicle peak demand; and
- Options for increasing off-peak ridership" (Section 7).

To guide the examination of these options, the legislation also provides parameters for evaluation, which include the need for each recommended strategy to:

- "Recognize that each travel shed is unique and might not have the same operational strategies;
- Use data from the current survey [to be conducted between Fall 2007 and Summer 2008]…
- Be consistent with vehicle level of service standards;
- Choose the most efficient balance of capital and operating investments by using a life-cycle cost analysis; and
- Use methods of collecting fares that maximize efficiency and achieve revenue management control" (Section 7).

## Existing Work on Operational Strategies

Some study and work has already been done in regard to operational strategy areas. *The Washington State Ferries Financing Study* (December 2006) and the *Washington State Ferries Draft Long-Range Strategic Plan 2006-2030* (April 2006) are two documents that heavily influenced the formulation and direction of ESHB 2358. Washington State Ferries' internal draft documents—such as the *Final Draft White Paper: Operational Strategies for Reducing the Impact of Ferry Terminal Traffic in the Colman Dock Area* (May 2006), the *San Juan Ferries Reservation Program Feasibility Study* (June 1991), and *Edmonds Ferry Terminal Operations Analysis* (February 1996)—have evaluated some of the operational impacts associated with strategies for particular terminals.

Washington State Ferries may not have a stated demand management policy to date, but congestion conditions are already an ad hoc demand management tool. Lengthy wait times can and have resulted in a shift in modes—from vehicles to walk-ons, motorcycles, and vanpools—as well as shifts in time. It is important to be aware that ferry users already adapt their behavior to the existing incentives and disincentives of the system in place. The examination and recommendation of operational strategies is a way to approach demand management and incentive structures more consciously, effectively, and efficiently.

## Preliminary List of Operational Strategies

The strategies that follow are an initial list of ways that WSF can manage demand and increase operational efficiency. Variations of each strategy and existing models in operation are added where relevant. These and other strategies should be viewed as a menu of options that could be combined in various ways to create a coherent package that reflects the needs of terminals, routes, travel sheds and the system as a whole.

- **Congestion pricing** is a policy that charges a user fee in order to reflect the true marginal cost of using a scarce resource—here, space on a ferry and terminal docks. Congestion pricing comes with many names—such as peak-load, value, time-of-day or discriminatory pricing—but the most important differences relate to the implementation of the fee structure. Implementation forms include:
    - Uniform tolls during a set time period based on typical congestion patterns at the location;
    - Variable tolls across locations based on real-time monitoring of congestion conditions.

  Congestion pricing is currently being used in London, Hong Kong, and Singapore and in development and roll out in other European countries to manage traffic in downtown areas. In the US, voluntary systems of congestion pricing (in the form of High Occupancy Toll lanes) exist in four areas, which will be described in greater detail below.

  The *WSF Final Draft White Paper: Operational Strategies for Reducing the Impact of Ferry Terminal Traffic in the Colman Dock Area* identified congestion pricing—or "peak pricing" as it was called in the paper—as one of the "most promising strategies" for reducing the impact on WSF traffic around the Colman Dock. In the paper, a $5 peak pricing surcharge, applied 100 days a year during a uniform peak period was modeled.

In contrast WSF customers, for the better part of the past 30-40 years, who traveled the most frequently, enjoyed the best per trip price through the use of frequent-user coupon books. As such, a high percentage of regular commuters traveling during the most congested periods are in fact paying the lowest possible price for their trip.

Congestion pricing would be most applicable to vehicle users since capacity for autos is the existing and foreseeable constraint on the system. Consistent with ESHB 2358's direction that operational strategies may vary by route, congestion pricing could take different forms on WSF's routes. Congestion pricing could on one or more routes include lowering non-peak fares in order to 1) shift demand from peak periods and 2) increase overall ridership. Information on elasticity and likely responses will be gathered by route to help inform this analysis.

The definition of peak will also vary by terminal and route, with a decision to be made whether congestion pricing is applied only to the most heavily used sailing of the day or to all sailings within the defined peak period.

- **A reservation system** is "a means of controlling traffic demand to fit available service capacity," according to the 1991 WSDOT *San Juan Ferries Reservations Program Feasibility Study*. This would be an extension of the WSF reservation system already provided for international travel routes (Anacortes-Sidney). Passengers could reserve space on a vessel via phone, internet, or terminal stations and counters. Features of the reservation system that would require further study include:
    - Percentage of reserved space allotted per vessel;
    - Existence of a reservation fee, and its amount;
    - Reservation cancellation policy;
    - Reservation unit (vehicle, passengers, bikes, etc)
    - Treatment of distinct ferry users (commuters, island residents, tourists, etc).

  Other ferry systems comparable to WSF with reservation systems in place for some routes include British Columbia Ferries and Woods Hole, Martha's Vineyard, and Nantucket Steamship Authority.

  Based on its previous studies of Colman Dock and the San Juan Island travel shed, WSF did not pursue a reservation system as an isolated strategy at those particular facilities because of concerns regarding the costs and benefits of implementation and citizens' fear (especially island residents) of reduced customer service. Yet, this previous analysis did not extend to a system-wide, integrated approach.

  Since there are generally no constraints on passenger walk-on service, reservation policies would be likely be applicable only to auto traffic and may vary both by route and by type of vehicle (i.e. passenger auto, freight trucks, recreational vehicles).

  Integration with congestion pricing may mean that the time of day when reservations are available and the costs of those reservations may vary to reflect congestion pricing decisions. It could be less expensive to make a reservation during non peak periods and very expensive to make a reservation during a peak period.

- **High-occupancy toll (HOT) lanes** are a hybrid system that combines voluntary congestion pricing and reservations. This strategy would require a creation of high-occupancy vehicle (HOV) lanes—such as those on freeways—at ferry terminals that would give priority to vehicles willing to pay a toll for assured passage on the next ferry. The lanes could also give priority to high-occupancy vehicles, such as its freeway counterpart does, or other sub-groups of vehicles deemed appropriate.

  While new to the ferry system, WSDOT is currently planning a HOT pilot project on nine miles of SR 167, scheduled to open in the spring of 2008. Tolls will be collected electronically via a "Good to Go!" transponder mounted on a vehicle's windshield. Interstate HOT lanes are already operational in Orange County, California; San Diego, California; Denver, Colorado; and Minneapolis, Minnesota. Tolls in San Diego, Denver, and Minneapolis adjust to real-time congestion in the HOT lanes, while Orange County tolls are based on a predetermined schedule.

- **Mode shift** strategies encourage ferry passengers to use other modes (walk-on, bicycle, motorcycle, vanpool, and transit). Ways to implement mode shift strategies include:
  - Pricing vehicles at a higher rate than other modes;
  - Increasing transit connections and services at and near terminals.

  Vehicle pricing and transit connections were identified respectively as "a potentially high-benefit" and "most promising" strategies in the *WSF White Paper*.

- **Ticketing operations** are methods—such as eTicketing, tandem ticketing, and fare structure simplification—to improve efficiencies at the terminal docks prior to departure. The *WSF White Paper* mentions that WSF has recently completed the roll out of a new electronic fare collection system (EFS), which would allow passengers to purchase future tickets—but not specific trips—online and via kiosks and some tollbooths. Tandem ticketing arranges ticket booths in succession so that two sets of vehicles can be processed simultaneously

- **Increasing holding facilities** for waiting vehicles in order to reduce congestion on neighboring streets is closely related to current dock size. Further study of each terminal and dock should be conducted to evaluate the two options of creating remote holding and increasing on-dock capacity. Both options require an assessment of how much extra capacity is desirable, given peak and off-peak loading times. Remote holding considerations include:
  - Management of vehicle traffic to and from remote holding locations;
  - Time associated with transferring vehicles.

  On-dock expansion options include:
  - Reduction of employee parking;
  - Physical expansion.

  Both on-dock and remote holding could require significant capital investments. In addition, any such measures discussed in operational strategies should be aligned with the work of the "Terminal Design Standard Team."

- **Entry and exit queuing and metering** techniques aim to reduce congestion in neighboring streets and affect the percentage of time under a green light condition. Ways of implementing this strategy include the following:
    - Entry metering with the option of vehicle transfer to a holding location (on-dock or remote);
    - Exit metering by reducing the boat offloading rate;
    - Exit metering by transferring vehicles to a holding location (on-dock or remote).

  The *WSF White Paper* identified on-dock exit queuing as a "worthwhile strategy" to pursue at Colman Dock.
- **Scheduling and other operational constraints/issues** should be reviewed from the perspective of ensuring that ferry service is delivered in a cost efficient, cost effective and responsive manner. This is a very broad mandate to look at how WSF is providing its services and if there are approaches that would either maintain current service levels at a lower cost or improve service levels on a cost efficient basis. Examples could include the following:
    - The relationship between schedules, operating costs and vessel utilization and whether there are opportunities to improve utilization by adjusting schedules.
    - Labor agreement work rules which have a cost impact or reduce service flexibility options.
    - How the current route configurations align with demand and ridership and if there might be alternative terminal pairs that offer a better overall balance of costs and services from either the customer or the Ferry System's perspective.
    - Peak service scheduling. Labor agreements require that all vessel staff receive a minimum 8 hour shift except on auto-passenger ferries which has heavily influenced WSF's scheduling. An analysis of peak scheduling should be included to assess the costs and benefits of meeting peak demand by increasing service during these periods despite the costs associated with current labor agreements.
    - How can existing vessels be deployed or re-deployed to ensure cost efficient and responsive service.

## Potential Operational Issues

The strategies listed above require varying degrees of operational changes. Potential implications of implementing the strategies that warrant further study include:

- **Change in WSF staff size:** Extra terminal staff will be needed for the implementation of reservation systems, HOT lanes, entry and exit queuing, and additional holding facilities in order to take reservations or direct vehicle traffic and segregation. eTicketing, on the other hand, may reduce tollbooth staffing. The costs associated with changes in staff size must be considered in further analysis of these options.

- **Schedule modifications** may result because of increasing demand during off-peak times and changes in the loading and unloading of vehicles.
- **Increase in terminal capacity and facilities**: Vehicle segregation and holding require increased space on-dock or off-dock. Increased transit connectivity may require additional terminal facilities, such as ramps, waiting spaces, etc. Congestion pricing, HOT lanes, and reservations may also require additional terminal tolling booths, and the possible reinstatement of two-point tolls for all routes. There are significant capital investments and operating costs that come with these additions. ESHB 2358 requires WSF to find the most efficient balance between operating and capital expenses in assessing these alternatives for each terminal.
- **Increase in technology systems**: Variable congestion pricing and HOT lanes, and reservations require an expansion of technology capacity. Existing technology—such as the system in place for international reservations—as well as developing technology in WSF and WSDOT—such as EFS and "Good to Go!" HOT lane transponder—should be leveraged and integrated wherever possible.
- **Development of new protocol and procedures**: With any significant change in operations, WSF staff must be informed and trained. The time involved doing so could vary considerably depending on the strategy being introduced.

## Key Evaluative Criteria for Potential Operational Strategies

In determining recommendations, operational strategies should be evaluated by their impact on four dimensions implicit in ESHB 2358: 1) demand 2) customer service 3) revenue generation and 4) impact on users, capacity and communities. While these criteria are mentioned in the Ferry Bill no explicit prioritization is stated. In later stages of analysis, prioritization and the balancing of these considerations should be clear or further guidance may be warranted.

This evaluation will be conducted in parallel to this process under the pricing strategies work element which will involve the Washington State Transportation Commission, as they have the regulatory authority to set fares for ferries. Below are some initial questions to guide data collection and analysis as well as begin to frame how individual strategies might be evaluated.

**Demand Impacts.** Managing ferry demand—and vehicle ferry demand in particular—is an integral part of the Legislature's directive. Questions include:

- What is the estimated demand elasticity for vehicles, walk-ons, bicycles, motorcycles, and vanpools?
- What is the estimated cross-elasticity for walk-ons, bicycles, motorcycles, vanpools, and transit if vehicle fees are increased?
    - Do terminals have the added facility capacity to handle the shift in demand from autos to other modes?
- How does demand elasticity differ for rider sub-groups (commuters, tourists, island residents, etc)?
- How does demand elasticity differ by travel routes?

- How does one measure the effectiveness of demand response?

**Customer Service.** "Improving the quality and timeliness of service" is a stated goal in the Ferry Bill. Therefore, it is important that each operational strategy is evaluated according to its effects and perceived effects on the service toward different customer groups by route. For example, a reservation system may be seen by regular users as an improvement in customer service since they can plan their trips without waits, but as a hindrance to users who do not know that reservations are available. Questions by route include:

- How do users define "customer service improvements" (more efficient loading/unloading, more amenities on the ferries and in the terminals, etc)?
- How would the public respond to the new strategy and its perceived effect on service?
- Does the strategy affect different user groups in different ways? If so, how? Do certain user groups have special needs that should be addressed?
- How do customers value their time and how does that affect their likely response to operational changes.

**Revenue Impacts.** The passage of I-695 and its elimination of the Motor Vehicle Excise Tax (MVET) in 1999 decreased funding for WSF operations. The Ferry Bill emphasizes the need to keep costs down, but does not speak on the point of a strategy's revenue-generating potential. Before evaluating individual strategies, it is important to ask: What level of revenue generation is desirable and expected? For example, HOT lane and congestion pricing tolls may be priced in a way to recover the costs associated with implementing the systems or in a way to make money for WSF general operations.

- How should pricing and revenue be evaluated?

Impacts on users capacity and communities. WSF is an extension of the state highway system. The analysis of options should consider the potential for perceived and/or actual impacts on users, capacity and communities and identify how these might be mitigated while achieving the broader customer service, demand management and revenue goals. Questions could include by route:

- How does this strategy affect users, system capacities and communities?

## Relationship to Other Work Elements

The identification, analysis and recommendation of operational strategies will be closely aligned with several other concurrent tasks including: the WSTC customer survey; the development of terminal design standards; the re-establishment of vehicle LOS standards; and, the updated and reconciled ridership forecasts. In addition, the operational strategies will be a key component of a revised Long Range Plan.

## Schedule and Next Steps

This situation assessment memo is a first step in the identification, formulation, and analysis of operational strategy recommendations. The following time line and actions are tentative and are subject to revision. JTC review of recommendations will occur throughout the process.

- **October 2007-February 2008**: Preliminary investigation and analysis of operational strategies by WSF/WSDOT and its consultant teams.

- **March-May 2008**: Incorporation of survey results to analysis and recommendations.
- **May-June 2008**: First draft of operational strategy recommendations.
- **June-July 2008**: Public outreach and feedback on first draft through FAC and other meetings.
- **August-October 2008**: Incorporation of operational strategy recommendations into LRP.
- **December 2008**: Adoption of the Long Range Plan.

Washington State Department of Transportation

Washington State Ferries

# EVALUATIVE FRAMEWORK AND CRITERIA

The Revised Long Range Plan is intended to guide future service and investment decisions for the Ferries Division of WSDOT through 2030. In contrast to the Draft Long Range Plan of 2006, which detailed a capital investment plan that responded to growing demand and long-established level of service standards, the Revised Long Range Plan will consider the provisions of ESHB 2358, detail updated LOS standards, and describe a recommended set of operating and pricing strategies intended to maximize efficiency within the system and manage demand.


The overarching challenge inherent in developing the Revised Long Range Plan will be to develop a set of recommendations and strategies that (1) lead to greater operational efficiency (2) help to manage demand, and (3) provide a framework for strategic decision-making around how and when to add system capacity. This framework is consistent with WSDOT's overall mission and strategic direction.

## How will pricing and operating strategies shape the Revised Long Range Plan?

The recommended pricing and operating strategies will be the mechanisms that enable Ferries to more proactively manage its demand and operate more efficiently. Through LOS standards and a revised tariff policy framework, the Plan will detail the conditions under which additional capital investments may be warranted versus the conditions under which additional demand management pricing and operating strategies should be employed.

## How will strategies be evaluated and selected?

All elements of the Long-Range Plan, including pricing and operational strategies will be evaluated using the same overarching criteria. These criteria include:

- **Operating and capital costs**. Short and long term operating and capital costs will be evaluated for all recommendations.
- **Revenue generation**. While an individual pricing strategy's potential for revenue generation is not a criteria against which it will be measured, the combined package of recommendations and strategies included in the long range plan must be able to generate the revenue required by the biennial transportation budget.
- **Terminal and fleet operations**. Recommendations and strategies will be evaluated in terms of their impact on terminal and fleet operations.
- **Customers.** Customer impacts identified through the WSTC-commissioned survey, Local Agency Review Team meetings, Ferry Advisory Committee meetings and general public outreach efforts will be considered for all strategies and recommendations.

- **Communities.** Impacts on communities located around or near ferry terminals as identified through the WSTC-commissioned survey, Local Agency Review Team meetings, Ferry Advisory Committee meetings and general public outreach efforts will be considered for all strategies and recommendations.

In addition to the above overarching criteria, pricing and operating strategies will also be evaluated in terms of how well they might meet one or both of the following specific criteria:

- **Ability to change customer behavior and manage system demand.** The recommended pricing and operating strategies will be evaluated based on their ability to (1) induce changes in behavior like mode and time shifts or (2) provide supporting systems or mechanisms that make it easier or more desirable for customers to change behavior.
- **Improving service or cost efficiency.** Strategies that improve service or cost efficiencies will be considered even if they are not expected to have an impact on system demand.

## FRAMEWORK FOR EVALUATION OF STRATEGIES


### How will strategies be evaluated and selected?

**PRINCIPAL EVALUATION CRITERIA**

How well does the strategy achieve:

- Changes in customer behavior/shifts in demand
- Improvement in cost or service efficiency

**ADDITIONAL EVALUATION CRITERIA**

What are the expected impacts on:

- Operating and capital costs
- Revenue generation
- Terminal and fleet operations
- Customers
- Communities

# Summary of Operational and Pricing Strategy Best Practices

# February 21, 2008

## I. Introduction and Research Focus

Recent legislative direction (ESHB 2358 – "the Ferry Bill") mandated a review of the following operational and pricing strategies with the intent of finding new ways to improve service on the Washington State Ferry System. The strategies included:

- Feasibility of using reservation systems
- Methods of encouraging transportation mode shifts
- Methods of improving on-dock operations
- Cost-benefit analysis of remote vs over-water holding
- Methods of reorganizing holding areas and minimizing on-dock employee parking
- Schedule modifications
- Efficiencies in exit queuing and metering
- Interoperability with other transportation services
- Options for leveling vehicle peak demand
- Options for increasing off-peak ridership

In response to the legislative direction, WSF directed its staff and consultants to research the following initial list of strategies:

- Congestion pricing
- Reservation systems
- High occupancy toll (HOT) lanes
- Mode shift strategies
- Ticketing operations
- Increasing holding facilities
- Entry and exit queuing and metering
- Scheduling
- Fees and discounts that would support operational strategies

An early research step was to compile best practices about how and where such strategies have been applied, what their effect was, and whether the strategy may have potential application to WSF's system. This memorandum is a summary of the transportation operations best practices research. Each example was selected based on its ability to illustrate a concept, and none of the examples are given detailed descriptions. The purpose of both the examples and this memorandum is to offer some operational and pricing concepts for consideration. Further research will be done on those that interest decision makers as having potential for implementation within the Washington State Ferry System.

The legislative direction and preliminary strategies listed reflect the ultimate and immediate WSF goals to: increase the efficiency of daily operating procedures; to increase vehicle load during off-peak hours; and to increase passenger, rather than vehicle, load altogether. Therefore, operational strategies were selected that accomplish either faster transactions or daily operations; traveler mode shift (choosing an alternative means of travel other than a single occupant vehicle); or a traveler time shift (changing a time of departure based on traffic information or travel preferences.) The following table presents WSF's goals and strategies and the corresponding research topics:

| Goal | WSF Strategy | Corresponding Research Topic |
|---|---|---|
| Increase Operating Efficiencies | Ticketing operations | Intelligent Transportation Systems (ITS): Electronic fare collection |
| | Increasing holding facilities | Parking Management Strategies<br><br>ITS: Parking management |
| | Entry and exit queuing and metering | Reservations systems<br><br>ITS: Advanced Traveler Information Systems |
| | Scheduling | **Topic of a separate study ** |
| Traveler Mode Shift | Congestion pricing | Congestion pricing |
| | HOT lanes | Congestion pricing (HOT lane applications) |
| | Mode shift strategies | Congestion pricing<br><br>Transit marketing<br><br>Car sharing |
| Traveler Time shift | Congestion pricing | *See Congestion Pricing and HOT lanes* |
| | Reservations systems | Reservations systems |
| | | |
| Support for Operational Strategies | Fees and Discounts | Pricing Notes<br><br>Alternate revenue sources |

This memorandum is organized into the following sections:

i. **Existing WSDOT Travel Demand Management programming**:
This section lists and briefly describes the facilities and programs that Washington State Department of Transportation (WSDOT) offers with the intent of reducing peak hour vehicle demand. (This section does not include a description of regional transit agencies and services.) The programs listed in this section represent the current strategies that WSDOT uses to encourage traveler mode shifts and time shifts.

ii. **Operational and Pricing Strategies to Consider**:
This section presents operational and pricing best practices in the transportation industry related to the following research topics:

- Congestion pricing
    - Area-wide
    - Corridor-wide
    - Lane applications (including HOT lanes)
    - Pricing Notes
        - Alternate Sources of Revenue
- Reservation systems (examples from aviation, cargo, bus and theme parks)
- Parking management
    - Remote parking
    - Shared parking
    - Preferential parking
    - Vehicle valet
    - Employer-driven reduction programs
- Transit marketing
- Car sharing
- Intelligent transportation systems
    - Real time traffic information
    - Parking management
    - Electronic fare collection

**iii. Operational Strategies in Action: Ferry System Applications**

This section describes instances of operational and pricing strategies under study in this analysis being applied to other ferry systems across the world.

**iv. Summary of Findings**

This section provides a summary table that matches WSF operational goals to their corresponding best practices and states the general effects of implementing those strategies.

**v. Bibliography**

This section lists all sources researched, both cited and consulted. It is organized first by section of the document and then by subject.

## II. Existing WSDOT Transportation Demand Management Programs

Through existing programs, WSDOT already encourages commuters in the region, including its own employees, to use alternative times and modes of travel. This list is not inclusive or comprehensive of all the mode shift or time shift strategies or services active in the region. Instead, it focuses on WSDOT programs because they set a baseline for programming that WSDOT currently offers versus what expanded programming it could offer in the future.

| Legislative and WSF Strategies* | WSDOT Initiative |
|---|---|
| Congestion pricing (including HOT lanes) | SR 167 "Good to Go" – coming soon |
| Ticketing | ORCA card – coming soon |
| Entry and exit queuing and metering | Puget Sound Traffic Flow Map (and FerryCam.com) |
| Mode shift strategies | Vanpool program<br>- Priority carpool/vanpool loading on ferries<br>- Rideshare fare discount on ferries<br>RideShare On-Line<br>Park and Ride Lots<br>Trip Reduction Performance Program<br>Commute Trip Reduction Program |
| Fees and discounts to support operational strategies | Trip Reduction Performance Program<br>Commute Trip Reduction Program<br>Rideshare fare discount on ferries |

*WSF strategies were only listed that apply to existing WSDOT programming

*"Good to Go":* The electronic form of payment accepted at the Tacoma Narrow Bridge and, eventually, for SR 167 HOT lanes. This form of payment avoids the inconvenience of toll booths, but recognizes a varying payment schedule by vehicle or time of day as applicable[1].

[1] WSDOT website: http://www.wsdot.wa.gov/GoodToGo/about.htm

*Vanpool:* Legislative efforts to encourage vanpool use started in 1998 and increased in 2003 when a five-year, nine million dollar vanpool grant program was approved to help transit agencies with the capital costs of buying vehicles. In 2004, the Legislature also approved the use of financial incentives to encourage new vanpool riders and drivers. Van requests have exceeded the projected amount and WSDOT has projected being unable to meet the demand[2].

- In addition to helping promote to WSDOT vanpool program, WSF rewards carpools and vanpools by offering them preferential loading and by giving rideshare vehicles reduced fares. Exclusive staging area "diamond lanes" are available for carpool and vanpool vehicles, and those lanes get loaded first. In addition, carpools with three or more passengers and vanpools with five or more passengers are eligible for an annual vehicle permit at the cost of $20.00. This cost covers both the vehicle and driver. Additional passengers pay the applicable passenger fare[3].

*RideShare On-Line: "*WSDOT invested in expanding RideshareOnline statewide early in 2005, contributing to nearly doubling the number of visitors in the first nine months of the year compared with the same period in 2004. As of September 2005, nearly 13,000 individuals had sought ridematch information from the online service. A survey is being developed to track successful matches and the persistence of the groups formed.[4]*"*

*Park and Ride Lots:* Although there is no dedicated state funding for park and ride lots, approximately 270 lots (and more than 30,000 parking spaces) have been built, owned and operated through successful partnerships with transit agencies, other government agencies and local jurisdictions. Washington offering more than 30,000 parking spaces[5].

*Puget Sound Traffic Flow Map*: WSDOT maintains real-time traffic information related to incidents and congestion online[6]. WSF also has cameras showing dock and queuing conditions online.[7]

*Trip Reduction Performance Program*: WSDOT started a competitive grant program in 2003 to employers, agencies, nonprofits, developers and property managers to provide incentives to their employees for utilizing alternative modes of transportation to single occupant vehicle trips and/or other

[2] WSDOT website: http://www.wsdot.wa.gov/TDM/vanpool.htm

[3] Washington Administrative Code

[4] Ibid.

[5] WSDOT website: http://www.rideshareonline.com/prlots.htm

[6] WSDOT website: http://www.wsdot.wa.gov/Traffic/Seattle/

[7] WSDOT website: http://www.wsdot.wa.gov/ferries/cameras/

travel demand management measure such as telework. $1.5 million was appropriated for 2005-2007, and an additional $1.5 million was appropriated for 2007-2009[8].

*Commute Trip Reduction Program:* The Legislature passed the Commute Trip Reduction (CTR) Law in 1991, incorporating it into the Washington Clean Air Act. The goals of the program were to "reduce traffic congestion, reduce air pollution, and petroleum consumption through employer-based programs that decrease the number of commute trips made by people driving alone." At participating worksites, the drive-alone rate dropped from 70.8 percent in 1993 to 65.7 percent in 2005. Beginning in March 2006, new requirements were implemented that direct municipalities to develop Commute Trip Reduction Plans for eligible employers. (Employers with over 100 employees are required to comply.) Municipalities may also opt to designate areas with employers of smaller size to participate on a voluntary basis. These areas are referred to as Growth and Transportation Efficiency Centers and they have their own planning guidelines. The planning targets of the new requirements are[9]:

- 10% reduction in drive-alone travel in participating municipalities by 2011
- 13% reduction in VMT by commuter in participating municipalities by 2011
- Additional local targets as necessary to meet Urban Growth Area goals

*ORCA card*: One Regional Card for All is the Puget Sound's version of a "SmartCard" a plastic card with an embedded computer chip that will serve as fare media for Sound Transit, King County Metro, Washington State Ferries, Community Transit, Everett Transit, Pierce Transit, and Kitsap Transit. Implementation of the card has been tested and is awaiting final approval to begin operations.[10]

[8] WSDOT website: http://www.wsdot.wa.gov/TDM/TRPP/

[9] WSDOT website: http://apps.leg.wa.gov/WAC/default.aspx?cite=468-63-030

[10] http://soctech.cs.washington.edu/wiki/ORCA/ORCA and http://www.kitsaptransit.org/OrcaFactSheet.html

## III. Operational and Pricing Strategies to Consider

In this section, each research area is presented with the following descriptions:

- *Definition*: explains the concept and its general intent or why it typically gets implemented (the "what?" and "why?")

- *Examples and Effectiveness*: gives a few examples of a concept's application and outcomes. (The level of detail is general and brief, focused on "who?" "where?" and "how?".)

- *Considerations for Ferry Implementation*: assesses the concepts using some preliminary criteria to assist decision makers in selecting the most interesting concepts for further study.

**Congestion pricing**

*Definition:* Also referred to as "value pricing" this means the application of a toll, fee or tax for access to transportation facilities during set hours (usually peak travel periods) with the intent of using the price to limit the demand. The intent of redistributing traffic away from the most congested periods is what distinguishes congestion pricing from general tolling. (Tolling can be implemented to create, even maximize, revenues, or to manage congestion. Different pricing strategies are used to realize each goal.) As a means of managing traffic, congestion pricing has three general applications:

- Area-wide - meaning that access is tolled to an entire downtown or activity center area

- Corridor - meaning that access is tolled along a facility such as a bridge or freeway that connects an activity center or downtown to a commute shed

- Specific lanes – meaning that only certain lanes on a bridge or freeway are tolled (this includes High Occupancy Toll, or "HOT" lanes)

*Examples and Effectiveness:*

- Area-wide :

    - London: Since 2003 drivers have been charged 8 pounds per entry into Central London (transit vehicles, ADA vehicles, motorcycles and taxis are exempt, residents receive a discounted rate.) Congestion pricing was implemented as a means of reducing traffic in the city's core, thereby creating a more walkable environment. The fee is assessed all

day and every day by mounted cameras photographing vehicle license plates and a license plate recognition database.[11]

RESULT: There has been a 22% decrease in entering traffic and a 30% increase in transit ridership.

- Singapore: Since 1975 drivers have been assessed a flat fee to enter into central Singapore during peak periods. Congestion pricing was implemented to reduce traffic and the need for parking in the city's central area. The program started with the morning peak and eventually expanded to morning and evening peak and most of Saturdays. (Transit, motorcycles, cabs and 4+ carpools are exempt all day.) Means of collection began manually and then progressed to ERP (a transponder).[12]

  RESULT: When it was first implemented, traffic decreased in the central region by 44%. With each additional tolled period, traffic decreased a minimum of 25%.

- Stockholm: Since its successful demonstration in 2006 and successful vote in 2007, taxes have been imposed on vehicles entering central Stockholm on weekends. The program was initiated as a demonstration program to measure the potential reduction of traffic and the improvement in air quality. Video cameras and a license plate recognition database charges each owner a fee per entry (the rate varies by time of day). Owners may settle their accounts on-line or at kiosks located throughout the city.[13]

  RESULT: There has been a 20-25% decrease in vehicle traffic during tolled periods, and a 6% increase in transit use.

- Corridor

  - Toronto: Since its construction, drivers on SR 407 have been tolled by transponder and license plate recognition cameras and databases. Tolls have been charged on this facility since its construction as a means of managing traffic. Drivers pay their accounts monthly. Before 2002, the fee was variable, increasing to its highest point during peak periods. Since 2002, the fee has been a flat rate all day every day, with a surcharge imposed for drivers with no transponder[14].

[11] Transit Cooperative Research Program. "Chapter 14: Road Value Pricing" AND "Scanning Tour"

[12] Transit Cooperative Research Program. "Chapter 14: Road Value Pricing"

[13] Ibid.

[14] Ibid.

RESULT: Since the change to the flat rate, there has been a 30% decline in vehicle traffic.

- Port Authority of New York and New Jersey: Since 2001, drivers have been assessed a toll to utilize bridges and tunnels owned by the Port Authority at a rate that varies by both time of day and by means of collection. The new pricing scheme was implemented as a means of better managing traffic, giving drivers an incentive to drive during off-peak periods. Cash paying drivers are charged $6 all day. EZ Pass (transponder) users are charged $5 during the peak period and $4 during the off-peak period.[15]

  RESULT: There has been a 7% reduction in the morning peak and a 4% reduction in the evening peak. There has also been an increase in EZ Pass users.

- Specific lanes

  - SR 167: In Spring of 2008, the existing HOV lane on SR 167 in King County will be converted to a HOT lane. Tolls will vary by level of congestion, and will be collected via electronic transponder. This will be a demonstration project to determine the feasibility to of tolling as a means of traffic management in the Seattle region.[16]

    RESULT: To be determined

  - I-394 Minneapolis: Since 2005, the HOV lane on I-394 in Minneapolis has been converted to a HOT lane with tolls that vary by level of congestion ($1 to $4 generally with a maximum charge of $8.) 2+ carpools, transit and motorcycles are exempt. The lane was converted to a HOT lane as a means of better managing traffic.[17]

    RESULT: Vehicle throughput in the corridor has increased 5% since the system's inception.

  - SR 91 Orange County: Since 1995 drivers have been tolled on SR 91 at published rates that vary by time of day and day of week (generally between $1 and $4.75.) Congestion pricing was implemented as a means of better managing corridor traffic. 3+ carpools

[15] Transit Cooperative Research Program. "Chapter 14: Road Value Pricing"

[16] WSDOT website. SR 167 Project page.

[17] Munnich and Buckeye

receive a discount and a subscription service discount is available for those who use the lanes over 25 times a month. Tolls are collected by electronic transponder.[18]

RESULT: The tolled lanes handle 33% of corridor traffic (up from 14% before the tolls were imposed.) There has also been a 40% increase in carpools and vanpools in the corridor.

- Other Notable Applications:
  - Kennedy Airport, New York City: In late 2007, as a means of avoiding the summer delays that result from heavy summer travel, the USDOT proposed auctioning peak summer slots at Kennedy Airport to avoid delays of previous years.[19]

    RESULT: Ultimately, the Air Transport Association refused the idea of congestion pricing and the idea was dropped. The ATA claimed that congestion pricing has been proven to fail when applied to aviation, and the airlines prefer the approach of capping the number of flights that has been applied to La Guardia and Reagan Washington National.

  - Tappan Zee Bridge, New York: In 1997, as a means of improving traffic flow and reducing congestion, the Tappan Zee Bridge performed a demonstration project involving freight vehicles only. Cash-paying trucks utilizing the bridge during peak periods were charged double the regular toll. Trucks with transponders and trucks using the bridge during off-peak periods were exempt from the surcharge[20].

    RESULT: Unfortunately results were negligible because outreach and education was lacking (trucking company management didn't know of the demonstration project until after it had already scheduled its trucks for delivery.) An exit survey at the conclusion of the project revealed that if management had known it would have purchased transponders and/or scheduled the trucks differently.

[18] Transit Cooperative Research Program. Chapter 14: Road Value Pricing

[19] Conkey, December 11, 2007

[20] Transit Cooperative Research Program. Chapter 14: Road Value Pricing

*Considerations for Ferry Implementation*

| Assessment Question | YES/NO |
|---|---|
| Encourages passenger mode shift? | YES |
| Reduces negative land side impacts? | YES |
| Encourages higher off-peak vessel utilization? | YES |
| Improves convenience and attractiveness to customers? | NO |
| Requires capital outlay? | NO |
| Requires additional operating budget? | NO |
| Potential for revenue generation? | YES |
| Potential for alternative funding measures/public-private partnerships? | YES |
| Systemwide breadth of impact? | YES |

WSF could implement congestion pricing in the following role(s):

| | | | | | |
|---|---|---|---|---|---|
| Service provider | X | Employer | | Community partner | |

**Pricing Notes:**

Pricing strategies generally focus on either imposing a surcharge (price increase) or offering an incentive (price decrease). Congestion pricing examples are classified by their pricing strategy in the table below.

| | **Example** | **Details** |
|---|---|---|
| **Examples of Price Increase** | London | Flat rate all day |
| | Singapore | Flat rate all day |
| | Stockholm | Entry taxed on weekends; price fluctuates by time of day (higher during demonstrated peak periods) |
| | Toronto | Surcharge for peak periods and additional surcharge for cash payment |
| | Minneapolis | Price increases as congestion increases |
| | New York | Surcharge for peak periods; additional surcharge for cash payment |
| **Examples of Price Decrease** | Port Authority of NY and NJ | Discount for EZ pass users<br><br>Discount for off-peak use |
| | Orange County | Discount for subscription users; discount for carpools |

In the case of transit, fare increases typically result in fare elasticity of about .33: for every fare increase of 10%, system ridership will drop by 3.3%[21]. However, the elasticity also varies by type of service, by size of service area, and by time of day.

- Peak hour fares are less elastic than off-peak fares.
- Fares in smaller areas are more elastic than fares in larger areas.
- Bus fares are more elastic than rail fares.

[21] Gardner

*Alternate Revenue Sources*

Because fare increases are political, and often problematic, many transit properties consider other options for increasing revenue before they impose a price increase[22]. These may include:

- New fare programs
    - To employers: In 1991, the Regional Transportation District (RTD) in Denver, Colorado introduced the EcoPass, a program that invited employers to purchase tax-deductible annual farecards to offer their employees as a pre-tax employee benefit. To participate in the program, employers were required to buy farecards for all their employees whether or not the employees used transit. Participation exceeded RTD's forecasts, transit ridership increased, and RTD has had few employers drop out, even after prices increase.[23]
    - To tourists: The SkyTrain system in Bangkok was experiencing ridership levels 1/3 lower than forecast levels. It launched a major campaign including new (higher) tourist fares and fare media (a day pass), special information and maps, and improved signage and advertising. In four years, tourist ridership increased from 3,000/day to 45,000/day.[24]
    - To shoppers: Downtown businesses in Iowa City, IA participate in "Park and Shop" and "Bus and Shop" programs: for every $15 purchase, customers receive a parking validation or a transit pass. Merchants settle up with the agency at the end of each month for the cost of the fares and/or parking; merchants also pay the advertising costs of the marketing campaign[25].
- Parking revenue
- Advertising revenue
    - In May of 2007, Los Angeles MTA made $146,000 off of one McDonald's ad campaign in Union Station alone[26].

[22] Gardner

[23] Transit Cooperative Research Program "Cases on Revenue Generated by Public Transit Agencies"

[24] Anderson

[25] Transit Cooperative Research Program "Cases on Revenue Generated by Public Transit Agencies"

[26] "Los Angeles MTA Goes Commercial"

- Transit oriented development and/or joint development projects
    - In fifteen years, joint development generated over $150 million for WMATA[27].

- Innovative financing
    - "Tax advantaged leases, diesel fuel swaps and strategic borrowing and refinancing have generated over $100 million for WMATA[28]".

[27] Gardner

[28] Ibid.

**Reservation systems**

*Definition:* Capability of transferring demand management to passengers, as Internet-hosted computer systems allow passengers to reserve their travel slot (at the time and price of their choice).

*Examples and Effectiveness*

- Passenger airline examples:
    - For the sake of customer convenience and cost-savings, Southwest Airlines was the first airline to host their own website with ticket-booking capability in 1996[29].

      RESULT: In the third quarter of 2007, 74% of SWA bookings were made on-line using its own website. In June of 2007, 69% of passengers checked in on-line or at a kiosk.

    - Southwest has also launched SWABIZ, a service that allows business clients to plan, purchase and track business travel on-line[30].

      RESULT: Enrollments continue to rise; they increased by 23% in 2006.

    - American Airlines developed the Semi Automatic Business Research Environment (SABRE), a computerized passenger booking program internal to American, in 1964[31]. As other airlines developed their own software and computerized bookings through travel agencies became more and more common, the need developed for a common software that would work across airlines and be accessible by external users (such as passengers wanting to book their own tickets.) SABRE software was eventually used to start Travelocity, an on-line booking website for American Airlines as well as four other major carriers. In 1999, Travelocity had grown to be the world's largest on-line booking website with sales over $808 million.[32]

      RESULT: SABRE became so profitable in not only selling on-line booking software but also consulting to and outsourcing services for other airlines, hotels and rental car companies that in March of 2000 American Airlines spun off SABRE as its own independent business, but remained its largest client. In 1999, SABRE's total revenues were $2.4 billion.

[29] Southwest Airlines Fact Sheet AND Zellner

[30] Southwest Airlines Fact Sheet

[31] McDonald

[32] Naim

- As of September 25, 2007 Transportation Security Administration (TSA) is considering reservations for passenger screening times to reduce passenger wait times at security checkpoints[33].

  RESULT: *To be determined*

- Freight and cargo examples:
  - In 2005, to offer more convenience to shippers, and to incur less cost from erroneous orders or argumentative clients, DHL cargo services introduced Import Express Online. Users can specify all instructions for their shipments including terms of sale, pickup schedule and amount of insurance desired. Shipment status can be accessed on demand or retrieved from automatic status notifications via email[34].

    RESULT: A survey of over 500 shippers conducted by Business Week concluded that "40 percent of respondents are booking more than a quarter of their shipments electronically. They expect to substantially increase this with a full 60 percent expecting to be doing the majority of their bookings electronically by mid-2005."[35] In addition, "three-quarters of the respondents said that the ability to book shipments through the Web is very important and 87 percent said that it is important or very important for them to be able to see and manage their bookings online."

  - In 2007, to update their cargo services, offer more convenience to customers and streamline their own operations, Southwest Airlines introduced on-line cargo booking services that allow shippers to book shipments over the Internet instead of delivering their goods to a Southwest warehouse facility first[36].

    RESULT: To be determined.

- Bus example

[33] Frank

[34] Seemuth

[35] "Freight Forwarders Responses"

[36] Ibid.

- GoToBus.com started as the "Chinatown Bus," a low cost inter-city bus service to help connect people to jobs. It kept costs down by using on-line reservations to organize routes.[37]

  RESULT: GoToBus.com and has been so successful that it has expanded to other parts of the country as well as into tour services.

- Other examples for consideration
  - To regulate crowds at the most popular rides at its theme parks, and to allow an option for bypassing long queues, Disney launched the FastPass system. Patrons visit a kiosk to draw advance tickets for popular rides (the kiosk regulates the number of patrons per advance ride time in increments of 15 minutes. FastPass holders have their own line and priority boarding)[38].

    RESULT: FastPass has been popular enough that Disney is now considering a text message or cell phone application to allow patrons to book remotely.

[37] McClure

[38] Powers

*Considerations for Ferry Implementation*

| Assessment Question | YES/NO |
|---|---|
| Encourages passenger mode shift? | NO |
| Reduces negative land side impacts? | YES |
| Encourages higher off-peak vessel utilization? | YES |
| Improves convenience and attractiveness to customers? | YES |
| Requires capital outlay? | YES |
| Requires additional operating budget? | YES |
| Potential for revenue generation? | YES |
| Potential for alternative funding measures/public-private partnerships? | YES |
| Systemwide breadth of impact? | YES |

WSF could implement congestion pricing in the following role(s):

| | | | | | |
|---|---|---|---|---|---|
| Service provider | X | Employer | X | Community partner | |

**Parking management**

*Definition:* The attempt to limit the need for parking capacity in the most congested locations travel periods. (For WSF this applies both to the queuing that results from unmet passenger vehicle demand, but also to WSF employee parking which is currently offered "on-dock" in the ferry staging areas.) The following examples have been selected to be applied to WSF as follows:

- For ferry patrons:
    - Remote parking: providing the means to park away from the activity center, and to distribute parking demand over a wider area and more facilities.

    - Preferential parking based on vehicle type and/or occupancy: making access to some or all parking available to drivers on a conditional basis.

    - Shared parking: providing the means to utilize parking spaces for more than one purpose or land use.

    - Vehicle valet service: providing the service whereby for a fee, drivers leave their cars with a third party service that will park them and then retrieve them at the appointed time.

- For ferry employees
    - Employer –driven parking reduction programs: utilizing financial incentives, disincentives or service provisions to encourage employees to use alternative modes to single occupant vehicle travel.

*Examples and Effectiveness*

- Remote parking:
    - In Denver, Colorado, to facilitate employee travel to and from the airport and to offer transit patrons a direct connection, the Regional Transportation District (RTD) offers non-stop bus connections to the airport from select park-and–Ride lots. SkyRide bus service costs $7, $9 or $11 each way to and from the airport, depending on the park-and-Ride lot served, but there is no parking charge at the park-n-Ride lots. However, EcoPasses, or employer-sponsored transit passes, are also applicable to SkyRide routes making it a free service for airport employees.

      RESULT: In 2006, SkyRide served an average of over 19 boardings per hour[39].

[39] Regional Transportation District Service Development Archive, 2006 Family of Services Tables and Charts

- From 2002-2004, to provide commuters an option to downtown parking prices and to solve a parking shortage, the Downtown Business Partnership of Baltimore began funding a Downtown Area Shuttle (DASH) that circulated through downtown destinations from the Ravens Stadium. Patrons paid $50 per month to park in any of the 1200 stadium lots; carpools paid $20 per month[40]. Shuttle service is free to those who use monthly parking and $0.50 a ride to those using it as a circulator service downtown. After 2004, (and the termination of the 3-year federal grant) the service was cancelled both due to funding shortage and due to the 4500 additional parking spaces that got built downtown[41].

  RESULT: Over 725 commuters utilized the DASH commuter service.

- In 1992, "to encourage urban development in downtown Chattanooga while limiting congestion and air pollution, the Chattanooga Area Regional Transit Authority (CARTA) developed a strategy to provide peripheral parking and a free shuttle service. . . The two parking garages Shuttle Park South (550 spaces) and Shuttle Park North (650 spaces), are owned by CARTA and operated privately. The free shuttle buses are financed through the garages' parking revenues.[42]"

  RESULT: Between 1992 and 1998, over 1 million riders were served, and over $400 million was spent on development in Chattanooga, including the aquarium, over 100 retail shops and over 60 restaurants.

- Preferential parking based on vehicle type and/or occupancy: In 1977, to reduce the need for parking, the Pentagon offered guaranteed parking for carpools.

  RESULT: 10,000 parking spaces were available. 4960 carpool passes were distributed.

- Shared parking:
  - In 1994, the Lloyd District in Portland (an area across the river from downtown that includes land uses such as the convention center and the Rose Garden Arena) started a Transportation Management Association, a non-profit business association of large and small employers. The goal was to reduce the parking demand and better manage area traffic using improvements and programs funded by member support, City of Portland funds and grants. Through its partnership with city, the TMA manages parking supply including on-street parking. It was re-designated to carpool only, 5-hour parking, etc.

[40] Zimbler

[41] Fieser

[42] Parking Spaces Community Places: Finding the Balance through Smart Growth Solutions

The TMA and City share revenues, which are used to fund more transportation demand management programs[43].

RESULT: Through its promotion of transit, parking management, ride share programs, and other travel demand management programming, the Lloyd District achieved a drive-alone rate of only 42% in 2005[44].

- In 2006, the 65-acre Commons PUD in Denver, CO established a 63-20 corporation to own and manage parking within the PUD. The 63-20 corporation will build the parking facilities and contract out the operations and maintenance to a parking district. The parking district will be comprised of property owners and will direct the parking revenues to pay debts to the 63-20 and to finance TDM programs. A 63-20 Corporation is a private, not-for-profit corporation created for the purpose of financing public improvements on behalf of a political subdivision[45].

  RESULTS: The mode split will be assessed as area develops; there is already a mode split of 55% on alternate modes to Downtown Denver.

- Metropolitan Place TOD across the street from Renton Transit Center includes a 2-story parking garage (240 spaces) with 4,000sf of ground level retail space and 90 apartments above.

  RESULTS: 150 building spaces are used as park and ride spaces. The residential parking stall use is .6 per unit[46].

- Vehicle valet services

  - The City of Pasadena utilizes a "Universal Valet service" downtown that enables drivers to leave their car at the valet stand of their choice, and request a pick up time and place (valet stand) of their choice. The cost is $7 with a validation and $10 without one.[47]

    RESULT: *Utilization information pending*

[43] Lloyd District TMA website

[44] Lloyd TMA Annual Report 2006

[45] Boulder Village Area Plan: Parking Management Case Studies

[46] Ibid.

[47] City of Pasadena website: http://www.oldpasadena.org/info.asp

- Employer-driven parking reduction programs
    - In 1992, California enacted “parking cash out” legislation that allowed employers to pay employees either as an incentive to encourage use of alternative transportation modes or in lieu of providing them parking.

      RESULT: A study of eight Southern California employers performed after the legislation by TCRP found that an average subsidy of $2 per employee per month reduced the need for employee parking by 12%[48].

    - From 1993 to the present, to encourage the use of alternate modes of travel, San Diego Savings and Trust Bank has paid employees 125% the cost of monthly parking.

      RESULT: 37% of their employees carpool and 14% use transit[49].

    - In 1990, to encourage the use of alternate modes of travel, Ventura County Government, rather than offering direct payment, has allowed employees to earn cash prizes through accruing points. Points are awarded each day an employee doesn’t drive.

      RESULT: In the first 5 months, the County's vehicle trips decreased by 13 percent, with only 69 percent of employees driving alone[50].

[48] TCRP. Chapter 13: Parking Pricing and Fees

[49] Comsis Corporation.

[50] Ibid.

*Considerations for Ferry Implementation*

| Assessment Question | YES/NO |
|---|---|
| Encourages passenger mode shift? | YES |
| Reduces negative land side impacts? | YES |
| Encourages higher off-peak vessel utilization? | NO |
| Improves convenience and attractiveness to customers? | NO |
| Requires capital outlay? | NO |
| Requires additional operating budget? | NO |
| Potential for revenue generation? | YES |
| Potential for alternative funding measures/public-private partnerships? | YES |
| Systemwide breadth of impact? | NO |

WSF could implement congestion pricing in the following role(s):

| | | | | | |
|---|---|---|---|---|---|
| Service provider | X | Employer | X | Community partner | X |

**Transit marketing**

*Definition*: The promotion of public transportation services by public agencies with the intent of encouraging more ridership. For the purposes of this report, there are four categories of transit marketing that will be covered:

- Mass market promotions: focused on increasing ridership or knowledge of a particular route or service by distributing a high volume of materials rather than delivering materials to select audiences or rider groups.
- Mass market promotions with incentives: mass market promotions that offer participating riders a gift or reward for their ridership.
- Targeted information: focused on increasing ridership by advertising a specific goal, service or route or advertising in a specific geographic area.
- One on One promotions: encouraging ridership by offering the services of someone who will act as a guide throughout the transit system.

*Examples and Effectiveness:*

- In general the following trends apply to the effectiveness of transit and alternative modes marketing[51]):
    - Providing information only does not decrease vehicle trips but does result in smaller increases.
    - Providing both information and access to alternative modes (such as vanpool programs) can reduce vehicle trips by an average of 8.5%.
    - Programs that focus on financial incentives of disincentives to using alternative modes can reduce vehicle trips by an average of 16.4%.
    - Employers that combine both access to alternative modes (such as vanpools) with financial incentives or disincentives can decrease vehicle trips by an average of 24.5%.

[51] Commuter Choice Primer

- Mass market promotions (the following examples involve marketing a new phone-in automated route information service to encourage its use[52]):

    - In the 1980's the Central Ohio Transit Authority (Cleveland) advertised using a "door drop" of printed information about the service onto people's front doors in neighborhoods across the city.

      RESULT: After the door drop calls to the new service increased by 400%.

    - In 1990, the Hamilton Street Railway in Ontario Canada advertised using TV commercials, phone directory ads and flyers.

      RESULT: After the campaign calls to the new service doubled.

    - In 1995, Calgary advertised using a "wrapped" bus (a bus covered with advertisement material), radio and newspaper ads.

      RESULT: During the promotion, calls to the new service increased 26%.

- Mass market promotions with incentives[53]:

    - In the mid-1980's to increase awareness and use of the transit system, Pembroke County Transit started a "Try Transit Week" that included a $0.25 ride day and free rides given to special needs riders such as elderly and disabled. The week also included special public events and campaigns.

      RESULT: During the week, ridership increased by 35%. After that week, ridership remained 30% higher than before, and continued at a higher level for three years.

    - Beginning in 1997, to increase public awareness, Houston METRO held a "Try Transit Week" event where unlimited ride passes were made available for $5 during that week.

      RESULT: Each year ridership has increased over the previous year's.

[52] TCRP. Chapter 11: Transit Information and Promotion

[53] Ibid.

- Targeted information

    - In 1993, the Hamilton Street Railway in Ontario, Canada wanted to increase ridership on relatively new routes. They printed ride coupons and mailed them directly to residents within ¾ mile of the routes they wanted to promote[54].

      RESULT: Ridership on the targeted routes increased by 50%.

    - In 1995, to increase awareness about a new service instituted along I-94, the Metropolitan Transit Development Board in San Diego mailed new service and safety program information to residents located within the I-94 corridor with a free round-trip ticket[55].

      RESULT: The ticket redemption rate was 22% and ridership on the route increased by 5%.

    - In 1996, the Central Ohio Transit Authority wanted to increase ridership on its special event routes (especially during sports game days). They mailed a postcard advertising the service to all residents within ¼ mile of the route[56].

      RESULT: As a result game day ridership increased by 46% and revenue increased by 77%.

    - In 2006, Arlington Rapid Transit in Arlington, VA started advertising to teens to increase transit ridership among teenagers. They printed t-shirts, Frisbees and started a website dedicated to the program[57].

      RESULT: The program was successful in capturing teen attention and participation and is seeking permanent funding.

[54] TCRP. Chapter 11: Transit Pricing and Information

[55] Ibid.

[56] Ibid.

[57] Markon

- One-on-One promotions:
    - In Portland, Oregon, to increase awareness and transit ridership, Tri-Met experimented with a telemarketing program, where each telemarketer would speak personally to each person he called and offer them transit information and free-ride coupons[58].

      RESULT: 85% of those contacted accepted the offer and 20% kept riding transit after the promotion.

*Considerations for Ferry Implementation*

| Assessment Question | YES/NO |
|---|---|
| Encourages passenger mode shift? | YES |
| Reduces negative land side impacts? | YES |
| Encourages higher off-peak vessel utilization? | NO |
| Improves convenience and attractiveness to customers? | NO |
| Requires capital outlay? | NO |
| Requires additional operating budget? | NO |
| Potential for revenue generation? | NO |
| Potential for alternative funding measures/public-private partnerships? | YES |
| Systemwide breadth of impact? | NO |

WSF could implement congestion pricing in the following role(s):

| | | | | | |
|---|---|---|---|---|---|
| Service provider | | Employer | | Community partner | X |

[58] TCRP. Chapter 11: Transit Pricing and Information

**Car sharing**

*Definition*: Programs typically run by commercial businesses that allow members access to a fleet of vehicles on an as-needed basis. Vehicle fleets of varying sizes may be dispersed throughout a metropolitan area in downtown areas, office buildings, dense neighborhoods, or shopping districts. Typically members call or book on-line to reserve a pick-up time and a duration of use. National brands of car sharing companies include Seattle-based Flexcar and Boston-based Zipcar (though the two companies announced a merger in October of 2007.)

*Examples and Effectiveness*

- Local Examples:
    - Flexcar began a car-sharing business in the Seattle area in 1998 as a joint venture with King County to encourage the use of alternate modes of travel.

      RESULT: In October 2005, the Association of Washington Business presented Flexcar with an award for, among other accomplishments, "removing over 7,000 cars from the road in King County alone since its inception.[59]"

      In October of 2006, Flexcar and King County announced a Job Access program at White Center, whereby King County Metro would utilize Flexcar to supplement Metro Transit service. "In an average month more than 1,300 trips are taken by Job Access participants.[60]"

- National Examples:
    - In January 2007, Flexcar reported 30,000 participants nationally. Zipcar reported 80,000 members[61].

      RESULT: Surveys of car-sharing participants indicated that between 11% and 26% of participants sold a personal vehicle and between 12% and 68% delayed the purchase of a vehicle. They also indicate that each car-sharing vehicle removes between 6 and 23 vehicles from the road[62].

[59] Williams, October 20, 2005

[60] Williams, October 9, 2006

[61] Hodges

[62] Shaheen

In September of 2006, Flexcar and Zipcar both received over $21 million in private capital to fund expansion plans[63].

- Three companies compete for car-sharing business in San Francisco: Flexcar, Zipcar and City CarShare (a local non-profit).

  RESULT: In January 2007 in San Francisco, there are 13,000 car-sharing participants, 4,000 of whom joined in the 2006[64].

- Flexcar and Zipcar started university campus pilots programs in 2002.

  RESULT: In September of 2007, 70 colleges and universities participated in car-sharing programs nationwide[65].

[63] Goo

[64] Cabanatuan

[65] Bruno

*Considerations for Ferry Implementation*

| Assessment Question | YES/NO |
|---|---|
| Encourages passenger mode shift? | YES |
| Reduces negative land side impacts? | YES |
| Encourages higher off-peak vessel utilization? | NO |
| Improves convenience and attractiveness to customers? | YES |
| Requires capital outlay? | NO |
| Requires additional operating budget? | NO |
| Potential for revenue generation? | NO |
| Potential for alternative funding measures/public-private partnerships? | YES |
| Systemwide breadth of impact? | YES |

WSF could implement congestion pricing in the following role(s):

| | | | | | |
|---|---|---|---|---|---|
| Service provider | X | Employer | | Community partner | X |

**Intelligent Transportation Systems (ITS)**

*Definition*: ITS utilize advanced communications technology to provide real-time information about the operational condition of transportation infrastructure and services. It is the technological means to assess and manage conditions within the transportation system. As such, it has been applied to transit and highway systems, utilized to estimate travel time information, relied on to track the location of transit vehicles, utilized to monitor and manage traffic signal systems, and used to provide signal pre-emption to emergency vehicles. It also provides the technological means to collect tolls and to vary toll levels by level of congestion. This document summarizes some successful applications of the following forms of ITS:

- Advanced Traveler Information Systems
    - 511 Programs
- Parking Management
- Fare Collection

*Examples and Effectiveness*

- Advanced Traveler Information Systems
    - Local examples
        - From 1993-1997, WSDOT participated in a field operations test of ITS technology that included camera coverage and VMS signs at the Edmonds Ferry Terminal in 1999.

          RESULT: In the final report submitted in 1998, WSDOT claimed its success as defined by the improved efficiencies of monitoring by camera, rather than by drive-by queue length counts, and the utilization of the WSF website by passengers checking terminal conditions before beginning their trip. Terminal condition information was made available to the public through freeway and arterial-based variable messaging signs (VMS) and on-line[66].

        - In 1996, WSDOT and other partners in the Seattle region formed a partnership known as Smart Trek to participate in the ITS Metropolitan Model Deployment Initiative (MMDI). They offered services including a new WSDOT website with links to real-time traffic information, King County Metro Online (a transit route planning feature), Traffic TV, Transit Watch (real-time transit arrival and departure information at transit centers) and Fastline (a subscriber service for real-time traffic information sent to portable handheld devices[67]).

[66] Wetherby

[67] Metropolitan Model Deployment Initiative

RESULT: The WSDOT website has been maintained and is rated as one of the top ten websites for advanced traveler information services in the nation.

- 511 Systems: On July 21, 2000, the Federal Communications Commission designated "511" as the national traveler information number. The general goal behind the 511 service is to provide travelers with timely information to allow them to make informed travel decisions and to avoid compounding delays caused by incidents and peak hour traffic. The following examples illustrate how states, regions and localities have utilized it.

    - San Francisco Bay Area uses voice recognition technology and a series of menus to connect callers with transit, vanpool, carpool, and highway information. It also provides a call transfer to a regional or local rideshare operator[68].

    - I-81 Region in Virginia provides callers the option of listening to tourist information including lodging, restaurants and "things to do" in the 35 county coverage area. This system uses voice recognition for the queries and is fully automated using both text to speech and recorded messages[69].

    - iFlorida offers travel times on all of the limited access highways and most of the major arterials in Central Florida and current weather information and time-slice (starting and ending time) forecasts for defined road segments. Projected conditions from 15 minutes to two or three days out are provided for each identified roadway segment[70].

[68] 511 America's Traveler Information Number

[69] Ibid.

[70] Ibid.

- Arizona DOT improved its 511 system in 2003 to include touchtone and voice recognition options for use, road-segment information, transit information, "quick report" congestion and incident summaries, a 2-minute recorded message option for airport information, statewide coverage, and call transfer options to airports, the Arizona Office of Tourism, and all of Arizona's rural/regional transit operators.

  RESULT: Usage increased from approximately 20,000 calls per month to 60,000 calls per month. (A week-long promotion by DMS signs spiked calls to over 150,000.)[71]

- Parking Management

  - In 2001-2002 Acadia National Park (located on Mount Desert Island in Maine) introduced a comprehensive ITS program with the intent to decrease their need for parking facilities, to better manage traffic around the island, and to improve air quality. The ITS programming included real-time parking information, "next bus" technology to complement the new island circulator/shuttle, and a traveler information system which counted and summarized all the data received and relayed it to travelers over the web, the telephone and the parking display signs[72].

    RESULT: Of visitors using the parking information, 43% changed the time they visited a destination and 38% changed destinations based on the information.

    44% of the users of the real time parking information said it helped them decide to use the Island Explorer bus.

    The average number of excess parked vehicles per day fell from 325 in 2001 to 274 in 2002 even though total number of visitors to the Park grew.

[71] Battelle Memorial Institute and University of Arizona

[72] Zimmerman, Coleman, Daigle

- From 2004-2006, to better manage traffic around park and rides, Bay Area Rapid Transit (BART) started a reservation program at specific park and ride lots where drivers could reserve a parking space on-line or on the phone through voice recognition technology.

  RESULT: The program was successful enough that it has been continued indefinitely. Part of its success was in attracting new riders: 45% of those surveyed who utilized the service said they had never ridden BART before the service was available[73].

- WMATA offers a reserved parking program that it hosts on its website. Customers pay a monthly premium of $45 to be sent a hanging "reserved" car tag each month which allows them to access the lot and be guaranteed a space until 10am, when the lot is made available to the general public. Reservations patrons are also charged a daily exit fee. (SmarTrip cards must be used to exit the facility.)

  RESULT: 5,000 users (about 10% of the daily park and ride volume) utilize the reservations service[74].

- Private parking providers have also entered the market using ITS.

  RESULT:

  Mobile Parking LLC owns 400 parking facilities in 50 cities across the U.S. Service, and sells parking spaces by reservation. Drivers call a toll-free number from their cellular telephones to check parking availability in their city. After the driver provides the operator with his or her final destination, the operator directs the driver to the closest available space. The first reservation is free. Additional reservations cost $1.75 each. At some of MobileParking's partner garages, customers can also pay the parking fee itself through MobileParking[75].

  Spot Scout sells parking spaces either online or through Web-enabled cellular telephones. A text message is sent to the driver's cell phone with a confirmation code and directions to the facility. SpotScout™ also allows users to sell their personal parking spaces to other motorists for short-term use[76].

[73] Shaheen

[74] Smartcard Alliance. "Smartcards and Parking."

[75] Advanced Parking Management Systems

[76] Ibid.

- Electronic Fare Collection (The following are examples of SmartCard technology: cards containing computer chips that track expenditures and act like credit cards, automatically deducting the price of access to a service from the account balance at each time of use.)

    - In 1999, the Washington Metropolitan Area Transit Authority became the first transit agency in the United States to utilize SmartCard technology with the goal of making travel on the system more convenient for passengers. The SmarTrip card could be used on any METRO service (bus and rail) and for access and payment at park and ride lots.

      RESULT: Within five years over 650,000 SmarTrip cards were in circulation[77].

      The popularity of the SmarTrip card is such that CitiBank is partnering with WMATA to offer a combined SmarTrip and credit card: a credit card that rewards users for using it on METRO (5% credit for the first five months) with the same touch and go technology at METRO stations as the SmarTrip card.[78]

- In 1997, Hong Kong introduced the "Octopus card." Patrons can utilize it at parking meters, on all transit services (bus, rail and ferry), at selected shops and retail centers, selected vending machines, phone booths and photos booths.

  RESULT: Over 7 million transactions per day are recorded on Octopus cards, representing a daily value of over $6.5 million[79].

  "While Octopus cards are anonymous by default, over 500,000 personalized cards have been issued and are used for the Octopus Automatic Add-Value Service. Twelve Hong Kong banks and one credit card company support the automatic add-value service. Because each personalized card has a unique identification number, up to 40,000 cards are also being used as security passes at housing estates, for staff identification cards, and as loyalty cards."[80]

[77] Smartcard Alliance "Washington Metropolitan Area Transit Authority SmarTrip"

[78] http://www.wmata.com/riding/smartrip.cfm#combo

[79] Smartcard Alliance "Hong Kong Octopus Card"

[80] Ibid.

*Considerations for Ferry Implementation*

| Assessment Question | YES/NO |
|---|---|
| Encourages passenger mode shift? | NO |
| Reduces negative land side impacts? | YES |
| Encourages higher off-peak vessel utilization? | YES |
| Improves convenience and attractiveness to customers? | YES |
| Requires capital outlay? | YES |
| Requires additional operating budget? | YES |
| Potential for revenue generation? | YES |
| Potential for alternative funding measures/public-private partnerships? | YES |
| Systemwide breadth of impact? | YES |

WSF could implement congestion pricing in the following role(s):

| | | | | | |
|---|---|---|---|---|---|
| Service provider | X | Employer | | Community partner | X |

## IV. Operational Strategies in Action: Ferry System Applications

There are several international examples of the strategies that WSF is considering being put into practice by ferry systems seeking to make their services both more efficient and more attractive to customers. This chapter will provide current examples of the following kinds of strategies being utilized:

- Reservations systems
- Mode shift strategies
- Ticketing operations

*Reservations Systems*

Several ferry systems offer reservations for specific sailings by phone, e-mail or on-line. Generally, the policy is that at the time of reservation the full sailing fare is charged (plus, in the case of Cape May-Lewes ferries, an additional reservations fee.) The fare is considered non-refundable, though all systems offer changes in reservations, or their use as stand-by in case the reserved sailing time is missed. All systems require that vehicles arrive at least 20-30 minutes ahead of their sailing time, or their reservation is considered cancelled. (Their fare may still be accepted on other sailings as space is available, but the missed reservation means the loss of guaranteed and priority loading on other sailings.)

- Northumberland Ferries, serving Prince Edward Island in Eastern Canada, offers the NOW Pass and the NOW Assured Pass, both different applications of pre-paid reservations[81].
    - The NOW Pass is issued at the time of reservation, or a confirmation number is given in the case of phone-in reservations. It is non-refundable, can be used on other sailings, space permitting, is good for up to a year, and limited to vehicles under 20-feet in length.
    - The NOW Assured Pass can be purchased from ferry offices or other participating locations and may be used for guaranteed access onto any sailing as long as the vehicle arrives at least 20 minutes ahead of the sailing time. The pass is good for up to one year, and is also limited to vehicles less than 20 feet in length.

- BC Ferries in western Canada offers “RBI” (Reserved Boarding on the Internet) as well as reservations by phone and e-mail for some routes in their system, though they are required on specific northern routes[82]. Reservations are non-refundable, but can be changed for a fee. Discounts are given for booking at least two weeks in advance.
- Cape May-Lewes Ferries in New Jersey sells reservations on-line and by phone, and advertises selling up to 100% by reservations: "required for guaranteed sailing time." A non-refundable

[81] Northumberland Ferries website.

[82] BC Ferries website.

booking fee is also applied at the time reservations are made, though the ticket price is transferable to a different sailing.[83]

- Fjord 1[84], a ferry operator in Western Norway, is also a collective of transport companies including bus tours, railroads and car ferries. It offers on-line registration for any of its modes once customers have registered on its website.
- North Carolina DOT[85] offers reservations on a few routes only, and they can only be made by calling the departure terminal. Vehicles must arrive at least 30 minutes prior to loading or reservations are cancelled.
- The Steamship Authority[86] serving Martha's Vineyard, Woods Hole and Nantucket offers reservations on-line or by phone. Unused reservations may be used up to a day after the reserved sailing as space is available, but priority loading is no longer applicable. Reservations may be changed or cancelled, and fully refunded, with at least two hours notice ahead of the reserved sailing time.

*Mode Shift Strategies*

Ferry systems across the world are trying a variety of ways to make car-free travel more possible and attractive.

- Cape May Lewes ferries operates its own shuttles, which have differing seasonal and weekend hours and frequencies, from ferry terminals into towns and points of interest.
- IDO[87], the ferry operator in Istanbul, offers free fares to passengers arriving at terminals using ground or rail transport services.
- Fjord 1 offers reservations on all their modes of transport services, as previously noted, but they also offer automated route planning with travel distance and travel time noted by mode.
- Fosen Trafikklag[88], the ferry operator around Trondheim Fjord in Norway, offers free fares to walk-ons and to car passengers. This is a new program that started with a pilot project. Despite the fact that more people took advantage of the new program, the operator did not lose revenue.

*Ticketing Operations*

[83] Cape May-Lewes Ferries website.

[84] Fjord1 website.

[85] NCDOT Ferries website.

[86] The Steamship Authority website.

[87] IDO Company 2006 Annual Report.

[88] Fosen Trafikklag website.

Simplifying or expediting the ticketing process saves time and expense for ferry operators and improves the customer experience. Utilizing a reservation system aids in ticketing by managing the demand for each sailing, and making ticket sales accessible to customers on their own schedules through the use of computer technology. Simplifying the fare structure by offering free fares to walk-ons, as they do around Trondheim in Norway, also helps expedite the ticket process by requiring fewer passengers to be processed by ferry staff, and by simplifying vehicle transactions. All vehicles can be ticketed using the same process instead of having to account for number of passengers. The following examples serve to illustrate additional means of improving the ticketing process:

- Cape May-Lewes[89] offers a discount on return-fare passage if the return sailing is booked at the same time as the crossing reservation.
- IDO is beginning the use of thermal tickets with barcodes to replace conventional tickets as a means of expediting the ticket process. In addition, the IDO ferries already utilize camera technology to scan vehicle license plates and match them with license plate databases[90].
- The Steamship Authority issues a Fast Ferry ID to registered customers that can be used and referred to when purchasing tickets, making reservations or using a coupon from the 10-ride ticket book[91].

[89] Cape May-Lewes Ferries website.

[90] IDO Company 2006 Annual Report.

[91] The Steamship Authority website.

## V. Summary of Findings

Traveler mode shifts and time shifts can be accomplished in a variety of ways, and most effectively by combining a mix of services with a mix of financial incentives or disincentives (i.e. a mix of "carrots" and "sticks"). In addition, several strategies can accomplish multiple goals at the same time. Congestion pricing, for example, both decreases traffic in peak periods and increases transit ridership and/or ridesharing in every example. However, in both London and Singapore, it was also implemented along with an increase in transit service that travelers could utilize. The following table presents the strategies whose implementations in other places are best suited to meeting WSF goals.

| Strategy | General Effects | Meets WSF Goals | | |
|---|---|---|---|---|
| | | Increase Operational Efficiencies | Time Shift | Mode Shift |
| Congestion pricing | Reduces traffic during higher priced periods<br>Increases transit ridership<br>Shifts demand to off peak periods | X | X | X |
| Passenger reservations | Reduces queuing<br>Reduces customer /employee confrontation<br>Manages demand (some forced to off peak periods)<br>Increases vendor competition | X | X | |
| Shared parking | Increases ridesharing<br>Increases transit use | X | | X |
| Remote parking | Decreases activity center traffic<br>Increases transit use | X | | X |
| Car sharing | Decreases personal vehicle use and/or purchase | | | X |

| Strategy | General Effects | Meets WSF Goals | | |
|---|---|---|---|---|
| | | Increase Operational Efficiencies | Time Shift | Mode Shift |
| ITS: Parking Management | Customer appreciation<br>Decreases activity center traffic | X | X | X |
| ITS: Advance Traveler Information Systems | Customer appreciation<br>Increases interest in fee-based services<br>Increases use of other promoted facilities and services | X | X | |
| ITS: Electronic fare collection | Reduces ticketing time<br>Reduces or removes cost of toll booth or meter upkeep<br>Increases revenues | X | | |

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# Strategy Evaluation Worksheet

**Name:** Automated Route Planning

**Description:** Utilize computer technology to offer passengers a point-to-point route guide including highway routes, ferry sailings, and transit connections as applicable

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Medium. Could show customers how to use alternate modes to connect to ferries.
    b. **Encourages time shift:** Medium. If the system is programmed with "expected" and potentially "real-time" arrival and departure information loading conditions for various sailings, and even in concert with a reservation system. This would provide valuable information to customers on avoiding peak sailings and finding those less traveled. In addition, automated route planning could display fare information, which if peak-period pricing goes into effect, would further encourage customers to ride off-peak sailings.
    c. **Attracts new demand to available capacity:** Medium. ,With information beyond simply the sailing time, this tool could effectively communicate where capacity and pricing allow for a less delay prone passage.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No impact.
    b. **Reduces ticketing time:** Low. Although if this is combined with e-ticketing it could have a positive effect.
    c. **Reduces queue lengths:** Low. Although if combined with e-ticketing and real time arrival and departure information, it could prevent customers from arriving too early and then holding, which would have a positive effect.
    d. **Improves operating cost per rider:** Low. Has no effect.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** High. Most customers would benefit from this service, and it would be of even greater customer benefit if combined with e-ticketing, reservations and automated real arrival and departure times.
2. **Positive community impact:** Low. Little positive impact if implemented in a basic form, but positive community impacts would ensue if it were combined with e-ticketing, reservations and real arrival and departure times, which together, would serve to reduce queues and associated negative traffic impacts.
3. **Environmental impacts:** Medium. By creating some shift to transit mode of access, could show some positive environmental benefit.

## III. Implementation and Cost

1. **Ease of implementation:** High. Such systems are in use and common, and could be applied relatively easily.
2. **Capital costs:** Medium
3. **On-going operating cost:** Low

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but it would achieve maximum benefit if applied in concert with real arrival and departure times and demand information, e-ticketing, and reservations
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone**
    m. **Anacortes**
    n. **San Juans**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** All. It would be a system-wide application.

## VI. Strategy Disposition

Carry the strategy forward for its customer convenience and potential mode shift benefits.

# Strategy Evaluation Worksheet

**Name:** Automated Vehicle Advance System

**Description:** Similar to carwash technology, vehicles could be mechanically advanced and queued as appropriate to sailing times, allowing passengers to reclaim the time they would have otherwise spent queuing.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. By making driving an even more convenient mode of access, may even have a negative impact.
   b. **Encourages time shift:** Low. Does nothing to encourage people to shift time
   c. **Attracts new demand to available capacity:** Low. By allowing customers to recapture lost queue time, making peak sailings with their long waits more attractive, it could have a negative impact.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. Could have an adverse impact with more customers leaving their vehicles if they do not return in time to load the sailing.
   b. **Reduces ticketing time:** Low. No effect.
   c. **Reduces queue lengths:** Low. No effect.
   d. **Improves operating cost per rider:** Low. Has no effect.

## II. Evaluation of Secondary Screening Criteria:

1. **Customer impacts:** Medium. Many customers would benefit from this service by allowing them to leave their vehicles if desired.
2. **Community impacts:** Medium. Allowing more customers to leave their vehicles could benefit adjacent business districts.
3. **Environmental impacts:** Low. No impact.

## III. Implementation and Cost

1. **Ease of implementation:** Low. This is a novel concept, and the technology has not been commonly applied to transportation systems such as WSF. Land to vessel transitions, marine environment, vehicle pick-up after crossing are all issues that none of these systems have been designed to accommodate.
2. **Capital costs:** High
3. **On-going operating cost:** Medium.

## III. Interaction With Other Strategies

3. **Does this strategy need other strategies to work?** No.

4. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. The capital cost would be prohibitive to system-wide application.

2. **Terminal by Terminal Applicability:** It is unlikely that any single route would see operational benefits from this strategy.

   a. **Mukilteo:** Low
   b. **Clinton:** Low
   c. **Edmonds:** Low
   d. **Kingston:** Low
   e. **Bainbridge:** Low
   f. **Bremerton:** Low
   g. **Colman Dock:** Low
   h. **Southworth:** Low
   i. **Vashon:** Low
   j. **Fauntleroy:** Low
   k. **Pt. Townsend:** Low
   l. **Keystone:** Low
   m. **Anacortes:** Low
   n. **San Juans:** Low
   o. **Pt Defiance:** Low
   p. **Tahlequah:** Low

3. **What would be a good test route?** No single route lends itself to this strategy in particular. For demonstration purposes, a lower volume route such as Pt. Defiance-Tahlequah would serve best.

## VI. Strategy Disposition

There is little or no need to advance vehicles from the time they enter the queue until it's time to load the vessel, at which time customers must be in their vehicles regardless. It may also pose a security risk if unattended vehicles are able to be loaded onto vessels. This strategy offers little or no benefit compared to the significant cost it would take to implement, and should be screened out.

# Strategy Evaluation Worksheet

**Name:** Congestion Pricing

**Description:** Similar to peak period pricing on airlines, hotels, and even local bus services, WSF would apply a peak period surcharge, or charge higher fares, for vehicle access on to vessels during high-demand times of day, and/or during peak seasons. This could apply to only some routes (corridor-based), or on all routes (system-wide).

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: High. By making it more expensive to drive on during the high demand peak periods, customers will have an incentive to shift mode of access.
   b. **Encourages time shift:** High. Making it more expensive to drive on to ferries during peak times and less expensive where there is available capacity, gives customers an incentive to shift the time they travel.
   c. **Attracts new demand to available capacity:** High. Demand would be diverted to relatively lower cost off-peak sailings.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. Assuming auto capacity on vessels would still be full even with peak period pricing, loading and unloading type is probably unaffected.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Medium. By encouraging both time and mode shift, auto queues during peak hours/seasons would be shortened, although queues for off-peak sailings may lengthen.
   d. **Improves operating cost per rider:** High. By attracting walk-on demand to peak sailings, and increased ridership on off-peak sailings, operating cost per rider would fall.

## II. Evaluation of Secondary Screening Criteria:

1. **Customer impacts:** High. There would be negative customer reaction to increased fees for peak period sailings, although at the same time many customers would benefit from potentially shorter queues and wait times for peak period sailings.
2. **Community impacts:** High. Many communities would benefit from potentially shorter queues on the adjacent street network.
3. **Environmental impacts:** High. Shifting mode of access away from SOVs would result in positive air and water quality impacts

## III. Implementation and Cost

1. **Ease of implementation:** High. It would not be difficult to charge and collect a peak period surcharge or change the fare structure. Although to be most effective this charge needs to be dynamic. Under current operating practices this would be impractical as the communications necessary between the fare determination mechanism, ticket sellers and customers would be highly problematic. Also the current state of the tariff would require considerable overhaul with specific performance criteria and fare level setting in place to ensure the fares are being set within adopted policy.
2. **Capital costs:** Low.
3. **On-going operating cost:** Low.

## 5. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** The success of this strategy would rely on improved transit service, connections and facilities, and to a lesser degree improved bicycle and pedestrian connections and amenities. It would also help to have an expanded carpool definition to allow unregistered carpools, and additional carpool staging areas. Any additional support for alternate modes of access would bolster this strategy's success, such as carsharing pods, additional parking near terminals, and improved wayfinding and user information for transit users, bicyclists, carpoolers and pedestrians.

   It would be beneficial to implement this strategy in concert with other fare changes, such as greater fare differentials for various classes of vehicle and/or passenger vs. auto fares. It would also benefit (see above discussion related to dynamic pricing) from an optimized electronic fare collection system, reservations and E-ticketing.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No

## II. Applicability to Terminals

1. **Potential for System-wide Application:** High. It would be less confusing to the customer to apply peak period pricing as part of system-wide fare changes.

2. **Terminal by Terminal Applicability:** The more auto demand exceeds capacity during peak hours and seasons on routes serving the terminal, the higher the score received.

   a. **Mukilteo:** High
   b. **Clinton:** High
   c. **Edmonds:** High
   d. **Kingston:** High

e. **Bainbridge:** High
f. **Bremerton:** High
g. **Colman Dock:** High
h. **Southworth:** High
i. **Vashon:** Low. Currently no fares are collected leaving Vashon.
j. **Fauntleroy:** High
k. **Pt. Townsend:** High (during peak summer season and weekends in shoulder seasons)
l. **Keystone:** High (during peak summer season and weekends in shoulder seasons)
m. **Anacortes:** High (during peak summer season and weekends most of the year)
n. **San Juans:** High (during peak summer season and weekends most of the year). Because fares are not currently collected leaving the islands for Anacortes, there may be little benefit in terms of attracting people to less used sailings, But, it would result in higher revenue generation.
o. **Pt Defiance:** Low. Although if pricing is in place on Vashon it would probably be necessary to put it on the Pt. Defiance-Tahlequah route as well to counteract potential traffic diversion effects.
p. **Tahlequah:** Low. Currently no fares are collected leaving Tahlequah. Although if pricing is in place on Vashon it would probably be necessary to put it on the Pt. Defiance-Tahlequah route as well to counteract potential traffic diversion effects.

3. **What would be a good test route?** Any route that experiences a large imbalance of auto demand and capacity between peak and off-peak times would be a good test route, including Bainbridge-Seattle,. Edmonds/Kingston, Mukilteo/Clinton, Port Townsend-Keystone, and/or Anacortes-San Juans.

## III. Strategy Disposition

Carry strategy forward for its potential large, system-wide impacts in shifting mode of access at terminals, potential to shift travel to off-peak periods, and environmental benefits—all for relatively low implementation, capital and operating cost.

# Strategy Evaluation Worksheet

**Name:** Increase Parking Capacity at Terminals

**Description:** Increase parking capacity at terminals by building parking structures, lots, or implementing shared parking to capture underutilized nearby parking space.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. Making driving an even more convenient mode of access may induce more people to drive to terminals. However, depending on how the parking fee compares to the fare to drive the vehicle on the ferry, the strategy has good potential for reducing the number of customers who drive their vehicle onto vessels.
   b. **Encourages time shift:** Low. Does nothing to encourage people to shift time.
   c. **Attracts new demand to available capacity:** High. Enabling more people to park their vehicles near terminals and walk on to vessels would help fill existing capacity.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No anticipated impact.
   b. **Reduces ticketing time:** Low. No effect.
   c. **Reduces queue lengths:** Medium. More people parking and walking on would help reduce queues.
   d. **Improves operating cost per rider:** Medium. Attracting walk-on demand to existing capacity would help reduce the operating cost per rider.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Customers would enjoy the added choice of leaving their vehicles behind if desired. The cheaper parking is compared to driving the vehicle onto the vessel, the greater the customer convenience benefit.
2. **Positive community impact:** Low. Increased infrastructure devoted to parking would likely be seen as a negative community impact by some. If more people are circling local streets in the terminal area looking for parking, this would be seen as a negative impact as well. However, potentially decreased queues would be viewed positively by local communities.
3. **Positive environmental impact:** Low. Depending on parking fees, this strategy could induce more people to drive, creating additional air and water pollution in ferry terminal communities.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Shared parking arrangements would require negotiations between WSF, local jurisdictions and local businesses. New parking structures take time and money to build, as well as land use permits.
2. **Capital costs:** Medium. Costs are high in the case of parking structures, medium in the case of new parking lots, and low in the case of shared parking.
3. **On-going operating cost:** Low.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but it would benefit from an integrated parking reservation and pricing system, real time parking capacity information, and improved transit service and connections (for those customers parking their vehicle and needing transit to connect to their destination on the other side).
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. Every terminal has different levels of existing parking and parking demand. It would only be applicable to some terminals.

2. **Terminal by Terminal Applicability:** Routes with strong demand for auto access yet relatively little affordable parking available on one or both ends receive higher scores for applicability.

    a. **Mukilteo:** High
    b. **Clinton:** Medium
    c. **Edmonds:** High
    d. **Kingston:** Medium
    e. **Bainbridge:** High
    f. **Bremerton:** Medium
    g. **Colman Dock:** Medium
    h. **Southworth:** Medium
    i. **Vashon:** Medium
    j. **Fauntleroy:** Medium
    k. **Pt. Townsend:** High
    l. **Keystone:** Medium
    m. **Anacortes:** High
    n. **San Juans:** Medium
    o. **Pt Defiance:** Low
    p. **Tahlequah:** Low

3. **What would be a good test route?** Bainbridge Island, since parking demand is definitely strong but supply is limited indicated by existing utilization rates. It would be a good place to test parking strategy impacts on mode of access and queue lengths. Shared parking opportunities exist here.

## VI. Strategy Disposition

This strategy should be carried forward due to its ability to potentially increase the walk-on mode share, attract demand to underutilized passenger capacity, decrease operating cost per rider, and increase customer convenience and choice. To develop detailed parking recommendations by terminal, more information is needed on utilization rates at each parking area, as well as the potential unmet parking demand by terminal, which can be partially gleaned from the results of the WSTC Customer Survey currently underway.

# Strategy Evaluation Worksheet

**Name:** Decentralized Holding

**Description:** Vehicles are ticketed for a specific sailing and are given a time slot to access the on dock holding facility. Outside of the time slot, it is up to drivers to choose where to wait.

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Medium. By making it difficult to find a place to park and wait for the ferry, some users may be deterred from driving on.
b) **Encourages time shift:** Medium. Regular customers may be discouraged from traveling at peak times if they know they must use the remote holding system, preferring to drive directly onto the terminal in off-peak times.
c) **Attracts new demand to available capacity:** Medium. Does very little to encourage people to take underutilized off-peak sailings, but by creating more walk-on traffic it may allow better use of existing passenger capacity. There is the potential that this strategy would attract demand to sailings where the remote holding system is not in place..

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. It may even have a negative impact on loading and unloading times if cars are queuing from the adjacent signalized street network rather than from on-dock holding lanes.
b) **Reduces ticketing time:** Low. No impact on ticketing time.
c) **Reduces queue lengths:** Medium. Ongoing queues adjacent to terminals would be largely eliminated. However, queues would be dispersed into the community or drivers would not leave their initial origin point until they could approach the terminal, creating the potential for informal queuing areas in local streets, thus creating even longer queues that would back up into the community and adjacent street network at time of loading and unloading, given little or no centralized holding space on or near the dock.
d) **Improves operating cost per rider:** Medium. May result in an improved operating cost per rider if enough riders switch to walk-on as a result of the added inconvenience.

## II) Evaluation Against Secondary Screening Criteria:

1) **Positive customer impact:** Low. Customers would be greatly inconvenienced if they were unable to accurately predict travel time to reach the terminal at their appointed entry time. .

2) **Positive community impact:** Medium. There could be a negative community impact with additional cars circling on the city streets creating congestion and taking up available parking capacity as their drivers waited for their departure. If parking were abundant and convenient, a positive benefit might be seen with greater local business patronage.
3) **Positive environmental impact:** Low. Any potential improvements made by increased walk on access could be negated by circling autos, and related traffic and automobile emissions.

## III) Implementation and Cost

1) **Ease of implementation:** High.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** It would achieve maximum benefit if applied in concert with real time arrival and departure information, improved wayfinding, real time parking capacity information and e-ticketing. Decentralized holding would also likely require increased metering of entering and existing vehicles, improved traffic management systems, and possibly increased parking capacity in the greater terminal area.

2) **Are there other strategies that might compromise this strategy's effectiveness?** Poor wayfinding, limited parking capacity, and substandard traffic management in the terminal community could hamper this strategy's effectiveness.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** Low. Many terminal areas simply could not absorb the traffic and parking demand that would be generated by decentralized holding. Others have ample existing holding capacity and would have little use for this strategy.

2) **Terminal by Terminal Applicability:**

   a) **Mukilteo:** Low
   b) **Clinton:** Medium
   c) **Edmonds:** Medium
   d) **Kingston:** Low
   e) **Bainbridge:** Low
   f) **Bremerton:** Medium
   g) **Colman Dock:** Low
   h) **Southworth:** Medium
   i) **Vashon:** Medium

j) **Fauntleroy:** Low
k) **Pt. Townsend:** High
l) **Keystone:** Medium
m) **Anacortes:** High
n) **San Juans:** Medium
o) **Pt Defiance:** High
p) **Tahlequah:** Low

3) **What would be a good test route?** A low-density rural location would be a good test bed, since it would be less susceptible to the negative system-wide traffic impacts of additional vehicles on the road network that a more urban location might experience. Possible test routes may be Port Townsend - Keystone or Anacortes – San Juans, where the strategy could be tested in off-peak hours and/or the low season first.

## VI) Strategy Disposition

Any positive operational effects generated by this strategy would likely be counteracted or overshadowed by a host of negative operational and/or community impacts. At the same time, there are not many terminal locations where the strategy would make good sense due to insufficient parking or already congested street networks, among other factors. This strategy should be retained although considered for only specific locations where communities are readily accepting of people with vehicles looking for some way to use available time .

# Strategy Evaluation Worksheet

**Name:** Optimize Use of Electronic Fare System (EFS)

**Description:** Optimize performance of the Electronic Fare System with full employee training, removal of the requirement to issue paper receipts; and the keeping of electronic rather than manual sales records.

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Low. Does nothing to encourage mode shift.
b) **Encourages time shift:** Low. Does nothing to encourage people to shift time.
c) **Attracts new demand to available capacity:** Low. Does nothing to attract new demand to available capacity.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. This strategy does nothing to impact loading and unloading times.
b) **Reduces ticketing time:** High. Taking steps to optimize the EFS could greatly reduce the average time processing each customer at the tollbooth.
c) **Reduces queue lengths:** Medium. Moving vehicles more quickly through the ticketing process will result in shorter queues waiting for the ticketing window.
d) **Improves operating cost per rider:** Low. Although there might be a slight improvement to operating cost per rider due to moving more passengers through more quickly, the difference would be negligible.

## II) Evaluation Against Secondary Screening Criteria:

1) **Positive customer impact:** Medium. Customers would see quicker processing times as an added convenience.
2) **Positive community impact:** Medium. Moving vehicles off adjacent roadways, out of traffic flow, and through the toll booth more quickly constitutes a positive community impact.
3) **Positive environmental impact:** Medium. Moving vehicles queuing for the ferry out of the adjacent street network's traffic flow could help relieve nearby congestion hotspots and reduce idling in the terminal area. Getting rid of the need for paper records would reduce the state's paper consumption.

## III) Implementation and Cost

1) **Ease of implementation:** Medium. Would require new employee training programs.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No, but it would benefit from having employee reviews linked to ticketing processing time. Also, the use of electronic vehicle transponder systems would complement this strategy to further expedite the ticketing process.

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** High.

2) **Terminal by Terminal Applicability:** N/A. Would be a system-wide application.

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**
   k) **Pt. Townsend:**
   l) **Keystone:**
   m) **Anacortes:**
   n) **San Juans:**
   o) **Pt Defiance:**
   p) **Tahlequah:**

3) **What would be a good test route?** N/A

## VI) Strategy Disposition

Carry forward due to the strategy's positive operational, customer, community and environmental impacts for a relatively small cost.

# Strategy Evaluation Worksheet

**Name:** Encourage Preferred Payment Methods

**Description:** WSF offers a discount for preferred payment methods, or alternately, a surcharge for non-preferred payment methods.

## I) Evaluation Against Primary Screening Criteria:

1) **Manages Demand**
   a) **Encourages mode shift**: Low. Does nothing to encourage mode shift.
   b) **Encourages time shift:** Low. Does nothing to encourage time shift.
   c) **Attracts new demand to available capacity:** Low. Does nothing to attract new demand to available capacity.

2) **Increases Operational Efficiency**

   a) **Reduces loading/unloading time:** Low. This strategy does nothing to impact loading and unloading times.
   b) **Reduces ticketing time:** Medium. A portion of customers would switch to preferred payment methods, reducing the average time spent processing each customer at the tollbooth. However, the additional surcharges also serve to complicate the fare system, which may result in more customers questioning the fee and negating any time savings at the ticket window.
   c) **Reduces queue lengths:** Low. The increased portion of customers using preferred payment methods is unlikely to have a noticeable impact on queues.
   d) **Improves operating cost per rider:** Low. There would not be an improvement to operation cost per rider.

## II) Evaluation Against Secondary Screening Criteria:

1) **Positive customer impact:** Low. Customers would be confused by the further complicated fare structure and take issue to additional fees that only affect certain users. There would likely be widespread negative customer reactions.
2) **Positive community impact:** Low. No positive community impacts are likely to result from this strategy.
3) **Positive environmental impact:** Low. No environmental impacts are likely to result from this strategy.

## III) Implementation and Cost

1) **Ease of implementation:** High.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No.

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Would be a system-wide application.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend:**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance:**
    p. **Tahlequah:**

3. **What would be a good test route?** N/A

## VI. Strategy Disposition

This strategy serves to further complicate the fare structure and with it's additional surcharges and fees and as a result would likely see resistance from customers, all for negligible operational benefit. The strategy "Limit Payment Forms Accepted" would achieve the same ends with less negative attention from riders. This strategy should be screened out.

# Strategy Evaluation Worksheet

**Name:** Limit Payment Forms Accepted

**Description:** WSF could begin accepting preferred payment methods and cash only

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Low. Does nothing to encourage mode shift.
b) **Encourages time shift:** Low. Does nothing to encourage time shift.
c) **Attracts new demand to available capacity:** Low. Does nothing to attract new demand to available capacity.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. This strategy does nothing to impact loading and unloading times.
b) **Reduces ticketing time:** High. With reduced payment methods, the average time spent processing each customer at the tollbooth would decrease.
c) **Reduces queue lengths:** Medium. Moving vehicles more quickly through the ticketing process will result in shorter queues waiting for the ticketing window.
d) **Improves operating cost per rider:** Low. There would not be an impact to operating cost per rider.

## II) Evaluation Against Secondary Screening Criteria:

1) **Positive customer impact:** Low. Although reduced methods of payment would be considered a minor inconvenience by most, customers would likely adapt to the new system over time.
2) **Positive community impact:** Low. No positive community impacts are likely to result from this strategy.
3) **Positive environmental impact:** Low. No positive environmental impacts are likely to result from this strategy.

## III) Implementation and Cost

1) **Ease of implementation:** High.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No.

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** High.

2) **Terminal by Terminal Applicability:** N/A. Would be a system-wide application.

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**
   k) **Pt. Townsend:**
   l) **Keystone:**
   m) **Anacortes:**
   n) **San Juans:**
   o) **Pt Defiance:**
   p) **Tahlequah:**

3) **What would be a good test route?** N/A

## VI) Strategy Disposition

Carry forward due to the strategy's positive operational impacts that can be achieved at no, or very little, cost.

# Strategy Evaluation Worksheet

**Name:** Fare Card Coordination – ferries and parking

**Description:** WSF could automate WSF parking access to accept Wave 2 Go or other SmartCard payment.

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Medium. By making terminal area parking easier, this strategy may encourage more people to park and walk on the ferry.
b) **Encourages time shift:** Low. Does nothing to encourage people to shift time.
c) **Attracts new demand to available capacity:** Medium. Making it easier for more people to park their vehicles and walk on to vessels would help fill existing passenger capacity.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. No anticipated impact.
b) **Reduces ticketing time:** Low. No impact on average ticketing time.
c) **Reduces queue lengths:** Medium. If sufficient numbers of customers shift to walk-on mode of access, there would be a positive impact on queue length.
d) **Improves operating cost per rider:** Medium. Attracting walk-on demand to existing capacity would help reduce the operating cost per rider.

## II) Evaluation of Secondary Screening Criteria:

1) **Positive customer impacts:** Medium. Customers would enjoy this added benefit of their Wave2Go cards.
2) **Positive community impacts:** Low. Little or no community impact.
3) **Positive environmental impacts:** Medium. Encouraging more people to park and leave their vehicles behind would help reduce overall vehicle miles traveled by ferry users, would help shorten queues and decrease associated negative traffic impacts associated with queuing.

## III) Implementation and Cost

1) **Ease of implementation:** Medium. Wave2Go already exists, but it would take some time and effort to add the parking feature. It may also require negotiations with private owners of parking adjacent to terminals.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** Yes, it would require wayfinding so that drivers could find the participating lots.

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** Low. Some terminals have little or no parking.

2) **Terminal by Terminal Applicability:** Could apply to any terminal with parking, but would be most applicable to terminals where nearby parking is fully or mostly owned by the state.

   a) **Mukilteo:** Medium. Nearby parking is privately owned.
   b) **Clinton:** High
   c) **Edmonds:** Medium. Nearby parking is privately owned or owned by the Port.
   d) **Kingston:** High
   e) **Bainbridge:** High
   f) **Bremerton:** Medium. Nearby parking is privately owned.
   g) **Colman Dock:** Medium. Nearby parking is privately owned.
   h) **Southworth:** High
   i) **Vashon:** High
   j) **Fauntleroy:** Low. Minimal parking nearby.
   k) **Pt. Townsend:** Low. Minimal parking nearby.
   l) **Keystone:** Low. Minimal parking nearby.
   m) **Anacortes:** High
   n) **San Juans:** Low. Only one of four San Juan terminals has parking (Orcas, 40 spaces)
   o) **Pt Defiance:** Medium. Nearby parking is privately owned.
   p) **Tahlequah:** High

3) **What would be a good test route?** A route with high parking demand and where lots are owned by the state, such as Bainbridge Island.

## VI) Strategy Disposition

Carry the strategy forward for its potential mode shift benefit, operational benefits, and positive customer and environmental effects, all at little cost and effort.

# Strategy Evaluation Worksheet

**Name:** Fare Reductions for Commuters

**Description:** WSF expands its existing program by offering a greater discount for monthly or annual passes.

## (1) Evaluation Against Primary Screening Criteria:

1) **Manages Demand**

   a) **Encourages mode shift**: Low. This only creates even more demand for travel during peak times.
   b) **Encourages time shift:** Low. Does nothing to encourage people to shift time.
   c) **Attracts new demand to available capacity:** Low. Does nothing to attract demand to existing capacity.

2) **Increases Operational Efficiency**

   a) **Reduces loading/unloading time:** Low. Does nothing to impact loading time.
   b) **Reduces ticketing time:** Medium. Assuming pass-holders can be processed more quickly, this reduces ticketing time.
   c) **Reduces queue lengths:** Low. No effect.
   d) **Improves operating cost per rider:** Low. Has no effect.

## II) Evaluation of Secondary Screening Criteria:

1) **Positive customer impact:** Medium. Regular users would benefit financially.
2) **Positive community impact:** Low. No community impacts.
3) **Positive environmental impact:** Low. No impact.

## III) Implementation and Cost

1) **Ease of implementation:** High.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No.
2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** High. This would be a system-wide strategy.

2) **Terminal by Terminal Applicability:** N/A.

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**
   k) **Pt. Townsend**
   l) **Keystone**
   m) **Anacortes**
   n) **San Juans**
   o) **Pt Defiance**
   p) **Tahlequah**

3) **What would be a good test route?** No single route lends itself to this strategy in particular. For demonstration purposes, a lower volume route such as Pt. Defiance-Tahlequah would serve best.

## VI) Strategy Disposition

Screen out. This strategy only increases peak-period demand for auto access onto ferries and has very little operational benefit. It also has the potential to lower overall system revenues, unless enough new riders are gained due to the lower cost for frequent users.

# Strategy Evaluation Worksheet

**Name:** Fare Surcharges for Premium Access

**Description:** WSF offers a monthly or annual pass guaranteeing drive-on access to any vessel at any times for a premium rate. Similarly, WSF could offer a special tourist pass guaranteeing drive-on access to any vessel at any time for a premium rate.

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Low. This only creates an incentive for people to drive on (at least for those who can afford it).
b) **Encourages time shift:** Low. Attracts additional demand to sailings already experiencing high demand levels.
c) **Attracts new demand to available capacity:** Low. Attracts additional demand to sailings already experiencing high demand levels.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. Does nothing to impact loading.
b) **Reduces ticketing time:** Low. No impact.
c) **Reduces queue lengths:** Low. If anything, this strategy may create even longer queues for high demand sailings.
d) **Improves operating cost per rider:** Low. No impact.

## II) Evaluation Against Secondary Screening Criteria:

1) **Positive customer impact:** Medium. Users in the higher economic strata would enjoy this benefit, but at the same time it creates longer queues for everyone else and would likely be seen as inequitable by many.
2) **Positive community impact:** Low. No impact.
3) **Positive environmental impact:** Low. No impact.

## III) Implementation and Cost

1) **Ease of implementation:** Low. It would be challenging to properly communicate to the public about this strategy, and it would be very difficult to integrate this strategy with reservations and congestion pricing schemes.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No.

2) **Are there other strategies that might compromise this strategy's effectiveness?** Reservation systems would negate the need for this strategy, since they also provide guaranteed access onto sailings for a fee. Congestion pricing also partially serves the same function, in that it charges a premium fee for individuals wanting to ride high-demand sailings. The difference between congestion pricing and fare surcharges for premium access is that under congestion pricing, all people trying to ride high demand sailings would be impacted similarly.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** High. It would probably be easiest and simplest to apply this system-wide.

2) **Terminal by Terminal Applicability:** N/A

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**
   k) **Pt. Townsend:**
   l) **Keystone:**
   m) **Anacortes:**
   n) **San Juans:**
   o) **Pt Defiance:**
   p) **Tahlequah:**

3) **What would be a good test route?** N/A

## VI) Strategy Disposition

Screen out. This strategy would be viewed as inequitable by the public and brings very few, or even negative, benefits in terms of mode and time shift. Congestion pricing is a much more promising strategy and would bring larger, system-wide benefits.

# Strategy Evaluation Worksheet

**Name:** Round Trip Ticketing

**Description:** Begin selling round-trip vehicle fares, possibly with a fare discount for those opting for round-trip purchase. Round trip tickets could also entitle holders to priority boarding on one or both legs of their trip (i.e. HOT lane access, or queue jump lane through toll booth area).

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. Added convenience for vehicles could even have an adverse impact by encouraging more drive-ons.
   b. **Encourages time shift:** Low. Little or no impact on time shift. In fact, the added convenience to drive on and added guarantee of getting on the return ferry could attract more vehicle demand to some routes during peak times.
   c. **Attracts new demand to available capacity:** Low. Does nothing to attract new demand to available capacity.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact
   b. **Reduces ticketing time:** High. With round-trip tickets more people could pass through the tollbooth via a queue jump lane where they electronically scan their ticket.
   c. **Reduces queue lengths:** Medium. Moving vehicles more quickly through the ticketing process will result in shorter queues waiting for the ticketing window.
   d. **Improves operating cost per rider:** Low. There would not be an impact to operating cost per rider.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** High. Many customers would see round-trip ticketing as an added convenience.
2. **Positive community impact:** Medium. Moving vehicles off adjacent roadways, out of traffic flow, and through the toll booth more quickly constitutes a positive community impact.
3. **Positive environmental impact:** Medium. Moving vehicles queuing for the ferry out of the adjacent street network's traffic flow could help relieve nearby congestion.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Would require integration with enhanced electronic record-keeping as well as any reservation and e-ticketing systems.
2. **Capital costs:** Low
3. **On-going operating cost:** Low

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Yes, it would require an optimized electronic fare system so up-to-date records can be referenced to check space on future sailings before selling return tickets. It would greatly benefit by being integrated with a reservation system and electronic ticketing. In fact this might be the only effective way to control demand for return trips in the San Juan Islands without establishing ticket sales in the islands.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone**
    m. **Anacortes**
    n. **San Juans**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** A route with lower demand would be best (i.e. Pt. Defiance-Tahlequah) to observe impacts before applying to higher demand routes with more extreme peaks.

## VI. Strategy Disposition

This strategy should be carried forward for its ability to speed ticketing times and reduce ticket booth queues, added customer convenience, and its interoperability with reservation systems and e-ticketing. However, care should be taken in its application since it has the potential to create mode shift towards auto access. Being able to purchase a ticket for the return leg of the trip hours or even days in advance is similar to a reservation, a premium service which should cost more rather than be discounted. Also, if round-trip ticketing is combined with priority loading this would be an added incentive to drive on unless it is counteracted with an appropriately high fee for the premium service, which shouldn't necessarily be linked to round-trip ticketing but comprises a separate strategy (see *Fare Surcharges for Premium Access, HOT Lanes,* and *HOT Sailings).*

# Strategy Evaluation Worksheet

**Name:** Tandem Ticketing

**Description:** Booths could be added to each ticket lane, to allow two vehicles in each lane would be processed simultaneously.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Low. No impact on mode shift.
    b. **Encourages time shift:** Low. Does nothing to encourage people to shift time
    c. **Attracts new demand to available capacity:** Low. No impact.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No impact
    b. **Reduces ticketing time:** Medium. With tandem ticketing more people could potentially pass through the tollbooth line more quickly, but this potential benefit would be partially diminished in the case where the front car takes longer to ticket, delaying the back car as well.
    c. **Reduces queue lengths:** Medium. Moving vehicles more quickly through the ticketing process will result in shorter queues waiting for the ticketing window. Again, this benefit relies on both cars being processed at the same rate. If the front car takes longer and holds up the rear car, some of the queue length benefit could be negated.
    d. **Improves operating cost per rider:** Low. This strategy would increase operating cost per rider with the added staff needed to operate tandem ticketing.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Many customers would view the shorter ticket line queues as a benefit.
2. **Positive community impact:** Medium. Moving vehicles off adjacent roadways, out of traffic flow, and through the toll booth more quickly constitutes a positive community impact.
3. **Positive environmental impact:** Medium. Moving vehicles queuing for the ferry out of the adjacent street network's traffic flow could help relieve nearby congestion.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Gaining enough extra space in the terminal area for added tollbooths could be problematic in some locations.

2. **Capital costs:** Medium. New tollbooths will require moderate capital investment.
3. **On-going operating cost:** Medium. New tollbooth attendants would be needed to support this strategy.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. This strategy will require extra space at terminals to locate the additional booth(s) and new vehicle access lane(s), and each terminal has different holding and ticket booth space issues.

2. **Terminal by Terminal Applicability:** Terminals with apparent extra space to accommodate new toll booths receive higher ratings.

   a. **Mukilteo:** Low
   b. **Clinton:** High
   c. **Edmonds:** High
   d. **Kingston:** High
   e. **Bainbridge:** High
   f. **Bremerton:** High
   g. **Colman Dock:** High
   h. **Southworth:** High
   i. **Vashon:** N/A- no tolls collected at Vashon
   j. **Fauntleroy:** Medium
   k. **Pt. Townsend:** High
   l. **Keystone:** Low
   m. **Anacortes:** High
   n. **San Juans:** N/A- no tolls collected on San Juans
   o. **Pt Defiance:** Medium
   p. **Tahlequah:** N/A- no tolls collected at Tahlequah

3. **What would be a good test route?** A medium volume route would make good sense for testing this strategy, such as Edmonds-Kingston. A good approach might be to implement tandem ticketing in only one ticket line to start, and compare how many passengers the tandem line processes compared to the non-tandem line.

## VI. Strategy Disposition

The strategy should be advanced due to its potential to reduce ticketing time and ticket line queues, but given the capital and operating costs associated with it, should be piloted in one or two locations to assess impacts before applying it more broadly. This strategy would be most helpful in a scenario where the processing time for autos entering the terminals would be more equalized. Currently the differential from one car to the next from one transaction to the next is far too high at nearly every location to make this a practical application. However, if nearly every vehicle has already completed the fare transaction prior to reaching the terminal, and the process is one of checking in the car or checking against a reservation system, this could prove to be a useful way to add processing ability with out adding more lanes approaching the terminal entrance area. Under the current method of terminal operations, this strategy has little positive benefit.

# Strategy Evaluation Worksheet

**Name:** Link employee reviews to ticketing processing times.

**Description:** Evaluate employees based on how efficiently they serve customers and load and offload boats

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Low. Does nothing to encourage mode shift.
b) **Encourages time shift:** Low. Does nothing to encourage people to shift time.
c) **Attracts new demand to available capacity:** Low. Does nothing to attract new demand to available capacity.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. This strategy does nothing to impact loading and unloading times.
b) **Reduces ticketing time:** Medium. This strategy encourages employees to decrease the average time they spend processing customers at the tollbooth.
c) **Reduces queue lengths:** Medium. Moving vehicles more quickly through the ticketing process will result in shorter queues waiting for the ticketing window.
d) **Improves operating cost per rider:** Low. Although there might be a slight improvement to operating cost per rider due to moving more passengers through more quickly, the difference would be negligible.

## II) Evaluation Against Secondary Screening Criteria:

1) **Positive customer impact:** Medium. Customers would see quicker processing times as an added convenience.
2) **Positive community impact:** Medium. Moving vehicles off adjacent roadways, out of traffic flow, and through the toll booth more quickly constitutes a positive community impact.
3) **Positive environmental impact:** Medium. Moving vehicles queuing for the ferry out of the adjacent street network's traffic flow could help relieve nearby congestion.

## III) Implementation and Cost

## Strategy Evaluation Summaries

1) **Ease of implementation:** Medium. It would rely on new/updated employee training in EFS and ticketing procedures. This would also be considered a change in working conditions and would require negotiations to be included in employee expectations. While it would not necessarily require inclusion in contract language, there would have to be a memorandum of understanding about how this strategy is to be employed and to ensure equal application.
2) **Capital costs:** Low.
3) **On-going operating cost:** Low.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No, but it would greatly benefit from optimization of the Electronic Fare System, elimination of the need for paper records and receipts, and most importantly, employee training in EFS.

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** High.

2) **Terminal by Terminal Applicability:** N/A. Would be a system-wide application.

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**
   k) **Pt. Townsend:**
   l) **Keystone:**
   m) **Anacortes:**
   n) **San Juans:**
   o) **Pt Defiance:**
   p) **Tahlequah:**

3) **What would be a good test route?** N/A

## VI) Strategy Disposition

Carry forward due to the strategy's positive operational, customer, community and environmental impacts for a relatively small cost. Although if systems were employed

that essentially eliminate auto level ticketing sales at terminals, application would be limited.

# Strategy Evaluation Worksheet

**Name:** Extended ferry schedule

**Description:** Implement more frequent early morning, mid-day, and late-night ferries to help "flatten" the existing peak demand curves.

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Low. In fact, by flattening the peak hour demand curve, it could lead more people to choose auto access.
b) **Encourages time shift:** Medium. More choice in sailings would lead to demand shifting more evenly among various sailings.
c) **Attracts new demand to available capacity:** Low. This doesn't do much to attract new demand to existing capacity.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. No anticipated impact.
b) **Reduces ticketing time:** Low. No effect.
c) **Reduces queue lengths:** Medium. With added sailings in or flanking the peak periods, demand would be siphoned off of the highest demand sailings, reducing queue lengths on those "peak of peak" sailings.
d) **Improves operating cost per rider:** Low. More sailings will significantly increase operating costs and lead to increased operating costs per rider.

## II) Evaluation of Secondary Screening Criteria:

1) **Positive customer impact:** High. Customers would enjoy the increased level of service.
2) **Positive community impact:** Medium. There may be shorter queues for the "peak of the peak" sailings, which removes traffic from the adjacent street network during critical times. However, at the same time added service would add ferry traffic at new times of the day.
3) **Positive environmental impact:** Low. Increased level of service and sailings ups creates added fuel consumption and emissions.

## III) Implementation and Cost

1) **Ease of implementation:** Low. Added sailings require potentially more vessels and crews and revised service schedules.
2) **Capital costs:** Low, assuming the existing fleet could be used for additional sailings.

3) **On-going operating cost:** High. Added service necessitates additional labor hours and fuel.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No, but it could be viewed as a variation on, *Reorient Basic System Design.*

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** Low. Each route has a different demand curve so it would be applied on a route by route basis.

2) **Terminal by Terminal Applicability:** Routes with the strongest peak-period demand are deemed most appropriate for application of this strategy.

   a) **Mukilteo:** Medium
   b) **Clinton:** Medium
   c) **Edmonds:** Medium
   d) **Kingston:** Medium
   e) **Bainbridge:** High
   f) **Bremerton:** High
   g) **Colman Dock:** High
   h) **Southworth:** Medium
   i) **Vashon:** Medium
   j) **Fauntleroy:** Medium
   k) **Pt. Townsend:** High (peak season)
   l) **Keystone:** High (peak season)
   m) **Anacortes:** High (peak season)
   n) **San Juans:** High (peak season)
   o) **Pt Defiance:** Low
   p) **Tahlequah:** Low

3) **What would be a good test route?** Bainbridge-Seattle, since this has some of the highest peak-hour demand in the system. Alternately, it could be tested on the Port Townsend and/or San Juans routes during high season.

## VI) Strategy Disposition

This strategy should be carried forward due to its ability to shift the time people travel and reduce peak period queues at high demand locations. However, due to the high capital and operating costs associated with it, careful attention will need to be paid to size of vessel needed for any new service. The strategy also needs to be considered carefully in tandem with, or folded into the strategy *Reorient Basic System Design* which achieves many of the same benefits.

# Strategy Evaluation Worksheet

**Name:** Remote Holding

**Description:** Store vehicles waiting for the ferry in a designated storage area near the terminal rather than in traffic lanes leading to or at the terminal.

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Low. No incentive to shift from auto to another mode. May have the opposite effect by clarifying vehicle access process.
b) **Encourages time shift:** Low. Does nothing to encourage people to shift time, and eases the possible deterrent of high vehicle congestion on near-to-terminal streets even during peaks.
c) **Attracts new demand to available capacity:** Low. Does nothing to encourage people to take off-peak sailings.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. Crew will still need to guide the same number of vehicles on and off the boats and direct vehicle movement from remote holding to the dock. Unloading time may improve if travel time out onto nearby streets is significantly reduced due to removal of the on-street vehicle queues.
b) **Reduces ticketing time:** Low. Unless coupled with new, more efficient ticketing technologies, ticketing time will remain the same as the same number of drivers (or more) need to pay.
c) **Reduces queue lengths:** Medium. Drivers waiting at a remote holding area do reduce the linear length of queues in on-street lanes. Still, overall wait time would not be reduced because vehicles are simply displaced from on-street traffic queues into the holding area.
d) **Improves operating cost per rider:** Low. Additional operating costs will be incurred due to the new staffing and monitoring processes needed to direct traffic from the remote holding area.

## II) Evaluation of Secondary Screening Criteria:

1) **Positive customer impact:** Medium. At first, drivers may have difficulty while learning the new queuing process, and may be disoriented if they cannot see ferry arrivals and departures while in the holding area. But, the system may improve driver experience by reducing time spent in long street queues, and remove swaths of vehicles from streets, shoulders, and the dock that otherwise interrupt or constrain bicycle and pedestrian movements.

2) **Positive community impact:** Medium. Removing ferry queues from the streets will reduce traffic impacts on the community.
3) **Positive environmental impact:** Low. No real mode shift benefit. May have moderate positive air quality impact if drivers spend less time idling or making the stop-and-go movements characteristic of queuing.

## III) Implementation and Cost

1) **Ease of implementation:** Low. Land must be acquired for remote holding areas, and staff and passengers re-trained to use the new queuing system.
2) **Capital costs:** High, especially if land must be purchased. Creating remote holding areas would involve construction, possibly including new pavement and signage, curb cuts or roadway realignments, and/or toll booth relocation.
3) **On-going operating cost:** High, with increased staffing to sort vehicles (e.g., staging HOV, large trucks, and motorcycles separately) and guide traffic from holding area to the dock. In locations where Washington State Patrol officers are hired to monitor off-dock traffic, savings may be achieved if long queues are eliminated and fewer officers needed.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No, though moving ticketing booths to the remote holding area, revamped ticketing procedures to make ticketing time faster, or real-time wait-time information may make this strategy more attractive as part of a comprehensive remote holding system.

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** Low. It is unlikely that any single route would see operational benefits from this strategy, and the capital and ongoing operational cost would be prohibitive to system-wide applications.

2) **Terminal by Terminal Applicability:** All are low.

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**

**k) Pt. Townsend:**
**l) Keystone:**
**m) Anacortes:**
**n) San Juans:**
**o) Pt Defiance:**
**p) Tahlequah:**

3) **What would be a good test route?** No single route lends itself to this strategy in particular. Port Townsend may offer an opportunity for a demonstration, as WSF is already planning to create a new remote holding area for 80 cars to serve this terminal.

## VI) Strategy Disposition

Screen out. The operational benefit is negligible, and both capital and operational costs are high. Screen out in favor of real-time information, parking consolidation, re-oriented basic system design, and revamped ticketing operations that could also reduce queue lengths (the only significant benefit of remote holding).

# Strategy Evaluation Worksheet

**Name:** Remote Ticketing

**Description:** Tickets could be sold and received in a remote holding location. Vehicles entering on-dock holding or loading would already be ticketed.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Low. Does nothing to encourage mode shift.
    b. **Encourages time shift:** Low. Does nothing to encourage time shift.
    c. **Attracts new demand to available capacity:** Low. Does nothing to encourage people to take off-peak sailings.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. Drivers already pay and are ticketed before entering on-dock holding, so ticketing time and location have no effect on actual loading time.
    b. **Reduces ticketing time:** Low. Again, the same amount of time is required for ticketing before on-dock holding or before remote holding.
    c. **Reduces queue lengths:** Medium. However, this is mainly a result of the necessary remote holding area that removes queues from streets.
    d. **Improves operating cost per rider:** Low. Employees will still need to oversee ticketing, the toll booths will just be moved off-terminal. Due to the remote holding, new operating costs will be incurred to sort and direct vehicles from the remote area to the terminal.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Low. Drivers will have the same experience paying in a remote ticketing area as paying at an on-dock tollbooth.
2. **Positive community impact:** Medium, due to removing ferry vehicle queues from the street into the remote holding area and reducing impacts on traffic congestion.
3. **Positive environmental impact:** Low. No mode shift benefit, no change in the amount of vehicle idling time during ticketing.

## III. Implementation and Cost

1. **Ease of implementation:** Low. While simply moving tollbooths and continuing current ticketing procedures is relatively easy, this strategy depends on the complicated acquisition and construction of remote holding areas.

2. **Capital costs:** Low. However, capital costs related to remote holding are high.
3. **On-going operating cost:** Low. Same level of staffing needed for ticketing. However, operating costs for the entire remote holding process are high.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** This strategy by definition depends on the acquisition, construction, and operation of a remote holding area. Making other changes to ticketing technology and procedures would have an actual benefit to customer service and operating cost that remote ticketing alone does not offer.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. It is unlikely that any single route would see operational benefits from this strategy, and the capital and ongoing operational costs of remote holding would be prohibitive to system-wide applications.

2. **Terminal by Terminal Applicability:** All are low.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone**
    m. **Anacortes**
    n. **San Juans**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** No single route lends itself to this strategy in particular. Port Townsend may offer an opportunity for a demonstration, as WSF is already planning to create a new remote holding area for 80 cars to serve this terminal, and remote ticketing procedures could be added to the pilot.

### VI. Strategy Disposition

Screen out. The operational benefit is negligible, as ticketing at a remote holding area is essentially the same operationally as ticketing at an on-dock holding area. Capital and operational costs are high for creating the remote holding area itself. Screen out in favor of revamped ticketing operations that would allow more efficient fare verification, such as transponders; policies that will streamline payment procedures, such as accepting limited forms of payment or automating EFS record keeping; or technology that allows ticket purchase before leaving home or work, such as pre-paid reservations or e-ticketing.

# Strategy Evaluation Worksheet

**Name:** Re-orient Basic System Design

**Description:** Purchase larger amount of smaller vessels with lower vehicle capacity on each vessel. Offer increased number of sailings to meet the vehicle demand.

## I. Evaluation Against Primary Screening Criteria:

### 1. Manages Demand

a. **Encourages mode shift**: Low. Greater sailing frequencies may encourage drive-on ridership as drivers would not have to wait as long between boats in order to get the next boat. However, greater frequency would offer more support compared to today for the use of transit, bike, or walking to access the ferry dock, as these riders need not be as concerned with arriving at a specific time in order to avoid the risk of missing a ferry and waiting an hour or more for the next sailing.
b. **Encourages time shift:** Medium. Many more options for departure time allow for more flexible schedules. Less time will be spent waiting if one sailing is missed. In addition, where it may not be possible for many people to change their work start and stop times by an hour or more in order to catch an earlier or later ferry, smaller schedule shifts may be possible. (i.e., instead of arriving at work at 9AM, a passenger may be able to start at 9:30AM, whereas the necessity of delaying arrival to 10AM due to long headways may preclude choosing a later sailing.)
c. **Attracts new demand to available capacity:** Medium. This strategy may support mode shift which leads to more walk-ons, but drivers will also benefit from increased frequencies. Allowing for more frequent sailings all day lends more convenience to mid-day sailings, which can support choosing mid-day, off-peak travel times.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** High. Lower-capacity boats mean fewer vehicles moving on and off during each stop, reducing dwell time.
b. **Reduces ticketing time:** Low. Though a significant shift away from vehicular modes could reduce ticketing time, this strategy would not have a large effect without other changes to ticketing procedures.
c. **Reduces queue lengths:** High. Moving vehicles in and out of the holding area with greater frequency reduces the queue for any individual run. For example, if frequency is increased from hourly to every half-hour, queue lengths may be reduced by up to half as fewer vehicles need storing through the wait time between vessels.
d. **Improves operating cost per rider:** Low. Though smaller vessels require smaller crews, a greater number of vessels would require more individual crews. Reduced vehicle queues may reduce the number of staff

needed to sort and direct traffic flow. Greater sailing frequency may balance out the fuel cost savings of using smaller vessels, depending on multiple variables (i.e., actual vessel fuel efficiency, distance traveled, and number of trips per day).

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** High. Greater frequency gives ferry customers more options in terms of travel times and mode of access to the terminal, significantly reduces wait times between vessels, and specifically improves customer service and user experience for passengers arriving via non-motorized modes and transit.
2. **Positive community impact:** High. Reduces ferry vehicle queues congesting neighboring streets and lowers the traffic pulse during unloading.
3. **Positive environmental impact:** Low. The environmental impacts will be low if greater sailing frequencies counteract the fuel savings of using smaller vessels. However, environmental benefits may be achieved by making targeted decisions about vessel fuel efficiency, and reducing the amount of time drivers spend idling and making start-and-stop movements in long queues.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. While vessel acquisition will take time and significant investment, WSF staff re-training should be minimal as the same basic loading and unloading procedures can be scaled for smaller vessels.
2. **Capital costs:** High. Vessel acquisition costs, possible terminal retrofitting.
3. **On-going operating cost:** Medium. Will depend on whether additional staff are needed for smaller but more crews, how fuel efficient the smaller boats are, and whether the number of employees assigned to sort and direct large pulses of loading and unloading vehicles can be reduced. In locations where Washington State Patrol officers are hired to monitor off-dock traffic, savings may be achieved if long queues are eliminated and fewer officers needed.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but streamlined ticketing procedures and would significantly improve customer experience and confidence with more frequent sailings. The quality and convenience of bike, pedestrian, and transit connections will directly affect the amount of mode shift that is possible related to this strategy.

2. **Are there other strategies that might compromise this strategy's effectiveness?** In the event that ticketing procedures and fare verification times became so slow that ticketing cannot keep up with loading, the benefits achieved through more frequent sailings would decline if vehicles are stuck at tollbooths and boats leave less than full.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High. This strategy is being advanced as a system-wide application and will be most beneficial on routes and runs with highest demand, large vehicle surges, and long vehicle queues under current conditions.

2. **Terminal by Terminal Applicability:** High for all. Terminals with higher peak season demand and surges will experience the most benefit during that season.

    a. **Mukilteo:** High (especially during peak season)
    b. **Clinton:** High (especially during peak season)
    c. **Edmonds:** High
    d. **Kingston:** High (especially during peak season)
    e. **Bainbridge:** High
    f. **Bremerton:** High
    g. **Colman Dock:** High
    h. **Southworth:** High
    i. **Vashon:** High
    j. **Fauntleroy:** High
    k. **Pt. Townsend:** High
    l. **Keystone:** High (especially during peak season)
    m. **Anacortes:** High (especially during peak season)
    n. **San Juans:** High (especially during peak season)
    o. **Pt Defiance:** High
    p. **Tahlequah:** High

3. **What would be a good test route?** All routes offer an opportunity for pilot projects, but the Bainbridge to Seattle route may be the most immediately successful and highly beneficial test.

### VI. Strategy Disposition

Advance for study as a system-wide application due to the high operational benefits for customers, WSF, and neighbor communities, and the efficiencies of acquiring, staffing, and maintaining smaller vessels system-wide.

# Strategy Evaluation Worksheet

**Name:** Reorganize the Flow and Lane Usage

**Description:** Load and store vehicles in the staging area in such a way as to maximize use of space and minimize vehicle movement.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Low. May improve conditions for cyclists also navigating the staging area, but otherwise no effect on mode shift.
    b. **Encourages time shift:** Low. Does nothing to encourage time shift.
    c. **Attracts new demand to available capacity:** Low. Does nothing to encourage off-peak sailings or walk-on passengers. In fact, by improving flow conditions that are worst at peak times, this strategy may reduce the existing 'time penalty' for traveling at peak times, and therefore potentially discourage off-peak travel.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Medium. Can reduce loading time at terminals where loading procedures differ for drivers, HOV, motorcycles, and cyclists (for example, Fauntleroy's extremely confusing loading process); where vehicles must essentially stage twice by shifting into new lanes (as at Bainbridge); or where maximizing the use of space may allow for adding dedicated, safe, and clear pedestrian or bicycle access routes.
    b. **Reduces ticketing time:** Low. No change to ticketing procedures.
    c. **Reduces queue lengths:** Medium. Maximizing the use of space in the staging area can increase the vehicle holding capacity and move more cars out of on-street queues.
    d. **Improves operating cost per rider:** Low. No real impact, except in reduced labor costs if these changes allow for the redeployment of personnel managing the vehicle circulation/staging areas.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Reorganizing staging areas to clarify loading procedures will improve the usability of the ferry system for all vehicle passengers, including new riders who have never boarded the ferry before.
2. **Positive community impact:** Low. May reduce on-street vehicle queues that impact neighborhood traffic, but maximizing the use of space in the staging area is unlikely to open up a significant amount of additional capacity for cars.
3. **Positive environmental impact:** Low. No effect on mode shift. May slightly reduce the amount of vehicle idling time and fuel usage to make on-dock movements.

## III. Implementation and Cost

1. **Ease of implementation:** High. WSF and dock employees must be willing to change long-held procedures, and drivers must learn slightly adjusted loading patterns, but overall this is an easily implemented strategy with no costly physical or capital changes necessary.
2. **Capital costs:** Low. At most, may require a change in painted lane markings or signage.
3. **On-going operating cost:** Low. No additional staff needed, and may allow for redeployment of staff in some instances; simply retrain current employees on the adjusted holding pattern.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** In many cases, employee parking on the dock constrains holding patterns and leads to complicated flow and lane usage patterns. Employee parking may need to be removed, reduced, or shifted in order to accomplish flow and lane usage reorganization.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. This strategy may only apply at terminals with confusing or constrained circulation patterns or staging areas, especially those where the current configuration requires additional personnel to manage and therefore results in increased labor costs.

2. **Terminal by Terminal Applicability:**

    a. **Mukilteo:** High
    b. **Clinton:** Low
    c. **Edmonds:** Medium
    d. **Kingston:** Medium
    e. **Bainbridge:** High
    f. **Bremerton:** Low
    g. **Colman Dock:** Medium
    h. **Southworth:** Medium (especially as relates to transit access and vehicles that must load backwards)
    i. **Vashon:** Low
    j. **Fauntleroy:** High (though here, the problem is more due to space constraints rather than how the available space is used)
    k. **11. Pt. Townsend:** Medium
    l. **Keystone:** Medium
    m. **Anacortes:** Low
    n. **San Juans:** Low

o. **Pt Defiance:** Low
p. **Tahlequah:** Low

3. **What would be a good test route?** The Bainbridge Island terminal employs a uniquely complex staging process. HOV vehicles must drive around the perimeter to access priority lanes (4 through 6). Once a boat is full, vehicles remaining in the last staging lanes are directed to make on-dock movements and refill the first lanes before any new cars are let in. During this movement, all ticket sales must stop. Careful change in lane assignment and alternating loading order can address these problems. This makes Bainbridge a good candidate for a test.

## VI. Strategy Disposition

Suspend for future consideration if needed, on a terminal-by-terminal basis. Overall, the operational benefit of this strategy is small, as only very small improvements in capacity and loading time may be achieved, and any benefits may not be significant enough to be noticeable by customers.

# Strategy Evaluation Worksheet

**Name:** Reservation Systems

**Description:** Passengers buy a vehicle fare for a specific sailing and for a specific vehicle. Reservations are made at automated walk-up kiosks, over the phone, or online. Kiosks at ferry terminals, the airport, and various other locations (including possibly on board) would immediately issue a ticket for the selected sailing. This assumes there is a computerized system capacity available to track tickets sold by all kiosks. Phone sales could be automated with voice recognition technology or handled by WSF staff acting as ticket agents. For phone and online sales, an electronic record of license plate numbers with reservations is kept and verified before access to the terminal is granted. An alternative to using staff to verify license plates is installing camera technology that matches license plate numbers to the electronic record. The technology sends a bill to each driver whose license plate does not match the reservations record for that sailing.

## I. Evaluation Against Primary Screening Criteria:

### 1. Manages Demand

a. **Encourages mode shift**: Low. Does nothing to encourage mode shift.
b. **Encourages time shift:** High. Shows passengers an obvious limit on the capacity of each sailing and makes clear the extent of peak demand. With a reservation, motorists know exactly which sailing they will ride and need not arrive at the terminal hours early to ensure a desired departure time. Passengers will also be better able to plan for off-peak sailings when they can be certain of getting a spot on a specific boat and confident about the time they will arrive at their destination terminal. Coupling this strategy with demand-responsive pricing would emphasize the financial cost of peak period travel to passengers and encourage even greater shifts to lower-priced off-peak sailings.
c. **Attracts new demand to available capacity:** High. By making clear the delay and capacity limitations involved in traveling during peak periods, reservations systems encourage motorists and freight drivers who do not need to travel during the high peak to travel when there is more available capacity. As with 1.b. above, this effect will be strengthened if reservations are coupled with demand-responsive pricing.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Low. Does not reduce the time needed to load any individual vehicle.
b. **Reduces ticketing time:** High. Ticketing may be done before motorists ever arrive at the dock, or may be done automatically using cameras at the terminal. The more automated the fare verification system, the greater the ticketing time savings. Removing toll gates entirely and relying on

automatic license plate and transponder billing would most reduce ticketing time.

c. **Reduces queue lengths:** High. Vehicles without a reservation would be less likely to arrive during peaks and cause disruptive and inefficient queuing backups on neighboring streets. In order to discourage drivers from arriving early to take their chances with stand-by, an extra fee should be applied to non-reservation tickets.
d. **Improves operating cost per rider:** Medium. Removes the need for on-site tollbooth employees, especially if cameras are used to verify fare payment using license plates. Personnel who would otherwise staff tollbooths or direct off-site traffic or queues can be redeployed. Ridership should increase, as people who are today discouraged by the long queues and unpredictable wait times become new paying passengers. Increased services will be necessary to administer the reservation system (i.e., machines, software, quality control), but much of the work can be automated, and overall, labor costs will decline. Careful planning is necessary to balance the number of reserved spaces and standby spaces reserved per sailing, and set appropriate fees for reservation, standby, and non-reservation passengers to ensure that boats do not leave less-than-full and negatively impact revenue and efficiency.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** High. Improves reliability and convenience, reduces long delays and time spent waiting, and especially builds better customer service for regular ferry riders. May decrease customer service for infrequent riders who may not be able to get a reservation during high-demand commute peaks or who may arrive unaware of the reservation system and be turned away from fully reserved sailings. Overall, should significantly increase ridership by eliminating long wait times, making departure and arrival times predictable, and improving the quality of peak-time travel.
2. **Positive community impact:** High. Reduces queuing and the ferries' impact on traffic congestion. Opens up routes to businesses and homes. May result in traffic pulses just before departure times, but reduces overall traffic surges and congestion peaks during high-demand periods. Could provide additional economic development for host communities, as customers will know the exact departure time of the boat they will be on and will be a "captive market" for local businesses (rather than sitting in their vehicles on the dock as under the current system).
3. **Positive environmental impact:** Medium. Can reduce emissions by reducing the amount of time drivers spend idling or sitting in stop-and-go queue traffic.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Requires analysis to select an appropriate system and time to purchase and install new equipment/software, hire and train staff, and educate customers. Some passengers may oppose implementation of a reservation system if they feel it imposes a constraint on their ability to ride a ferry spontaneously, if regular riders feel they should receive greater priority over

infrequent riders, or if infrequent riders perceive competition with regular riders to obtain reservations.

2. **Capital costs:** Medium costs to select, purchase, and install the most user-friendly and cost-effective reservation ticketing and enforcement technology and to train staff. Capital costs would be lower for phone reservations than for on-line or kiosk systems. Importantly, reducing queues would avoid major capital costs by eliminating the need to expand holding area capacity. Expanding holding areas would involve extremely costly construction and increased environmental concerns especially for over-water holding. Constructing new on-land holding areas would require and high land costs and result in loss of opportunities for revenue-supportive ferry-oriented development.
3. **On-going operating cost:** Low. Costs for staff to monitor and administer the new systems can be offset by the reduction in labor costs as a result of simplifying and automating most of the ticketing process. Staff currently dedicated to taking tickets or managing off-site traffic and queues could be redeployed. For this and other technology strategies, ongoing operating costs could additionally be reduced through contract agreements in which the vendor is required to install and maintain the technology, perhaps as part of a revenue sharing agreement. In this way, up-front costs can be spread out over time, and these annualized costs may be lower than the labor costs (salary + benefits) for otherwise necessary fare collection and technology maintenance personnel.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Demand-responsive pricing is essential to make the reservation system fully effective at balancing variable demand with the vessels' fixed capacity. The strategy will be most cost- and time-efficient if supported with technology that automates the ticketing process (e.g., cameras that automatically check license plates for fare verification or billing). Transponders could also be used for reservation verification or attached to automatic debit accounts for frequent riders. Sufficient space must be available in holding areas to maintain separate queues for reservation passengers and those without reservations. May require off-dock holding areas, especially if passengers with reservations arrive before the previous sailing boards. However, with enough queue reduction, the capacity of the existing terminal holding area will suffice. Electronic message signs informing passengers of current fees and alerting both drivers and WSF personnel when an arriving vehicle needs to redirect to a non-reservation stand-by queue will allow better holding-area management and passenger understanding of the fare system.

2. **Are there other strategies that might compromise this strategy's effectiveness?** The price charged for reservations and/or for traveling during congested periods must be carefully set at an "optimum" level, so as to make reservations attractive enough that many drivers use the service, but not too low that demand exceeds reservation supply or too high that passengers simply revert to non-reservation stand-by. Non-reservation tickets must also bear the congestion price and an additional premium fee, in order to strongly encourage riders to make a reservation. Still, stand-by ridership and transferring reservations must always be possible, so boats can be filled for highest efficiency even when there are reservation no-shows. If a video-automated license plate tolling system is not employed, kiosks for passengers who arrive without a

reservation may be located on board the boats for optimum time-efficiency. A small number of stand-by spaces should be reserved on even the highest demand sailings so that emergency vehicles and other priority riders can be accommodated. Overall, the reservation system and fare structure must be made as clear and easy to use as possible.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High. Phone and e-ticketing options should be considered for system-wide application, with an analysis of whether reservations should be allowed for all passengers, or limited to commuters only or recreational riders only. Kiosk systems should be advanced for study on a route-by-route basis, particularly at terminals with high recreational traffic (i.e., likely serve many infrequent passengers).

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend :** include evaluation of a kiosk system
    l. **Keystone:**
    m. **Anacortes:** include evaluation of a kiosk system
    n. **San Juans:**
    o. **Pt Defiance:**
    p. **Tahlequah:**

3. **What would be a good test route?** All. This would be a system-wide application. Port Townsend and Anacortes with high recreational and seasonal peak demand may offer the best opportunities for piloting a kiosk system test.

### VI. Strategy Disposition

Carry reservations forward for evaluation on all routes and at all terminals for the operational, community, and environmental benefits, and the opportunity to vastly improve customer service and reliability.

# Strategy Evaluation Worksheet

**Name:** Shared Parking

**Description:** Pursue shared-use and access contracts to use underutilized parking facilities at adjacent land uses (churches, schools, shopping malls) for customer and/or employee parking.

## I. Evaluation Against Primary Screening Criteria:

### 1. Manages Demand

a. **Encourages mode shift**: High. With added parking capacity, more passengers can choose to park and leave their vehicles at their terminal of origin and walk on to the ferry.
b. **Encourages time shift:** Low. Does nothing to encourage time shift, unless off-site parking availability is limited to off-peak times. If additional off-site parking is made available during peak times, then this strategy could encourage additional "drive to/walk-on" passengers during peak times.
c. **Attracts new demand to available capacity:** Medium. Does nothing to encourage off-peak sailings unless off-site parking availability is limited to off-peak times, but supports more "drive to/walk-on" passengers.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Low. Only effect on loading and unloading time would occur if drivers shift to walking on instead of driving on in large enough numbers that peak period boats leave less-than-full in terms of vehicle capacity. Otherwise, the same number of vehicles will load per boat, though fewer will be left waiting for the next boat.
b. **Reduces ticketing time:** Low (see 2.a.)
c. **Reduces queue lengths:** Medium. If drivers park and walk on, fewer vehicles will be queuing on-street in between sailings as additional space will open in the holding and staging areas.
d. **Improves operating cost per rider:** Low, unless a substantial number of riders shift to parking and walking on such that more individual passengers are carried per sailing even as the vehicle capacity of the boat remains the same. If current parking is provided for free, and off-site parking is priced, could reduce the parking subsidy for "drive to/walk-on" customers.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Additional parking capacity offers more choice to passengers with respect to their final mode of access. Sharing lots with

a business offering services or retail gives an additional amenity to those who park.

2. **Positive community impact:** Medium. May reduce queue lengths that affect neighborhood traffic, and may increase on-foot customers to local businesses at the parking lot or along a pedestrian route to the ferry terminal. Creates a financial premium for the preservation of parking lots in the vicinity of ferry terminals, which may not be a locally-desired land use.
3. **Positive environmental impact:** Medium, if the drivers who use the new parking spots would otherwise have driven aboard and made longer vehicle trips on the destination side. Environmental impacts will be low if passengers who currently access their "home" ferry terminal via transit, bicycle, or on foot due to its constrained parking capacity are incentivized by the off-site parking to switch to driving and parking instead.

## III. Implementation and Cost

1. **Ease of implementation:** Low. Shared use opportunities must be identified, and pricing, availability, maintenance responsibility, and liability agreements must be negotiated with owners.
2. **Capital costs:** Low. WSF would not construct new parking, but pursue agreements to provide customer and employee access to parking built and funded by others.
3. **On-going operating cost:** Low, unless substantial monitoring or maintenance is required by the lot owner.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** May require a shuttle and/or investments in pedestrian and bicycle infrastructure to link ferry passengers from the off-site parking lot to the terminal, if safe, convenient connections do not already exist.

2. **Are there other strategies that might compromise this strategy's effectiveness?** A lack of safe transit, pedestrian, and cycling infrastructure and wayfinding between the terminal and the parking lot would limit the usefulness of this strategy.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High. Shared parking opportunities should be investigated for all terminals.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

   a. **Mukilteo:**
   b. **Clinton:**
   c. **Edmonds:**
   d. **Kingston:**
   e. **Bainbridge:**

**f. Bremerton:**
**g. Colman Dock:**
**h. Southworth:**
**i. Vashon:**
**j. Fauntleroy:**
**k. 11. Pt. Townsend:**
**l. Keystone:**
**m. Anacortes:**
**n. San Juans:**
**o. Pt Defiance:**
**p. Tahlequah:**

3. **What would be a good test route?** Opportunities for shared parking should be investigated for all terminals.

## VI. Strategy Disposition

Carry the strategy forward for its customer convenience, potential mode shift benefits, and small capital costs.

# Strategy Evaluation Worksheet

**Name:** Stagger Departures and Arrivals

**Description:** Schedule vessel arrival and departure in such a way that there is only one arrival and departure at any given time.

## I. Evaluation Against Primary Screening Criteria:

### 1. Manages Demand

a. **Encourages mode shift**: Low. Does nothing to encourage mode shift, unless staggering effectively results in more frequent departures for the same destination, so passengers need not worry about missing a sailing and having to wait for an hour or more for the next boat. Such frequency could make ferries more convenient for non-motorized and transit access.
b. **Encourages time shift:** Low. Does nothing to encourage time shift, unless frequency increases enough that passengers may make small shifts to their schedules and not have to wait an hour or more for the next ferry to their desired destination (see 1.a.).
c. **Attracts new demand to available capacity:** Low. Does nothing to encourage off-peak sailings, unless frequency increases (see 1.a.). By reducing time penalty to customers traveling at peak times, increasing the frequency could incentivize some additional peak period travel.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Medium. Streamlines and clarifies loading and unloading procedures, as vehicles need only be staged and moved for one dock at a time. At terminals where vehicles cross paths to and from different docks and the staging areas, altering schedules to completely separate ferry arrivals and departures would remove this crossing conflict that forces one group of cars to wait for the other and increase overall loading and unloading time.
b. **Reduces ticketing time:** Low. No decrease in the overall number of vehicles needing ticketing, and no change to the speed with which vehicles can be processed.
c. **Reduces queue lengths:** Medium. Staggering arrival and departures for different sailings would allow drivers bound for different boats to arrive at staggered times, reducing the overall queue to enter the staging area. This would be especially effective where vehicles bound for or coming from different docks would otherwise cross paths and require that one group of vehicles pause while waiting for the other group to clear.
d. **Improves operating cost per rider:** Low. May slightly reduce the number of staff needed to direct and sort traffic queues.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Reducing queues, waiting times, and crossing conflicts between vehicles bound for different docks or boats simplifies the loading process and improves customer experience.
2. **Positive community impact:** Medium. May reduce queue lengths and traffic surges that affect neighborhood traffic and livability.
3. **Positive environmental impact:** Low. No impact on mode shift. By reducing time penalty for drive-on customers, may reduce the existing incentive to walk, bike, or take transit to terminals as well as to "drive to/walk-on."

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Schedules must be carefully analyzed and coordinated, and staff and passengers retrained to manage the new scheduling and queuing system.
2. **Capital costs:** Low. No need for new construction or capital acquisition.
3. **On-going operating cost:** Low. May even slightly reduce the need for staff to direct and sort traffic queues.

## IV. Interaction With Other Strategies

**1. Does this strategy need other strategies to work?** No, but staggered arrivals/departures increases the importance of schedule adherence as boats must be strictly on time to avoid cascading delays into subsequent arrival/departures. A reservation system and real-time departure and arrival information would help support the strategy.

**2. Are there other strategies that might compromise this strategy's effectiveness?**
Re-orienting the basic system design to accommodate more frequent departures with fewer vehicles per boat would reduce the window of time between arrivals/departures and could hamper the ability to significantly stagger arrival and departure schedules.

## V. Applicability to Terminals

**1. Potential for System-wide Application:** Low. Few terminals have different boats arriving and departing simultaneously.

**2. Terminal by Terminal Applicability:** Only terminals with more than one slip receive any rating higher than "low."

a. **Mukilteo:** Low
b. **Clinton:** Medium
c. **Edmonds:** Low
d. **Kingston:** Medium

e. **Bainbridge:** Medium
f. **Bremerton:** Low
g. **Colman Dock:** Medium
h. **Southworth:** Low
i. **Vashon:** Medium
j. **Fauntleroy:** Low
k. **Pt. Townsend :** Low
l. **Keystone:** Low
m. **Anacortes:** Medium
n. **San Juans:** Low
o. **Pt Defiance:** Low
p. **Tahlequah:** Low

3. **What would be a good test route?** At Colman Dock, the single access point to enter the terminal results in boats sometimes departing half-full because drivers who want to be on that boat are stuck behind vehicles headed for a different slip. This would be a good terminal for a pilot program.

## VI. Strategy Disposition

Screen out in favor of strategies that have a much greater potential for improving queue lengths, convenience, and loading/unloading time. This strategy would have negligible beneficial impact on overall operations.

# Strategy Evaluation Worksheet

**Name:** Subsidize Taxi, Carsharing, and/or Rental Car Service

**Description:** Provide operational fee support to customer access to "non-owned" vehicles via cab companies, car sharing organizations, and/or rental car agencies to offer new and/or increased services at ferry terminals. For carsharing, all monthly pass holders could be enrolled in the program for free and/or pay reduced usage charges. Allows passengers to travel to/from their arrival terminal by vehicle when needed, without needing their personal automobile, thereby reducing the number of vehicles driven on board and transported by ferries.

## I. Evaluation Against Primary Screening Criteria:

### 1. Manages Demand

a. **Encourages mode shift**: Medium. Supports passengers' ability to travel without driving on to the boats in a private vehicle, even when they need the flexibility of a car to travel to or from either the origin terminal or the destination terminal. Most effective for those riding for recreation, tourism, or services, or for daily commuters who may need a car only infrequently.
b. **Encourages time shift:** Medium. May enable walk-on, bike-on, or transit-riding passengers to postpone trips to off-peak hours with the knowledge that a fast, direct vehicle connection is available at the other terminal. Additionally, may allow those who currently drive on and off to park their vehicle at either terminal and use these automobile options to reach final destinations.
c. **Attracts new demand to available capacity:** Medium. May support off-peak travel and walk-on ferry access.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Low. Only affects loading/unloading time to the extent that a sailing might leave less-than-full of vehicles if enough people leave their cars behind.
b. **Reduces ticketing time:** Low. Same as 2.a. Ticketing will take the same amount of time for the same amount of vehicles, but if a significant number of people walk-on as a result of the taxi and rental car options, ticketing time for individual runs may decrease slightly.
c. **Reduces queue lengths:** Low. Same as 2.a. and 2.b.
d. **Improves operating cost per rider:** Low. Improves operating cost per rider only to the extent that boats carry more total people even as vehicle capacity remains constant, if more riders than usual park and walk on. Operating cost savings could be offset by operating subsidies to support the non-owned vehicle system.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Provides another land-side amenity for riders.
2. **Positive community impact:** Low. May slightly reduce queuing. The additional taxi and car rental offerings will also be available and benefit neighboring residents, and may enable ferry passengers to more easily access local businesses.
3. **Positive environmental impact:** Low. No net effect on emissions if private vehicles are still used to reach one terminal and a taxi or rental car used at the other. May have greater benefit if current drivers switch to transit or non-motorized modes at one end of the route as a result.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. WSF provides funding, but private companies operate the service. More difficult to implement at terminals where rental, carsharing, or taxi companies do not see a strong market demand.
2. **Capital costs:** Low. May need to create a dedicated space for rental/taxi pickup.
3. **On-going operating cost:** Medium, depending on whether the private companies profit from the service without operational support.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Yes. Transit, bike/ped, and/or rental/taxi/carsharing connections must be strong at both the "origin" and "destination" terminals in order for this strategy to have beneficial impacts. Strategies to continue or expand existing fare surcharge for vehicles would encourage more passengers not to bring private vehicles on board ferries at their "origin" station, and, when a vehicle is needed at their "destination" terminal, to use a "non-owned" vehicle instead.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Medium. May only apply at terminals with excellent tourist, recreational, or service opportunities that attract infrequent visitors.

2. **Terminal by Terminal Applicability:** Terminals rated "high" are located in high-demand tourist and recreational destinations. Colman Dock ranks "medium" because many other transportation options are already available from the Seattle terminal.

    a. **Mukilteo:** Low
    b. **Clinton:** Low

c. **Edmonds:** Low
d. **Kingston:** Low
e. **Bainbridge:** Low
f. **Bremerton:** Low
g. **Colman Dock:** Medium
h. **Southworth:** Low
i. **Vashon:** Low
j. **Fauntleroy:** Low
k. **Pt. Townsend:** High
l. **Keystone:** Low
m. **Anacortes:** High
n. **San Juans:** High
o. **Pt Defiance:** Low
p. **Tahlequah:** Low

3. **What would be a good test route?** Port Townsend, with high seasonal peak demand.

## VI. Strategy Disposition

Advance for consideration on a route-by-route basis. No strong system-wide benefits.

# Strategy Evaluation Worksheet

**Name:** Traffic Management

**Description:** Restrict the formation of queues on local streets with signal coordination, traffic regulation ordinances, signage, channelization, and enforcement.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Low. Does nothing to encourage mode shift.
    b. **Encourages time shift:** Low. Does nothing to encourage time shift.
    c. **Attracts new demand to available capacity:** Low.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. Only improves unloading time to the extent that signal coordination and other traffic management strategies also speed vehicle flow out of and away from the terminal.
    b. **Reduces ticketing time:** Low. Vehicles must still stop to pay or show fare verification.
    c. **Reduces queue lengths:** Medium. Clarifying and enforcing allowable and preferable vehicle flow toward and into the terminal can reduce the backup on neighboring streets, especially any such queuing that is exacerbated by driver confusion.
    d. **Improves operating cost per rider:** Low. May require more ongoing operational costs dedicated to enforcement if WSF cannot simply redeploy current staff.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Streamlines, simplifies, and eases driver access.
2. **Positive community impact:** Medium. May reduce queuing; signal coordination will benefit all road users.
3. **Positive environmental impact:** Low. May slightly reduce vehicle emissions if drivers spend less time circulating, idling, or starting-and-stopping in queues and at confusing interchanges and unsynchronized signals.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Will require funding, study, and buy-in from multiple agencies, jurisdictions, and community stakeholders.
2. **Capital costs:** High. Will vary based on actual costs of re-construction, road engineering design, and costs for new signals or signage.

3. **On-going operating cost:** Low, depending on how many net new WSF staff would be needed for enforcement. Alternately, WSF could subsidize assignment of traffic enforcement personnel from host communities. The current policy of having state troopers provide traffic management at some terminals is not a cost-effective arrangement for expansion of traffic management strategies.

## IV. Interaction With Other Strategies

**1. Does this strategy need other strategies to work?** No.

**2. Are there other strategies that might compromise this strategy's effectiveness?** No, but any changes related to remote or nearby holding, ticketing procedures, and transit and non-motorized access would need to be coordinated with these traffic management decisions.

## V. Applicability to Terminals

**1. Potential for System-wide Application:** High. All terminals can benefit from an evaluation of and commitment to improving traffic management on impacted roads and intersections.

**2. Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

a. **Mukilteo:**
b. **Clinton:**
c. **Edmonds:**
d. **Kingston:**
e. **Bainbridge:**
f. **Bremerton:**
g. **Colman Dock:**
h. **Southworth:**
i. **Vashon:**
j. **Fauntleroy:**
k. **Pt. Townsend:**
l. **Keystone:**
m. **Anacortes:**
n. **San Juans:**
o. **Pt Defiance:**
p. **Tahlequah:**

**3. What would be a good test route?** All. This would be a system-wide application.

## VI. Strategy Disposition

Carry the strategy forward for evaluation on all routes and at all terminals.

# Strategy Evaluation Worksheet

**Name:** Transponder-Only Lanes

**Description:** Drive-on passengers with electronic transponders linked to pre-paid accounts or credit cards could access premium transponder-only queuing lanes. Open road tolling technology would recognize transponders and activate a traffic arm (or similar automated access management mechanism) to allow the drive-on passenger into the holding area.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Low. Does nothing to encourage mode shift.
    b. **Encourages time shift:** Low. Does nothing to encourage time shift. May create even more encouragement for transponder users to arrive during peaks since they can access the faster transponder-only lanes.
    c. **Attracts new demand to available capacity:** Low.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No change in the number of vehicles needing to load and unload during dwell times.
    b. **Reduces ticketing time:** Medium. Drivers with transponders bypass the entire queue and move quickly through the tollbooth with only a brief stop. Drivers without a transponder would still need to use staffed tollbooths.
    c. **Reduces queue lengths:** Medium. Transponder users passing through an automated transponder lane would move through the tollbooth area more quickly than when using a human-staffed tollbooth. This time savings could lead to shorter queues in the transponder-only lanes. This system should be managed dynamically, so that if enough drivers shift to transponder use and backups begin to occur in the automated lanes, WSF would convert more lanes to transponder-only access and reduce this queue formation. Also, if the on-dock holding area beyond the tolling point fills up, then a queue will still form before the transponder access point outside of the holding area. In this case, WSF will need to stage off-site holding areas to get the cars off the streets.
    d. **Improves operating cost per rider:** Medium. Automation can reduce the number of staff needed to manage tollbooths and ticketing services.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Streamlines and eases driver access.
2. **Positive community impact:** Medium. Shorter queue lengths will contribute less disruptive traffic congestion to neighborhood streets.

3. **Positive environmental impact:** Low. Has no impact on mode split and may even encourage more driving as ticketing is simplified.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Will require a feasibility study, technology selection and installation, and passenger marketing and education.
2. **Capital costs:** Medium, to evaluate, select, and install technology.
3. **On-going operating cost:** Low. Reduces need for tollbooth staff.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Yes. If the on-dock holding area beyond the tolling point fills up with drivers who have passed through the transponder lanes and are waiting to board, a queue will still form outside of the holding area before the transponder access point. In this case, WSF will need to stage off-site holding areas to get these cars off the streets. Additionally, all accounting should be made paperless, unlike the current Electronic Fare System (EFS) system where card holders must still stop, have their card scanned, and wait for a printed receipt.

2. **Are there other strategies that might compromise this strategy's effectiveness?** If the time savings of a transponder isn't significant enough, WSF may need to offer a discount for transponder use as compared to cash fare, or offer some discount initially to entice drive-ons to make the switch to transponders.

## V. Applicability to Terminals

**1. Potential for System-wide Application:** High. All terminals can benefit from any simplification of the fare collection and verification process.

**2. Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

a. **Mukilteo:**
b. **Clinton:**
c. **Edmonds:**
d. **Kingston:**
e. **Bainbridge:**
f. **Bremerton:**
g. **Colman Dock:**
h. **Southworth:**
i. **Vashon:**
j. **Fauntleroy:**
k. **11. Pt. Townsend :**
l. **Keystone:**
m. **Anacortes:**

n. **San Juans:**
o. **Pt Defiance:**
p. **Tahlequah:**

**3. What would be a good test route?** All. This would be a system-wide application.

**VI. Strategy Disposition**

Carry the strategy forward for evaluation on all routes and at all terminals.

# Strategy Evaluation Worksheet

**Name:** Transponders: Fully Automated System

**Description:** All vehicles could be required to purchase electronic transponders linked to pre-paid accounts and/or credit cards. Automatic Vehicle Identification (AVI) camera technology would be utilized to bill drivers whose license plate numbers do not match the electronic transponder record.

## I. Evaluation Against Primary Screening Criteria:

### 1. Manages Demand

a. **Encourages mode shift**: Low. Does nothing to encourage mode shift.
b. **Encourages time shift:** Low. Does nothing to encourage time shift.
c. **Attracts new demand to available capacity:** Low.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Low. No change in the number of vehicles needing to load/unload during dwell times as long as boats still carry the same capacity.
b. **Reduces ticketing time:** High. Stopping for fare verification or ticketing no longer necessary nor supported.
c. **Reduces queue lengths:** Medium. Automated transponders allow users to pass through the tollbooth area more quickly than when using a human-staffed tollbooth. This time savings could lead to shorter queues. However, if the on-dock holding area beyond the tolling point fills up, then a queue will still form before the transponder access point outside of the holding area. In this case, WSF will need to stage off-site holding areas to get these excess cars off the streets.
d. **Improves operating cost per rider:** Low. Automation would reduce the number of staff needed at the terminal to manage tollbooths and ticketing services, but a transponder system may involve different or new staffing, mailing, or on-going technology costs for electronic billing and processing off-site. If driving on alone is encouraged through easy payment systems, total drive-on trips may increase without a corresponding increase in walk-on trips that would drive down per-capita costs. The need to maintain a non-transponder lane or to have on-board fare collection for infrequent drive-ons could undermine the operational cost savings. For this and other technology strategies, ongoing operating costs could additionally be reduced through contract agreements in which the vendor is required to install and maintain the technology, perhaps as part of a revenue sharing agreement. In this way, up-front costs can be spread out over time, and these annualized costs might be lower than the labor costs (salary + benefits) for otherwise necessary fare collection personnel.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Streamlines, simplifies, and eases driver access for those with transponders, but may confuse, deter, or alienate infrequent or new passengers who do not know the system ahead of time, thereby requiring preservation of at least one non-transponder lane booth at each terminal or on-board fare collection for the infrequent drive-on passengers without transponders.
2. **Positive community impact:** Medium. Shorter queue lengths will contribute less disruptive traffic congestion to neighborhood streets. If the holding area past the transponder booth starts filling to capacity and leading to backup onto neighborhood streets, WSF would need to utilize off-site holding areas that could remove these queues from the streets.
3. **Positive environmental impact:** Low. Has no impact on mode split and may even encourage more driving as ticketing is simplified. However, some positive environmental benefit could be achieved by reducing idling time and stop-and-go driving patterns associated with waiting in a queue.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Will require feasibility study, technology selection and installation, and passenger marketing and education.
2. **Capital costs:** Medium, to evaluate, select, and install technology.
3. **On-going operating cost:** Low. Reduces need for tollbooth staff, though some investment may be shifted to new, different off-site staffing needs to process billing. (See I.2.d. regarding annualized costs)

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Yes. In order to ensure on-street queue reduction, off-site holding areas will be needed during peak times and at terminals where the on-dock holding area beyond the transponder fare collection access point is constrained.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High. All terminals can benefit.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**

e. **Bainbridge:**
f. **Bremerton:**
g. **Colman Dock:**
h. **Southworth:**
i. **Vashon:**
j. **Fauntleroy:**
k. **Pt. Townsend:**
l. **Keystone:**
m. **Anacortes:**
n. **San Juans:**
o. **Pt Defiance:**
p. **Tahlequah:**

**3. What would be a good test route?** All. This would be a system-wide application.

**VI. Strategy Disposition**

Carry the strategy forward for evaluation on all routes and at all terminals.

# Strategy Evaluation Worksheet

**Name:** Vehicle Valet Service

**Description:** For a fee, drivers could choose to have their vehicles stored and staged by a third party service at the appropriate times.

## I) Evaluation Against Primary Screening Criteria:

### 1) Manages Demand

a) **Encourages mode shift**: Low. Does nothing to encourage mode shift.
b) **Encourages time shift:** Low. Does nothing to encourage time shift.
c) **Attracts new demand to available capacity:** Low. By reducing the time penalty and direct inconvenience for drive-on passengers during peak travel periods, could potentially increase number of drive-on passengers at these times.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. No change in the number of vehicles needing to load and unload during dwell times.
b) **Reduces ticketing time:** Low. No change in ticketing process.
c) **Reduces queue lengths:** Low. Same number of cars would still be queuing even if some are stored by individuals other than the owner.
d) **Improves operating cost per rider:** Low. No effect.

## II) Evaluation of Secondary Screening Criteria:

1) **Positive customer impact:** Medium. May represent a desirable, luxury service for a few passengers.
2) **Positive community impact:** Low. Does nothing to reduce queues, though drivers who are willing to pay the valet fee may patronize local businesses while their vehicles are being staged for them.
3) **Positive environmental impact:** Low. Has no impact on mode split.

## III) Implementation and Cost

1) **Ease of implementation:** High. Need only find an interested valet operator.
2) **Capital costs:** Low. May need to create a dedicated space for valet drop-off.
3) **On-going operating cost:** Low. No expense to WSF.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No.

2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** Low. Negligible benefit for any terminal.

2) **Terminal by Terminal Applicability:** All are low.

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**
   k) **Pt. Townsend:**
   l) **Keystone:**
   m) **Anacortes:**
   n) **San Juans:**
   o) **Pt Defiance:**
   p) **Tahlequah:**

3) **What would be a good test route?** No terminal would be more appropriate than any other for a pilot valet program, though routes with higher-income passenger ridership, or terminals with multiple nearby amenities, businesses, or high seasonal peak demand such as Port Townsend may offer more drivers interested in the novelty, luxury service.

## VI) Strategy Disposition

Screen out due to negligible to zero positive operational benefit.

# Strategy Evaluation Worksheet

**Name:** Wayfinding: Bicycles and Pedestrians

**Description:** Provide/improve pedestrian and bicycle wayfinding signage around terminals and throughout nearby business districts.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Medium. Makes bicycling and walking more attractive, easier to use for ferry access, and more visible as potential modes for ferry access.
    b. **Encourages time shift:** Low. Does nothing to encourage time shift.
    c. **Attracts new demand to available capacity:** Medium. May promote more walk-on and bike-on ridership.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. Wayfinding signage is an important part of an overall effort to increase bike-on and walk-on passengers; however, implemented alone it likely won't promote enough mode shift to walk-on and bike-on to significantly affect vehicle capacity or the total number of vehicles loading and unloading during dwell time.
    b. **Reduces ticketing time:** Low. No change in vehicle ticketing process, as per 2.a above.
    c. **Reduces queue lengths:** Low. Only contributes to reduced queue lengths if substantial numbers of drive-on passengers decide to walk-on or bike-on instead, as per 2.a above.
    d. **Improves operating cost per rider:** Medium. Mode shift to bike- and walk-on access can increase the total number of individual passengers on a given sailing even as vehicle capacity stays constant. The ferry system may attract more, new riders by making it clearer to potential customers how to safely and conveniently access ferries by bike or on foot.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Improves the ferry experience and a feeling of security for non-motorized travelers.
2. **Positive community impact:** Medium. Wayfinding can improve neighbors' walking and cycling environments. Wayfinding can support local businesses by drawing people on foot and bicycle through the main business district.
3. **Positive environmental impact:** Medium. Supporting mode shift to walk-on and bike-on can reduce vehicle travel and its related environmental impacts, including emissions and storm water runoff.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Need to work with local community to identify sign types, messages, and locations, and order and place signs.
2. **Capital costs:** Low. Signage costs inexpensive.
3. **On-going operating cost:** Low. Signs may need occasional maintenance.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Yes. Good, clear, and safe bicycle and walking infrastructure and robust financial incentives for walk-on and bike-on passengers must be in place in order to achieve significant additional mode shift to non-motorized modes, with or without improved wayfinding.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

**1. Potential for System-wide Application:** High. All terminals can benefit from better wayfinding.

**2. Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

a. **Mukilteo:**
b. **Clinton:**
c. **Edmonds:**
d. **Kingston:**
e. **Bainbridge:**
f. **Bremerton:**
g. **Colman Dock:**
h. **Southworth:**
i. **Vashon:**
j. **Fauntleroy:**
k. **Pt. Townsend:**
l. **Keystone:**
m. **Anacortes:**
n. **San Juans:**
o. **Pt Defiance:**
p. **Tahlequah:**

**3. What would be a good test route?** All. This would be a system-wide application. Colman Dock or Bainbridge Island would be good terminals to begin the wayfinding program, as this route has significant bicycle and pedestrian ridership, and bicycles must navigate vehicle traffic even within the holding area in order to access these docks.

### VI. Strategy Disposition

Advance for further analysis as a system-wide application.

# Strategy Evaluation Worksheet

**Name:** Wayfinding: Parking

**Description:** Utilize wayfinding signage including real time occupancy information to direct motorists to available parking.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Medium. This strategy would simplify the otherwise time-consuming task of searching for an available parking spot when in a hurry to catch a ferry. Prominent wayfinding signage and real-time information even advertises that the option is available for drivers to park, leave their vehicle, and walk on the ferry, reducing vehicle travel at the other terminal.
    b. **Encourages time shift:** Low. Does nothing to encourage time shift.
    c. **Attracts new demand to available capacity:** Medium. Does nothing to encourage off-peak sailings, but does support more walk-on passengers during peak travel times.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. Only effect on loading and unloading time would occur if drivers shift to walking on instead of driving on in large enough numbers that peak period boats leave less-than-full in terms of vehicle capacity. Otherwise, the same number of vehicles will load per boat to reach full capacity, and the time to move any individual vehicle in and out does not change.
    b. **Reduces ticketing time:** Low (see 2.a.)
    c. **Reduces queue lengths:** Low. May have a slight positive effect if enough additional drivers park instead of driving on that space opens in the terminal holding and staging areas to accommodate some of the vehicles that would otherwise queue in the streets. Drivers lining up to enter the parking area still contribute to queues.
    d. **Improves operating cost per rider:** Low, unless a substantial number of riders shift to parking and walking on such that more individual passengers are carried per sailing even as the vehicle capacity of the boat remains the same.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Improves the experience and shortens the time needed to search for parking for those who already park and walk on. Bolsters the “drive to/walk on” alternative as a feasible, attractive access mode for passengers.

2. **Positive community impact:** Low. May slightly reduce queue lengths that affect neighborhood traffic. By directing motorists to appropriate long-term parking, may reduce "spillover" parking impacts where WSF customers park in residential or commercial areas adjacent to terminals.
3. **Positive environmental impact:** Medium, if the drivers who use the new parking spots would otherwise have driven aboard and made vehicle trips on the destination side. Environmental impacts will be low if passengers who currently access the ferry via transit, bicycle, or on foot decide to switch to driving and parking instead.

## III. Implementation and Cost

1. **Ease of implementation:** High. Where parking infrastructure is already in place, WSF need only analyze the wayfinding needs and design and install an appropriate solution (including real-time occupancy information).
2. **Capital costs:** Low. No expensive construction or land acquisition necessary.
3. **On-going operating cost:** Low. Some costs associated with monitoring and maintenance of signs (whether done by WSF or a vendor under contract).

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** A lack of safe pedestrian and cycling infrastructure and wayfinding between the parking lot and the terminal could limit the usefulness of this strategy.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

**1. Potential for System-wide Application:** High. All terminals can benefit from better parking wayfinding.

**2. Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

a. **Mukilteo:**
b. **Clinton:**
c. **Edmonds:**
d. **Kingston:**
e. **Bainbridge:**
f. **Bremerton:**
g. **Colman Dock:**
h. **Southworth:**
i. **Vashon:**
j. **Fauntleroy:**
k. **Pt. Townsend:**
l. **Keystone:**

m. **Anacortes:**
n. **San Juans:**
o. **Pt Defiance:**
p. **Tahlequah:**

**3. What would be a good test route?** All. It would be a system-wide application. Terminals that already have multiple nearby parking options, such as Bremerton with 13 nearby lots and garages, would offer good test cases.

## VI. Strategy Disposition

Carry the strategy forward for its customer convenience, potential mode shift and capacity management benefits (via increased incentive for “drive to/walk on” passengers), and small capital costs.

# Strategy Evaluation Worksheet

**Name:** Wayfinding: Vehicles

**Description:** Improve signage to help drivers navigate each terminal's specific procedures for on-street queuing, HOV holding, and motorcycle entrances/exits.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Low. Does nothing to encourage mode shift. Increases the ease and convenience of driving on to the ferry.
    b. **Encourages time shift:** Low. Does nothing to encourage time shift.
    c. **Attracts new demand to available capacity:** Low. Does nothing to encourage off-peak or walk-on travel.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No change in the number of vehicles needing to load and unload during dwell times. Only affects the time it takes for vehicles to make it into the holding area.
    b. **Reduces ticketing time:** Low. No change in ticketing process.
    c. **Reduces queue lengths:** Low. Same number of cars would still be queuing even if motorists are less confused about the process. This strategy simply reduces the time it takes drive-on passengers to get *into* the appropriate queue.
    d. **Improves operating cost per rider:** Low. Would reduce the number of staff needed to direct traffic and sort vehicles for holding; however, this strategy alone would not reduce the number of drive-on vehicles during peak travel periods (and in fact might even incentivize more by reducing the existing time penalty related to slow or confusing auto circulation patterns). Overall, then, this wayfinding strategy would not have a significant impact on operational costs (the number of boats needed at peak times to accommodate drive-ons, fuel costs for boats loaded with heavy and space-inefficient cars, etc).

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Makes driving on to a ferry easier and clearer for first-time passengers. Frequent passengers already know the circulation and queuing procedures at their daily terminals.
2. **Positive community impact:** Low. Does little to reduce queue lengths, though this strategy might reduce "confusion-related" circling and lane changes and thereby improve queue flow.
3. **Positive environmental impact:** Low. Has no positive impact on mode split.

## III. Implementation and Cost

1. **Ease of implementation:** High. WSF need only analyze the wayfinding needs and design and install an appropriate solution.
2. **Capital costs:** Low. No costly construction or other capital costs.
3. **On-going operating cost:** Low. Some costs associated with monitoring and maintenance of signs (whether done by WSF or a vendor under contract).

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

**1. Potential for System-wide Application:** Medium. Negligible operational benefit system-wide.

**2. Terminal by Terminal Applicability:** Would be most helpful for new passengers, for routes carrying infrequent users (such as recreational traffic), and at terminals with non-obvious holding and loading procedures.

a. **Mukilteo:** Medium
b. **Clinton:** Medium
c. **Edmonds:** Low
d. **Kingston:** Medium
e. **Bainbridge:** High (reorganizing flow and lane usage may be more helpful here)
f. **Bremerton:** Low
g. **Colman Dock:** High
h. **Southworth:** Medium (especially for vehicles needing to back on to the boat)
i. **Vashon:** Low
j. **Fauntleroy:** High
k. **Pt. Townsend:** Medium
l. **Keystone:** Medium
m. **Anacortes:** Medium
n. **San Juans:** Medium
o. **Pt Defiance:** Low
p. **Tahlequah:** Low

**3. What would be a good test route?** Colman Dock with its convoluted queuing and access process and high ridership to multiple destinations may provide a good test route.

## VI. Strategy Disposition

Screen out due to negligible operational benefit.

# Strategy Evaluation Worksheet

**Name:** Mode Shift Pricing

**Description:** WSF expands existing program and offers greater rideshare, walk-on and bike-on discounts during peak periods. Allow unregistered carpools and vanpools the same fares, staging and loading privileges as registered carpools

## I) Evaluation Against Primary Screening Criteria

### 1) Manages Demand

a) **Encourages mode shift**: Medium. Existing discounts are moderate, and a high percentage of person-trips are non-SOV. Additional discounts should encourage additional mode shift. However, since existing non-SOV spare capacity is high on all sailings, even when spare SOV capacity is zero, there is a limit to the amount of potential mode shift - even with 100% discounts.
b) **Encourages time shift:** Low. Does nothing to encourage people to shift time unless combined with off-peak period discounts.
c) **Attracts new demand to available capacity:** Low. Does nothing to encourage people to take off-peak sailings, unless combined with off-peak period discounts.

### 2) Increases Operational Efficiency

a) **Reduces loading/unloading time:** Low. No impact.
b) **Reduces ticketing time:** Low. No impact unless walker and biker fares are entirely removed. However, benefit does not affect vehicle ticketing.
c) **Reduces queue lengths:** Low. No impact.
d) **Improves operating cost per rider:** Medium. Cost per rider reduction is directly proportional to the mode shift.

## II) Evaluation of Secondary Screening Criteria:

1) **Positive customer impacts:** Medium. Any customers who could shift modes would benefit from these discounts, but SOV drivers would not see any benefit.
2) **Positive community impacts:** Low. Some potential for greater exchange and tourist activity in terminal communities.
3) **Positive environmental impacts:** Medium. By creating some shift to alternative modes, this could show some positive environmental benefits.

## III) Implementation and Cost

1) **Ease of implementation:** High. This is a simple fare adjustment.
2) **Capital costs:** Low. No additional capital costs.

3) **On-going operating cost:** Low. No additional operating costs. Potential to save significant fare processing costs if walkers and bikers ride for free.

## IV) Interaction With Other Strategies

1) **Does this strategy need other strategies to work?** No, but it would work well with off-peak pricing incentives.
2) **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V) Applicability to Terminals

1) **Potential for System-wide Application:** High.

2) **Terminal by Terminal Applicability:** N/A. If implemented, this strategy would need to be applied to all terminals equally.

   a) **Mukilteo:**
   b) **Clinton:**
   c) **Edmonds:**
   d) **Kingston:**
   e) **Bainbridge:**
   f) **Bremerton:**
   g) **Colman Dock:**
   h) **Southworth:**
   i) **Vashon:**
   j) **Fauntleroy:**
   k) **Pt. Townsend**
   l) **Keystone**
   m) **Anacortes**
   n) **San Juans**
   o) **Pt Defiance**
   p) **Tahlequah**

3) **What would be a good test route?** All. It would be a system-wide application.

## VI) Strategy Disposition

Carry this strategy forward for its ease of implementation, potential mode shift benefits, and potential operational cost savings.

# Strategy Evaluation Worksheet

**Name:** Financial Incentives for Small Vehicles

**Description:** Restructure fares to charge by vehicle length, with the smallest vehicles being charged the least.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. No impact.
   b. **Encourages time shift:** Low. No impact.
   c. **Attracts new demand to available capacity:** Low. No impact unless paired with peak-period pricing.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. No impact. Likely to increase processing time while vehicle length is determined.
   c. **Reduces queue lengths:** Low. No impact. Likely to increase queues while vehicle lengths are determined.
   d. **Improves operating cost per rider:** Low. Marginal efficiency gains may be attributed as operators of longer vehicles and trailers switch to shorter vehicles, leaving room for some additional vehicles on a vessel.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Low. The pricing incentive is likely to be perceived as an unfair penalty for anyone with a larger vehicle, especially since the cost to change vehicle types can be very high.
2. **Positive community impacts:** Low. No impact.
3. **Positive environmental impacts:** Low. Minor air quality benefits may be derived if there is a shift to use smaller vehicles which typically consume less gasoline and produce lower emissions than larger vehicles.

## III. Implementation and Cost

1. **Ease of implementation:** Low. A new system for determining vehicle length would need to be implemented at the point of ticket processing or through a pre-screening system.
2. **Capital costs:** High. In addition to installing automated or assisted length detection devices at every ticket booth, the new pricing system would have to be advertised and incorporated into all existing fare collection systems and media.

3. **On-going operating cost:** Medium. Once the new measuring and pricing system is in place and training completed, labor costs would be similar to current costs. However, additional maintenance costs for maintaining the length measurement equipment are expected.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. If implemented, this strategy would need to be applied to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone**
    m. **Anacortes**
    n. **San Juans**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** All. It would be applied system-wide.

## VI. Strategy Disposition

This strategy represents a significant impact on consumer convenience, capital costs, and operating procedures with a very marginal benefit to vessel capacity and no shift to other modes or sailings. It is not recommended.

# Strategy Evaluation Worksheet

**Name:** HOT (High Occupancy Toll) Lanes

**Description:** WSF designates priority-loading diamond lanes for carpools and vanpools, and sells single-occupant vehicle access to them for a surcharge. (Access sold only until lanes are at capacity.)

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. Existing vanpool programs already occupy much of the potential HOT lane capacity, limiting new participants. Furthermore, allowing SOVs that pay a surcharge could limit HOT lane capacity or even negatively impact existing vanpools whose members see a greater delay in the HOT lane or revert to SOVs themselves.
   b. **Encourages time shift:** Low. HOT lane users receiving priority boarding may shift to more desired sailings, but this will be offset by displaced non-HOT lane users.
   c. **Attracts new demand to available capacity:** Low. No impact unless paired with peak period pricing.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. Little or no impact.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Low. No impact.
   d. **Improves operating cost per rider:** Low. A shift to carpools and vanpools would reduce per rider costs, but little shift is expected.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Medium. A higher-level of service available to carpools or SOVs for a price will provide customers with a new convenience feature. However, a perception of inequity may develop among those unable to afford the HOT lane toll.
2. **Positive community impacts:** Low. No impact.
3. **Positive environmental impacts:** Low. Minor air quality benefits may be derived if there is a shift to increased carpooling and vanpooling. This would be offset by SOVs paying to use the HOT lanes.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. At most terminals, existing lane capacity can be converted to HOT lanes. Modest physical separation and a dedicated toll both would be needed. At some terminals there is limited capacity for lanes.
2. **Capital costs:** Low. Simple markings and signing can designate the lanes.
3. **On-going operating cost:** Low. No impact.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** Applies to all terminals equally, with the following exception:

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:** Due to landside constraints, a HOT lane cannot be implanted easily. Vanpools today are already forced to stage remotely and enter on the exit lanes.
    k. **Pt. Townsend**
    l. **Keystone**
    m. **Anacortes**
    n. **San Juans**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route**? All except Fauntleroy and lower volume routes such as Keystone where there is little advantage to having priority boarding on most sailings.

## VI. Strategy Disposition

HOT lanes are not recommended. While implementation costs are very low and there is some potential to further encourage ridesharing, allowing toll-paying SOVs to utilize the lanes could defeat any savings in per rider operating costs. HOT does not create any real disincentive to using SOV, and the priority loading for vanpools and carpools is not substantially different from the priority these HOVs receive today.

# Strategy Evaluation Worksheet

**Name:** "HOTS"- High Occupancy Tolled Sailing

**Description:** WSF requires either 2+ passengers in every vehicle OR a vehicle surcharge on peak period sailings.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: High. The incentive to carpool or vanpool will be very high unless surcharges do not discourage SOV riders sufficiently.
   b. **Encourages time shift:** Medium. Rideshare users will have an incentive to shift to HOTS vessels. SOV riders will have to shift to other sailings unless the surcharge is insufficient.
   c. **Attracts new demand to available capacity:** High. Rideshare users will be attracted to this exclusive service. SOV riders will be forced to shift to other sailings unless the surcharge is insufficient.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. No impact. Some potential of added delay while redirecting SOVs unwilling to pay the HOTS surcharge.
   c. **Reduces queue lengths:** Medium. Demand for HOTS vessels is likely to be lower than normal sailings, reducing queues during that sailing.
   d. **Improves operating cost per rider:** High. For each HOTS sailing, cost per rider will be nearly halved or more.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Medium. A higher-level of service available to rideshares or to SOVs for a price will provide customers with a new convenience feature. However, SOV users unwilling to pay a surcharge will have to shift to other sailing times, likely producing negative feedback.
2. **Positive community impacts:** Medium. Reduced queues for HOTS vessels will lessen local street impacts.
3. **Positive environmental impacts:** Medium. Increased ridesharing and reduced queues will reduce overall emissions.

## III. Implementation and Cost

1. **Ease of implementation:** High. Other than advertising and timetable changes, this strategy utilizes existing infrastructure and systems.

2. **Capital costs:** Low. No impact.
3. **On-going operating cost:** Low. No impact.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone**
    m. **Anacortes**
    n. **San Juans**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** All. It could be implemented on any route.

## VI. Strategy Disposition

Carry this strategy forward. It has a very high potential to shift trips to other modes and other sailings. Unfortunately, it may be difficult to implement due to opposition from SOV riders unwilling to shift modes or to pay the surcharge.

# Strategy Evaluation Worksheet

**Name:** Improved Bike Connections and Facilities

**Description:** Install bike parking within passenger areas at terminals. Designate bicycle lanes in and out of ferry terminals separated from vehicle traffic. Make bicycles available for rent or checkout similar to a car-sharing program (through WSF or a private contractor).

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Medium. New non-SOV trips can be made with secure bike parking available for bicycles that can be used at the beginning or end of a trip linked to another mode. Riders can utilize vessels to change clothes during crossings.
   b. **Encourages time shift:** Low. No impact, except for riders who can now park and ride a bike onto a better-timed sailing.
   c. **Attracts new demand to available capacity:** Medium. Drivers shifting to park and bike trips will produce new capacity in other sailings.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Low. No impact.
   d. **Improves operating cost per rider:** Medium. Increased walk-on or bike-on riders will reduce per rider costs.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Medium. Additional rider conveniences will benefit bike riders as well as vehicle users who see or perceive reduced vehicle traffic and bicycle conflicts.
2. **Positive community impacts:** Medium. Additional bicycle use will reduce traffic and queues.
3. **Positive environmental impacts:** Medium. Additional bicycle use will reduce overall emissions.

## III. Implementation and Cost

1. **Ease of implementation:** High. Bicycle parking is generally space efficient.
2. **Capital costs:** Low. Bike racks are rather inexpensive compared to capital solutions for other modes.

3. **On-going operating cost:** Low. Some bicycle rack maintenance is necessary. Personnel for bike rentals and security for private bike parking may be necessary in certain terminals.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend:**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance:**
    p. **Tahlequah:**

3. **What would be a good test route?** All. It could be implemented on any route, though routes connecting to Colman Dock would see the highest utilization.

## VI. Strategy Disposition

Carry this strategy forward. It is a very cost-effective way to move some vehicle trips to other modes. However, benefits are likely to be limited mostly to routes serving work destinations that are within reasonable biking distance of the terminal, particularly Colman Dock. Tourist trips will also benefit, potentially increasing ridership.

# Strategy Evaluation Worksheet

**Name:** Improved Pedestrian Connections and Facilities

**Description:** Build/expand sidewalks to and from ferry terminals to connect with parking, transit and other sidewalk systems. Provide covered, separated pedestrian walkways connecting directly to the vessel passenger deck.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Medium. Some riders with destinations within walking distance may start walking, and some who currently drive on to the ferry may shift to parking near the terminal and walking on.
   b. **Encourages time shift:** Low. Some riders with destinations within walking distance may start walking to more convenient sailings.
   c. **Attracts new demand to available capacity:** Low. Some mode shift will open up new capacity.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. Some time savings will be produced by removing walk-ons from the vehicle level.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Low. No impact.
   d. **Improves operating cost per rider:** Medium. Increased walk-on riders will reduce per rider costs.

## II. Evaluation Against Secondary Screening Criteria:

1. **Positive customer impacts:** Medium. Improved pedestrian operations will benefit most users and increase customer safety.
2. **Positive community impacts:** Medium. Improved pedestrian amenities will improve the built environment around terminals.
3. **Positive environmental impacts:** Low. Minimal mode shift from motorized modes is anticipated. Some benefits may be achieved if drivers choose to park their cars at one terminal and eliminate the driving trip on the other end of their route.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Pedestrian improvements generally require careful above and below-grade design.

2. **Capital costs:** Medium. Many improvements are inexpensive, but new sidewalks and possible drainage changes are moderately expensive.
3. **On-going operating cost:** Low. Pedestrian facilities are low maintenance, with the exception of mechanized boarding structures.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but additional near-terminal parking areas connected directly to the dock with the improved pedestrian infrastructure may improve the opportunity for park-and-ride mode shift.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone**
    m. **Anacortes**
    n. **San Juans**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** All. It could be implemented at any terminal.

## VI. Strategy Disposition

Carry this strategy forward. Improved pedestrian connections benefit users of all other modes and improve overall safety. Some shifts from SOV are possible.

# Strategy Evaluation Worksheet

**Name:** Improved Transit Connections and Frequencies

**Description:** WSF contracts with existing agencies and organizations to provide new transit services that connect terminals with park and ride lots, transit hubs, rental car agencies and employment and activity centers.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: High. Targeting transit services to key rider destinations can produce substantial mode shift.
   b. **Encourages time shift:** Medium. New transit riders can reliably use different sailings convenient to their transit connections, but new capacity for remaining drivers is only likely to open up on sailings that are less-convenient.
   c. **Attracts new demand to available capacity:** High. SOV riders shifted to transit will utilize available walk-on capacity and increase available vehicle capacity on congested sailings.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Low. No impact, unless drivers shift to transit in such high numbers that vehicle demand for peak sailings declines significantly.
   d. **Improves operating cost per rider:** High. Shifts from vehicular trips to walk-on trips produce high operating efficiency gains.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Medium. Improved transit services dedicated to ferry customers will be beneficial to most users.
2. **Positive community impacts:** Medium. New transit services may reduce vehicle traffic and provide ancillary public transportation benefits to communities.
3. **Positive environmental impacts:** High. If well-designed and utilized, new transit service can substantially reduce emissions by reducing SOV travel.

## III. Implementation and Cost

1. **Ease of implementation:** Low. Extensive coordination and funding is required for each new transit service.
2. **Capital costs:** Medium. Capital costs to WSF will be low unless the transit agencies require WSF to fund new vehicles or leases under the contract agreement.
3. **On-going operating cost:** High. New transit services have substantial on-going operating costs.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but improving transit access to terminals and paying careful attention to pedestrian connections from the transit stop to the dock will help support significant mode shift.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally, subject to cost considerations.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** Colman Dock is a likely candidate for improved transit service due to the potential of building off of existing services and the high concentration of rider destinations.

## VI. Strategy Disposition

Carry this strategy forward. Improved transit services have a very high potential to expand walk-on ridership and decrease operating costs per passenger. However, this strategy requires a high amount of coordination and financial investment to accomplish successfully.

# Strategy Evaluation Worksheet

**Name:** Improved Transit Access at Terminals

**Description:** Provide hand-held radios, cell phones and/or some other means of communication between transit drivers and toll booth operators or WSF traffic staff to convert tollbooth lane or vehicle access lane to transit access lane when necessary. Provide bus access and loading/offloading area at terminals or within vehicle staging areas.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Medium. Improving the convenience of transit connections greatly improves the acceptance of transit as a travel option.
   b. **Encourages time shift:** Medium. New transit riders can reliably use different sailings convenient to their transit connections, but new capacity for remaining drivers is only likely to open up on sailings that are less-convenient..
   c. **Attracts new demand to available capacity:** Medium. SOV riders shifted to transit will utilize available walk-on capacity and increase available vehicle capacity on sailings.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. At most terminals, dedicating space and time to bring transit close to vessels will impose a time penalty on loading/unloading.
   b. **Reduces ticketing time:** Low. No impact, assuming bus riders do not need to purchase tickets at their boarding terminal.
   c. **Reduces queue lengths:** Low. No impact, unless drivers shift to transit in such high numbers that vehicle demand for peak sailings declines significantly.
   d. **Improves operating cost per rider:** High. Shifts from vehicular trips to walk-on trips produce high operating efficiency gains.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Medium. Improved transit connections will be well-received by transit riders but may not be welcomed by SOV riders who experience delayed loading/unloading.
2. **Positive community impacts:** Low. Improved transit connections may reduce vehicle traffic.
3. **Positive environmental impacts:** Medium. Some benefit will result from mode shifts to transit.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. The cost and operational impact is limited to improved communications services and staging. However, careful planning and coordination is necessary to efficiently operate this strategy, especially at space-constrained terminals.
2. **Capital costs:** Low. Communications devices are relatively inexpensive.
3. **On-going operating cost:** Low. WSF staff will require new training and procedures, but little or no additional staffing is necessary.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but improved transit connections and frequency would greatly bolster this strategy's effectiveness by providing even greater incentives and opportunities to use transit.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Medium.

2. **Terminal by Terminal Applicability:** Application is only possible at terminals that have transit service nearby. Of those, some have efficient transit operations already. At others, difficulty exists due to landside space constraints for maneuvering buses.

    a. **Mukilteo:** Low. Not feasible. Narrow dock prevents on-dock transit operations. Existing transit stop is already as close as possible without a new dock.
    b. **Clinton:** High. Feasible.
    c. **Edmonds:** Medium. Somewhat feasible. Narrow dock prevents on-dock transit operations, but transit could be staged close to terminal building with a parking lot re-configuration.
    d. **Kingston:** High. Feasible.
    e. **Bainbridge:** N/A (transit is at terminal)
    f. **Bremerton:** N/A (transit is at terminal)
    g. **Colman Dock:** N/A (transit is at terminal)
    h. **Southworth:** Medium. Somewhat feasible. Narrow dock can accommodate on-dock transit operations with maneuvering.
    i. **Vashon:** High. Feasible. Transit is already at terminal, but a dedicated lane operation can be added.
    j. **Fauntleroy:** Medium. Somewhat feasible. Narrow dock can accommodate on-dock transit operations with maneuvering.
    k. **Pt. Townsend:** High. Feasible
    l. **Keystone:** High. Feasible
    m. **Anacortes:** N/A (transit is at terminal)

n. **San Juans:** N/A (transit is at terminal)
o. **Pt Defiance:** High. Feasible. Transit is already at terminal, but a dedicated lane operation can be added.
p. **Tahlequah:** Low. Not feasible. Narrow dock prevents on-dock transit operations. Existing transit stop is already as close as possible without a new dock.

3. **What would be a good test route?** Clinton and Kingston terminals are the most likely candidates.

## VI. Strategy Disposition

Carry this strategy forward. Improved transit access will benefit existing riders and attract new riders. The marginal gain in ridership may not warrant this strategy where its provision may be difficult.

# Strategy Evaluation Worksheet

**Name:** Construct sheltered transit facilities within terminals

**Description:** Include covered transit loading zones in all terminal expansion plans.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: High. Integrating transit service seamlessly into terminals greatly increases the attractiveness and convenience of transit as a modal option.
   b. **Encourages time shift:** High. New transit riders can reliably use different sailings convenient to their transit connections, but new capacity for remaining drivers is only likely to open up on sailings that are less-convenient.
   c. **Attracts new demand to available capacity:** High. SOV riders shifted to transit will utilize available walk-on capacity and increase available vehicle capacity on congested sailings.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Low. No impact, unless drivers shift to transit in such high numbers that vehicle demand for peak sailings declines significantly.
   d. **Improves operating cost per rider:** High. Shifts from vehicular trips to walk-on trips produce high operating efficiency gains.

## II. Evaluation Against Secondary Screening Criteria:

1. **Positive customer impacts:** High. Superior intermodal connections give equal priority to customers traveling by any mode.
2. **Positive community impacts:** Medium. Transit integrated into new terminals opens existing transit stops to new development; helps remove many pedestrian-vehicle conflicts.
3. **Positive environmental impacts:** Medium. Increased transit utilization can substantially reduce emissions by reducing SOV travel. This is offset by any additional waterfront construction impacts.

## III. Implementation and Cost

1. **Ease of implementation:** Low. Extensive coordination, engineering and funding is required to integrate transit into new terminals.

2. **Capital costs:** High. Building a new terminal with an intermodal transit component can be significantly more expensive than a simple terminal design.
3. **On-going operating cost:** Medium. The transit elements of a new terminal would require on-going maintenance and operations.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but improved transit connections and frequency would greatly bolster this strategy's effectiveness by providing even greater incentives and opportunities to use transit.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally, subject to cost considerations.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:** N/A (transit services are part of the new terminal)
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** Colman Dock is a likely candidate for a terminal redesign with an intermodal transit component.

## VI. Strategy Disposition

Carry this strategy forward. Intermodal transit connections should be an integral part of any terminal reconstruction. Direct transit access is a key component to encouraging new ridership and therefore fewer SOV ferry riders.

# Strategy Evaluation Worksheet

**Name:** Improved Transit/Ferry Schedule Coordination

**Description:** Provide hand-held radios, cell phones and/or some other means of communication between ferry pilots and transit drivers to confirm contingency plans in case of late arrival. Interview transit users and providers to ensure transit arrival and sailing times leave adequate time for passenger transfers.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Medium. Reliable connections are central to successful intermodal transit. Better schedule coordination and a system to ensure buses or vessels are not missed greatly increases reliability and encourages new transit users.
   b. **Encourages time shift:** Low. Increased reliability will attract some riders to sailings with improved coordination between bus and vessel arrivals.
   c. **Attracts new demand to available capacity:** Medium. Shifts from SOV trips to transit would open up capacity on some sailings.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. Slight vessel delays may result from waiting for buses.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Low. Significant shifts from drive to walk-on access would help shorten vehicle queues.
   d. **Improves operating cost per rider:** Medium. If transit ridership grows, shifts from SOV to walk-on trips improve operating cost per rider.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. This strategy will produce a high level of satisfaction from transit riders and attract new riders.
2. **Positive community impact:** Medium. Adjacent streets would see less queuing with a shift towards more walk-on passengers..
3. **Positive environmental impact:** Medium. Improvements to air quality would result from SOV riders that switch to transit.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Only notable hurdle for accommodating late arrivals is establishing effective coordination and communication protocols. However, transit schedule adjustments to improve coordination may require extensive system adjustments.

2. **Capital costs:** Low. Communications devices are very inexpensive relative to infrastructure items.
3. **On-going operating cost:** Low. Communications charges are minimal. No new labor is required.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** High transit ridership terminals such as Colman Dock, Bainbridge or Bremerton are the best candidates for initial implementation.

## VI. Strategy Disposition

Carry this strategy forward. This is an extremely cost-effective solution that can greatly improve the reliability of intermodal connections, enabling transit riders and providers to plan trips with less fear of missing a vessel sailing. This reliability will attract new transit riders. Careful coordination with broader transit system scheduling needs is necessary.

# Strategy Evaluation Worksheet

**Name:** Construct new park and rides with transit connections to terminals

**Description:** Partner with local transit agencies, sharing construction costs of park and rides in exchange for direct transit service to ferry terminals.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Medium. Park and ride facilities enable SOV riders to switch to a bus to bypass terminal queues. This advantage is off-set by the inconvenience of adding new modal connections and any associated delays or inconveniences at both ends of the ferry trip.
   b. **Encourages time shift:** Low. Riders can reliably take preferred sailings without queue delays, which increases walk-on demand for peak sailings, but doesn't necessarily shift demand to off-peak sailings.
   c. **Attracts new demand to available capacity:** Medium. Shifts from SOV trips to transit would open up capacity on some sailings.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Medium. Queue length will lessen if utilization of park & rides is high enough.
   d. **Improves operating cost per rider:** Medium. If park & ride use grows, shifts from SOV to transit improve operating cost per rider.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Low. While this strategy provides a service to increase reliability for riders, it requires riders to shift modes in order to receive the benefit.
2. **Positive community impacts:** Low. The benefit of reduced queues is off-set by the impact of a new parking facility.
3. **Positive environmental impacts:** Low. Little impact on air quality. While vehicle may be eliminated at ferry destinations with more walk-on riders, new driving trips may be created at origins by new customers using the park-and-ride. Additionally, the construction of and run-off from new parking facilities could impact adjacent environmental resources.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. While dock limitations are avoided, park & ride locations must be found and developed and transit services must be coordinated.
2. **Capital costs:** Medium. Remote parking facilities can be developed at lower cost than those in valuable dock-side locations.
3. **On-going operating cost:** Low. Parking facility maintenance costs can be minimal.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. Some terminals are already well served by park-and-rides and/or not appropriate for this type of transit connection.

2. **Terminal by Terminal Applicability:** Terminals with high auto demand coupled with limited terminal parking and lower density development patterns are most appropriate for park-and-ride development.

    a. **Mukilteo:** High. Three park-and-rides are in the vicinity, none of which appear to serve the ferry terminal.
    b. **Clinton:** Low.
    c. **Edmonds:** Low. Three park-and-rides serve the terminal.
    d. **Kingston:** Low. Two park-and-rides serve the terminal.
    e. **Bainbridge:** Medium. Could use another park-and-ride north of terminal off of SR 205.
    f. **Bremerton:** Low. Four park-and-rides serve the terminal.
    g. **Colman Dock:** Low. The dense, mixed-use setting is not conducive to park-and-ride development.
    h. **Southworth:** Medium. Could use another park-and-ride west of the terminal.
    i. **Vashon:** Low. Three park-and-rides serve the terminal.
    j. **Fauntleroy:** High. Two park-and-rides are in the vicinity, neither of which appear to serve the ferry terminal.
    k. **Pt. Townsend:** Medium. An additional park-and-ride could be warranted here, especially to accommodate peak season demand.
    l. **Keystone:** Medium. Rural location combined with very little area parking could support a park-and-ride.
    m. **Anacortes:** Medium. Only one park-and-ride serves the terminal with low frequencies.

n. **San Juans:** Low. Rural island setting is probably not supportive of new park-and-rides.
o. **Pt Defiance:** Medium. No park-and-rides currently serve the terminal.
p. **Tahlequah:** Low. Three park-and-rides serve the terminal.

3. **What would be a good test route?** Mukilteo or Fauntleroy which have high auto demand today with limited capacity. Both have existing park-and-rides through which to route connecting transit service.

## VI. Strategy Disposition

Carry this strategy forward but only for certain terminals. For this strategy to shift trips from SOV, the terminal must currently be difficult to drive to and park at; have auto demand that far outstrips capacity; and/or be located in a rural or suburban environment without expansive local transit service. Otherwise motorists have little reason to get out of their vehicle and add another mode to their trip.

# Strategy Evaluation Worksheet

**Name:** Integrated parking reservation and pricing system

**Description:** Allow passengers to reserve parking online or by phone and to pay for parking online, by phone, or with same fare media used to pay for ferries.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Low. Where parking capacity is limited, this strategy will ensure some riders of the ability to park and ride. However, other users will be displaced and take their vehicle on the ferry.
    b. **Encourages time shift:** Medium. Where parking access is not impacted by queues, motorists can reliably board preferred sailings.
    c. **Attracts new demand to available capacity:** Low. No impact. Demand is simply displaced.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No impact.
    b. **Reduces ticketing time:** Low. No impact.
    c. **Reduces queue lengths:** Low. No impact.
    d. **Improves operating cost per rider:** Low. No impact, or may even increase operating cost per rider with the system's ongoing operating costs.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** Low. While this strategy provides a premium service that greatly improves reliability for some, motorists that benefit from the current first-come, first-served system may be opposed.
2. **Positive community impacts:** Low. No impact.
3. **Positive environmental impacts:** Low. No impact.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Strategy requires a reservation system and new enforcement, access control, and/or payment systems.
2. **Capital costs:** Medium.
3. **On-going operating cost:** Medium. Reservations and parking control equipment require new on-going operating costs.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** Applies to all terminals equally with the exception of those that do not have parking.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:** N/A
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:** N/A
    k. **Pt. Townsend**
    l. **Keystone:** N/A
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** All. It could be implemented at any terminal (except for Colman Dock, Keystone or Fauntleroy).

## VI. Strategy Disposition

Carry this strategy forward as a mechanism to provide additional customer services and to collect additional revenues. However, it is not very effective at shifting SOV trips to other modes, shifting SOV trips to off-peak sailings, or attracting new demand to existing capacity.

# Strategy Evaluation Worksheet

**Name:** Metered exit queuing

**Description:** Route offloaded vehicles through terminal holding areas and release them at a set rate.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. No impact.
   b. **Encourages time shift:** Low. No impact.
   c. **Attracts new demand to available capacity:** Low. No impact.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. May increase unloading time.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Low. No impact.
   d. **Improves operating cost per rider:** Low. No impact.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Low. Benefits to local traffic operations and pedestrian/bicycle safety would be off-set by inconvenience to SOV customers.
2. **Positive community impact:** High. Controlling the pace of exiting traffic can alleviate intersection congestion problems in terminal communities while encouraging safer pedestrian crossings.
3. **Positive environmental impact:** Low. No impact.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. New signalization or other intersection coordination and timing strategies or devices will be necessary. Additional holding area may need to be obtained.
2. **Capital costs:** Medium. New signals and associated wiring and inter-connects may need to be installed. Additional terminal holding capacity may be needed.
3. **On-going operating cost:** Medium. On-going coordination systems and labor may be necessary.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low.

2. **Terminal by Terminal Applicability:** Benefits accrue mostly to terminals located close to problematic intersections or activity centers.

    a. **Mukilteo:** Medium
    b. **Clinton:** Low
    c. **Edmonds:** High
    d. **Kingston:** High
    e. **Bainbridge:** High
    f. **Bremerton:** High
    g. **Colman Dock:** High
    h. **Southworth:** Low
    i. **Vashon:** Low
    j. **Fauntleroy:** Medium
    k. **Pt. Townsend:** Medium
    l. **Keystone:** Low
    m. **Anacortes:** Low
    n. **San Juans:** Low
    o. **Pt Defiance:** Low
    p. **Tahlequah:** Low

3. **What would be a good test route?** Colman Dock.

## VI. Strategy Disposition

Carry this strategy forward limitedly. While significant traffic benefits are possible, there are few places where the benefit is substantial enough to justify the cost.

# Strategy Evaluation Worksheet

**Name:** Off peak pricing

**Description:** WSF offers vehicle fare discounts on off-peak sailings.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. May encourage more people to drive.
   b. **Encourages time shift:** High. Likely to encourage more off-peak trips.
   c. **Attracts new demand to available capacity:** High. Off-peak sailings will see more trips.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. No impact.
   c. **Reduces queue lengths:** Medium. Shifting auto demand away from congested peak period sailings will help shorten queues during those times.
   d. **Improves operating cost per rider:** Medium. Additional trips on off-peak sailings will improve their cost per rider.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impact:** Medium. Customers will appreciate the opportunity to save when traveling off-peak. However, many peak-hour riders will consider the off-peak discounts to be a surcharge.
2. **Positive community impact:** Low. No impact.
3. **Positive environmental impact:** Low. While queues and idling will be reduced during peak periods, additional off-peak vehicle trips will produce more air pollution and offset any gains.

## III. Implementation and Cost

1. **Ease of implementation:** High. Only fare structure and ticketing system changes are necessary.
2. **Capital costs:** Low. Minor system change costs.
3. **On-going operating cost:** Low. No impact.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** All. It would be a system-wide change.

## VI. Strategy Disposition

Carry this strategy forward. While no mode shift is likely to be encouraged, underutilized vessel capacity on off-peak sailings will be better utilized, improving the average operating cost per rider.

# Strategy Evaluation Worksheet

**Name:** On-board ticketing

**Description:** Vehicle tollbooths could be removed and staging areas controlled by traffic management staff only. Staff could collect vehicle fares once vehicles are on-board.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

   a. **Encourages mode shift**: Low. No impact.
   b. **Encourages time shift:** Low. No impact.
   c. **Attracts new demand to available capacity:** Low. No impact.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** High. Ticketing is handled on-board during overwater transit.
   c. **Reduces queue lengths:** High. Since most queues are the result of delays at ticketing, queues would be reduced significantly.
   d. **Improves operating cost per rider:** Low. Landside ticketing labor costs are removed at all terminals on a route and replaced by one group of on-board ticketing staff per vessel, reducing operating cost per rider slightly.

## II. Evaluation of Secondary Screening Criteria:

1. **Positive customer impacts:** High. Delay before boarding or entering holding areas is removed. Motorists are further benefited by having ticketing staff come directly to customer vehicles.
2. **Positive community impacts:** High. Many queues are shortened or eliminated.
3. **Positive environmental impacts:** Medium. Some idling emissions are eliminated.

## III. Implementation and Cost

1. **Ease of implementation:** Low. New ticketing and enforcement procedures must be established, trained and advertised since fare evasion will become a significant issue.
2. **Capital costs:** Low. Requires only hand-held electronic payment devices and fare gates.

3. **On-going operating cost:** Low. Strategy has the potential to lower labor costs.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** Applies to all terminals equally.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance**
    p. **Tahlequah**

3. **What would be a good test route?** It would be a system-wide change, but could be piloted on any route.

## VI. Strategy Disposition

Carry this strategy forward. While no mode shift is likely to be encouraged, overall system efficiency, cost savings and customer convenience would be increased.

# Strategy Evaluation Worksheet

**Name:** Double-decked holding areas

**Description:** At terminals where limited capacity or constrained layout of holding areas impacts operations (e.g. vehicle circulation patterns, queuing, loading/unloading times), holding areas could be "double-decked" to provide additional capacity and improve operations for drive-ons.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

    a. **Encourages mode shift**: Low. Does nothing to encourage passengers to shift to non-auto modes to access the terminal.
    b. **Encourages time shift:** Low. Does nothing to encourage passengers to shift to off-peak travel times.
    c. **Attracts new demand to available capacity:** Low. Does nothing to incentivize passengers to travel at times or on routes with surplus capacity.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. While double-decking holding areas could make loading/unloading marginally faster (due to less confusing circulation patterns, reduced need to "lane shift", etc due to increased holding capacity), the primary constraint on loading/unloading time is the "bottleneck" of the boat itself. Time savings from avoiding "lane shift" could be offset by time required to travel down holding area ramps to the at-grade access ramp to the boat.
    b. **Reduces ticketing time:** Low.
    c. **Reduces queue lengths:** Medium. Would reduce queues that occur outside the fare collection/verification "access point", but queues in the holding areas would not be reduced.
    d. **Improves operating cost per rider:** Low.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** Medium. Drive-ons would potentially benefit from improved circulation patterns and marginally improved loading/unloading times. Could also help reduce vehicle conflicts with transit vehicles and walk-on/bike-on passengers.
2. **Positive community impacts:** Low. At peak times, additional holding capacity could help reduce queues on surrounding streets. At the same time, multi-story holding areas could block community views of the waterfront compared to existing surface configurations.

3. **Positive environmental impacts:** Low. By getting drive-ons out of circulation queues and into the holding area more quickly, could potentially reduce vehicle idling and related emissions.

## III. Implementation and Cost

1. **Ease of implementation:** Low. Construction would likely require disruption to current operations and have impacts on host communities, and require new permits from local jurisdictions.
2. **Capital costs:** High (depending on terminal configuration). New parking structures are expensive to build.
3. **On-going operating cost:** Low. Will likely have higher operating and maintenance costs compared to current surface configuration of holding areas.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. Limited holding space is not a problem at all terminals. This strategy is only cost effective at terminals with high demand, extremely constrained holding areas, and significant on-street queuing impacts to host communities.

2. **Terminal by Terminal Applicability:**

    a. **Mukilteo:** Medium
    b. **Clinton:** Low
    c. **Edmonds:** Medium. Although no dock holding exists today, adjacent surface parking lots could potentially be acquired for a new double-decked holding structure.
    d. **Kingston:** Medium
    e. **Bainbridge:** High
    f. **Bremerton:** Low
    g. **Colman Dock:** High
    h. **Southworth:** Low
    i. **Vashon:** Low
    j. **Fauntleroy:** Medium
    k. **Pt. Townsend:** Low
    l. **Keystone:** Low
    m. **Anacortes:** Medium
    n. **San Juans:** Low
    o. **Pt Defiance:** Low

p. **Tahlequah:** Low

3. **What would be a good test route?** Colman Dock or Bainbridge.

## VI. Strategy Disposition

Due to the high capital costs of this strategy, potential negative environmental effects, and relative difficulty to implement it, carry it forward in a limited fashion at terminals with high demand, extremely constrained holding areas, and significant on-street queuing impacts to host communities, and where all other feasible mode shift and time shift strategies have already been implemented.

# Strategy Evaluation Worksheet

**Name:** Minimize employee parking at terminals

**Description:** At terminals where limited capacity or constrained layout of holding areas impacts operations, employee parking could be located off-site with access to the terminal by shuttle bus or multi-passenger fleet vehicle.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

    a. **Encourages mode shift:** Low. Does nothing to encourage passengers to shift to non-auto modes to access the terminal.
    b. **Encourages time shift:** Low. Does nothing to encourage passengers to shift to off-peak travel times.
    c. **Attracts new demand to available capacity:** Low. Does nothing to incentivize passengers to travel at times or on routes with surplus capacity.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. While removing employing parking from holding areas could make loading/unloading marginally faster (due to less confusing circulation patterns, reduced need to "lane shift", etc due to increased holding capacity), the primary constraint on loading/unloading time is the "bottleneck" of the boat itself.
    b. **Reduces ticketing time:** Low. Does not apply.
    c. **Reduces queue lengths:** Medium. By providing more capacity in the holding area for drive-ons, could reduce queues that occur outside the fare collection/verification "access point", but queues in the holding areas would not be reduced.
    d. **Improves operating cost per rider:** Low.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** Medium. Drive-ons would potentially benefit from improved circulation patterns and marginally improved loading/unloading times. Could also help reduce vehicle conflicts with transit vehicles and walk-on/bike-on passengers.
2. **Positive community impacts:** Medium. At peak times, additional holding capacity could help reduce queues on surrounding streets. Suitable off-site employee parking areas would need to be identified to ensure that employees do not cause spillover parking impacts in host communities.

3. **Positive environmental impacts:** Medium. By getting drive-ons out of circulation queues and into the holding area more quickly, could potentially reduce vehicle idling and related emissions.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Current labor agreements explicitly provide for on-dock employee parking only for Terminal Supervisors. However, because employee parking at terminals has been allowed for many years, it would is deemed a "past practice" and to remove it would potentially require renegotiated labor contracts as well as plans for alternate off-dock employee parking locations.
2. **Capital costs:** Low, depending on cost to purchase and/or improve off-site parking. If off-site parking is located farther than walking distance, a shuttle bus, van, or other multi-passenger fleet vehicle may need to be purchased to transport employees from off-site parking to terminal.
3. **On-going operating cost:** Low, including labor costs for shuttle/van operator and any maintenance costs for vehicle and off-site parking facility. If parking is leased instead of purchased as assumed above, lease costs would add to annual operating costs.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low, as not all terminals provide on-dock employee parking. Only worth pursuing at terminals with high demand, extremely constrained holding areas, and significant on-street queuing impacts to host communities.

2. **Terminal by Terminal Applicability:**

    a. **Mukilteo:** Low. Employee parking is in a location unusable for holding.
    b. **Clinton:** Low. Employees do not park in the holding area.
    c. **Edmonds:** Low
    d. **Kingston:** Medium. Employee spaces could be used for holding, especially during peak season.
    e. **Bainbridge:** High. Employee parking space could be used for staging bikes and carpools, and/or vehicle transitions.
    f. **Bremerton:** Low
    g. **Colman Dock:** High

h. **Southworth:** Low
i. **Vashon:** Low
j. **Fauntleroy:** Low. There are only a couple of employee parking spaces in the holding area.
k. **Pt. Townsend:** Medium
l. **Keystone:** Low
m. **Anacortes:** Medium (especially applicable during peak season)
n. **San Juans:** Low
o. **Pt Defiance:** Medium.
p. **Tahlequah:** Medium.

3. **What would be a good test route?** Bainbridge or Colman Dock.

## VI. Strategy Disposition

Carry the strategy forward by pursuing renegotiation of on-dock employee parking provision in labor agreements. Could initially limit to a 'pilot' at terminals with high demand, extremely constrained holding areas, and significant on-street queuing impacts to host communities. Quantifiable benefits of this pilot can be used to justify expansion to other appropriate terminals.

# Strategy Evaluation Worksheet

**Name:** Relocate non-essential functions off of on-dock holding area.

**Description:** Re-locate non-essential functions (such as waste disposal, vending, and materials storage) off of the dock area to alternate locations in order to increase capacity of vehicle holding areas.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

    a. **Encourages mode shift:** Low. Does nothing to encourage passengers to shift to non-auto modes to access the terminal.
    b. **Encourages time shift:** Low. Does nothing to encourage passengers to shift to off-peak travel times.
    c. **Attracts new demand to available capacity:** Low. Does nothing to incentivize passengers to travel at times or on routes with surplus capacity.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. While removing non-essential functions from on-dock holding areas could make loading/unloading marginally faster (due to less confusing circulation patterns, reduced need to "lane shift", etc. with increased holding capacity), the primary constraint on loading/unloading time is the "bottleneck" of the boat itself.
    b. **Reduces ticketing time:** Low. Does not apply.
    c. **Reduces queue lengths:** Medium. By providing more capacity in the holding area for drive-ons, could reduce queues that occur outside the fare collection/verification "access point", but queues in the holding areas would not be reduced.
    d. **Improves operating cost per rider:** Low.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** Medium. Drive-ons would potentially benefit from improved circulation patterns and marginally improved loading/unloading times. Could also help reduce vehicle conflicts with transit vehicles and walk-on/bike-on passengers.
2. **Positive community impacts:** Medium. At peak times, additional holding capacity could help reduce queues on surrounding streets.
3. **Positive environmental impacts:** Medium. By getting drive-ons out of circulation queues and into the holding area more quickly, could potentially reduce vehicle idling and related emissions.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. However, this will depend on the availability of space in or near the terminal to relocate non-essential functions.
2. **Capital costs:** Low.
3. **On-going operating cost:** Low.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low, as not all terminals have non-essential functions located on-dock in space that could be used for vehicle holding. This strategy is only worth pursuing at terminals with high demand, extremely constrained holding areas, and significant on-street queuing impacts to host communities.

2. **Terminal by Terminal Applicability:** Although a medium or high score indicates a terminal where non-holding functions are currently using potential holding space, additional research is needed to establish which functions must be located on-dock due to security and other requirements and which could be relocated.

    a. **Mukilteo:** Low
    b. **Clinton:** Low
    c. **Edmonds:** Medium
    d. **Kingston:** Medium
    e. **Bainbridge:** Low
    f. **Bremerton:** Low
    g. **Colman Dock:** Low
    h. **Southworth:** Low
    i. **Vashon:** Low
    j. **Fauntleroy:** Low
    k. **Pt. Townsend:** Medium
    l. **Keystone:** Medium
    m. **Anacortes:** Medium
    n. **San Juans:** Low
    o. **Pt Defiance:** Low
    p. **Tahlequah:** Low

3. **What would be a good test route?** Kingston, since there appears to be a large amount of adjacent space that could be utilized for relocated functions.

## VI. Strategy Disposition

Carry the strategy forward by pursuing system-wide review of what terminals have non-essential functions located on-dock and which of those functions could be feasibly located elsewhere. However, because re-located non-essential functions are unlikely to open up significant amounts of holding space, the application of this strategy should be. limited to a 'pilot' at terminals with high demand, extremely constrained holding areas, and significant on-street queuing impacts to host communities. Quantifiable benefits of this pilot can be used to justify expansion to other appropriate terminals.

# Strategy Evaluation Worksheet

**Name:** Participate in existing Transportation Management Associations (TMAs) and/or form new TMA.

**Description:** TMAs are quasi-public organizations that develop and administer programs that reduce vehicle trips and improve access by non-auto modes. Where TMAs exist, WSF could increase the agency's coordination and collaboration to improve WSF customer access issues (e.g. send staff to existing TMA meetings, promote existing TMA activities to WSF passenger, consider cost-sharing with existing TMAs on programs that benefit WSF passengers and achieve WSF operational goals).

Alternately, WSF could provide initial funding (or secure outside funding through grants) to establish a TMA that would coordinate with existing TMAs in host communities but specifically focus on addressing WSF access issues. This WSF-specific TMA would focus especially on strategies that promote mode shift and time shift for WSF, such as promoting ride-sharing, providing financial incentives to take transit to ferry terminals, etc.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

    a. **Encourages mode shift:** High, depending on programs/incentives ultimately implemented.
    b. **Encourages time shift:** High, depending on programs/incentives ultimately implemented.
    c. **Attracts new demand to available capacity:** High, depending on programs/incentives ultimately implemented.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. While promoting mode shift and time shift could make loading/unloading marginally faster especially at peak travel times, the primary constraint on loading/unloading time is the "bottleneck" of the boat itself.
    b. **Reduces ticketing time:** Low. Does not apply.
    c. **Reduces queue lengths:** Medium, depending on the effectiveness of the mode shift and time shift programs/incentives ultimately implemented.
    d. **Improves operating cost per rider:** Medium, depending on the effectiveness of the mode shift and time shift programs/incentives ultimately implemented (it is often cheaper to pay people not to drive than it is to accommodate their vehicle trip).

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** Medium. Regardless of the effectiveness of the mode shift and time shift programs/incentives ultimately implemented, TMAs play a valuable role in making WSF customers aware of the full range of their travel choices for accessing terminals.
2. **Positive community impacts:** Medium, depending on the effectiveness of the mode shift and time shift programs/incentives ultimately implemented, this has the potential to significantly reduce terminal queues and associated negative traffic impacts on adjacent streets.
3. **Positive environmental impacts:** Medium, depending on the effectiveness of the mode shift programs/incentives ultimately implemented.

## III. Implementation and Cost

1. **Ease of implementation:** High if WSF simply increases collaboration and coordination with existing TMAs. Low if WSF forms a new system-wide TMA. This also depends on the mode shift and time shift programs/incentives ultimately implemented.
2. **Capital costs:** Low.
3. **On-going operating cost:** Medium, depending on the mode shift programs/incentives ultimately implemented.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High if WSF forms a new system-wide TMA, which would probably be a good approach given only one terminal area (Seattle) has an existing TMA.

2. **Terminal by Terminal Applicability:**

    a. **Mukilteo:** Low
    b. **Clinton:** Low
    c. **Edmonds:** Low
    d. **Kingston:** Low
    e. **Bainbridge:** Low
    f. **Bremerton:** Low
    g. **Colman Dock:** High
    h. **Southworth:** Low
    i. **Vashon:** Low

j. **Fauntleroy:** Low
k. **Pt. Townsend:** Low
l. **Keystone:** Low
m. **Anacortes:** Low
n. **San Juans:** Low
o. **Pt Defiance:** Low
p. **Tahlequah:** Low

3. **What would be a good test route?** Colman Dock, since Seattle already has an active TMAs with a wide variety of programs.

## VI. Strategy Disposition

Carry the strategy forward by increasing WSF coordination and collaboration with the Seattle Urban Mobility Group to improve WSF customer access issues (e.g. send staff to existing TMA meetings, promote existing TMA activities to WSF passenger, consider cost-sharing with existing TMAs on programs that benefit WSF passengers and achieve WSF operational goals).

Depending on the success of this partnership in achieving WSF's mode shift and time shift goals, pursue a feasibility study of formation of a WSF-specific TMA that would coordinate with existing TMAs in host communities but specifically focus on addressing WSF access issues.

# Strategy Evaluation Worksheet

**Name:** Promote and market non-single-occupant-vehicle (SOV) modes of ferry access.

**Description:** Market and promote carpooling, vanpooling, transit, bicycling, and walking to access ferry terminals in order to reduce auto demand on WSF's system. Studies have shown that lack of information on transit, bicycling, and walking options and resources is a significant barrier to getting people to make fewer trips by auto. For example, the Travel Choice Program in the Bay Area provided personalized information on transit, biking, and walking to 4,500 households, resulting in a 14% reduction in drive alone trips by program participants. WSF could actively promote and market carpooling, transit, bicycling, and walking to access to ferry terminals in order to reduce drive-alone rates of WSF passengers. Examples include:

- **Advertise bicycle and walk-on amenities.** Initiate advertising campaign to publicize pedestrian and bicycle promotions, connections, fare types, and passenger benefits on the ferry system. Develop a long-term marketing plan. Develop and commit to a long-term multi-media, system-wide messaging plan that encourages preferred passenger behaviors and discourages undesired behaviors.
- **Promote car-free recreation/tourism information.** Develop materials for distribution to departments of tourism, SEA-TAC airport and other tourist destinations and organizations that advertise available connecting transit routes, cab services, parking and access to bicycles and other alternate modes from ferry terminals.
- **Provide additional transit, pedestrian, car-sharing and bicycle information.** Employ a "mobility concierge" at all terminals to assist walk-on and bike-on passengers with reaching their destinations.

## I. Evaluation Against Primary Screening Criteria

### 1. Manages Demand

a. **Encourages mode shift:** High, depending on robustness of the promotional/marketing campaign ultimately implemented.
b. **Encourages time shift:** Low.
c. **Attracts new demand to available capacity:** High, depending on robustness of the promotional/marketing campaign ultimately implemented and its effectiveness in promoting mode shift.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Low. Promoting non-drive-alone modes could result in a significant enough mode shift to make loading/unloading marginally faster (especially at peak travel times).

However, the primary constraint on loading/unloading time is the "bottleneck" of the boat itself.

b. **Reduces ticketing time:** Low. Does not impact ticketing times.
c. **Reduces queue lengths:** Medium, depending on the robustness of marketing campaigns and the degree of the mode shift achieved.
d. **Improves operating cost per rider:** Medium, depending on the robustness of marketing campaigns and the degree of the mode shift achieved.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** Medium. Regardless of the effectiveness of the promotional/marketing campaign ultimately implemented, making more information available about non-drive-alone modes helps WSF customers become more aware of the full range of their travel choices for accessing terminals.
2. **Positive community impacts:** Medium. Depending on the robustness of marketing campaigns and the degree of the mode shift achieved, queues and associated negative traffic impacts could be significantly reduced.
3. **Positive environmental impacts:** High. Positive air and water quality impacts could be high if marketing and promotions are successful in achieving significant mode and time shifts.

## III. Implementation and Cost

1. **Ease of implementation:** Medium., Additional funding and staffing would likely be needed.
2. **Capital costs:** Low.
3. **On-going operating cost:** Medium. This would depend on the robustness of the promotional/marketing campaign ultimately implemented.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Yes, the effectiveness of this strategy will require reasonably good transit, bicycle, and pedestrian service/infrastructure and wayfinding.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High.

2. **Terminal by Terminal Applicability:** Although this strategy lends itself best to system-wide application, it could also be targeted to users of terminals where auto demand greatly exceeds available capacity.

a. **Mukilteo:** High
b. **Clinton:** Low.
c. **Edmonds:** High
d. **Kingston:** High
e. **Bainbridge:** High
f. **Bremerton:** High
g. **Colman Dock:** High
h. **Southworth:** Medium
i. **Vashon:** Medium
j. **Fauntleroy:** High
k. **Pt. Townsend:** High
l. **Keystone:** Low
m. **Anacortes:** High
n. **San Juans:** High
o. **Pt Defiance:** Low
p. **Tahlequah:** Low

3. **What would be a good test route?** Seattle-Bainbridge.

## VI. Strategy Disposition

Carry the strategy forward, in partnership with TMAs and other stakeholders (e.g. for car-free tourism: convention and visitor's bureaus, state tourism/recreation departments). Initial steps would be to develop a long-term marketing plan to publicize non-drive-alone options. Consider a pilot program to employ a "mobility concierge" at terminals with good transit, bicycle, and pedestrian access to assist non-drive-alone passengers. Given the difficulty of targeting programs and promotions to users of particular routes, it is highly recommended to pursue this on a system-wide basis.

# Strategy Evaluation Worksheet

**Name:** Increase provision of priority ticketing, staging, and loading for carpools and vanpools and expand the carpool definition to include non-registered carpools.

**Description:** WSF currently provides priority access for carpools and vanpools at some highly-constrained terminals such as Colman Dock and Bainbridge Island. In order to incentivize more passengers to travel to/from terminals in carpools and vanpools, the agency could expand this priority access to all terminals current practices, especially where queuing problems are severe and holding capacity is constrained. Via dedicated ticketing booths and "diamond lanes", carpools and vanpools would receive priority ticketing, staging, and loading. At the same time, WSF could revise their definition of "carpools" to include non-registered carpools, since currently only registered carpools get priority loading and access.

## I. Evaluation Against Primary Screening Criteria

### 1. Manages Demand

a. **Encourages mode shift**: Medium. Expanding the carpool definition and making carpool and vanpool access to and from the terminal more convenient would help encourage drive-on passengers to shift to carpools and vanpools. Additionally, time savings for carpools/vanpools could cause passengers currently accessing terminals by transit, bike, and on foot to shift to carpools/vanpools.
b. **Encourages time shift:** Low. Does nothing to encourage passengers to shift to off-peak travel times.
c. **Attracts new demand to available capacity:** Medium. Shifting a portion of passengers who currently access vessels via SOV to HOV will attract new walk-on demand to available passenger capacity.

### 2. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Low. While prompting some mode shift to carpools/vanpools could make loading/unloading marginally faster, the primary constraint on loading/unloading time is the "bottleneck" of the boat itself.
b. **Reduces ticketing time:** Low. Does not apply.
c. **Reduces queue lengths:** Medium. Some mode shift to carpools/vanpools could reduce auto queues.
d. **Improves operating cost per rider:** Low, depending on the robustness of the mode shift achieved.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** Medium. Since priority loading for carpools already exists, marginal benefits would accrue to existing carpoolers & vanpoolers. However an expanded carpool definition would benefit a significant number of customers..
2. **Positive community impacts:** Low, depending on the robustness of the mode shift achieved.
3. **Positive environmental impacts:** Low. Depending on the robustness of the mode shift achieved, could potentially reduce vehicle trips and related emissions. These benefits would be offset if time savings for carpools/vanpools caused passengers currently accessing terminals by transit, bike, and on foot to shift to carpools/vanpools.

## III. Implementation and Cost

1. **Ease of implementation:** High. Simply requires dedicating one or more existing ticketing booths and queuing lanes to exclusive use for carpools/vanpools, and a shift to the carpool definition is a simple policy change.
2. **Capital costs:** Low.
3. **On-going operating cost:** Low.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but the likely negligible mode shift impacts and operational benefits of implementing this strategy alone could be significantly leveraged by increased financial incentives for carpools and vanpools.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High. An expanded carpool definition would be system-wide.

2. **Terminal by Terminal Applicability:** All terminals already provide some degree of priority loading for carpools and vanpools, but it could be bolstered, especially at terminals where auto demand greatly outstrips capacity and there is a large proportion of commuters.

    a. **Mukilteo:** High
    b. **Clinton:** Low
    c. **Edmonds:** High
    d. **Kingston:** Medium
    e. **Bainbridge:** High
    f. **Bremerton:** High
    g. **Colman Dock:** High
    h. **Southworth:** Low

i. **Vashon:** Low
j. **Fauntleroy:** High
k. **Pt. Townsend:** Low
l. **Keystone:** Low
m. **Anacortes:** Low
n. **San Juans:** Low
o. **Pt Defiance:** Low
p. **Tahlequah:** Low

3. **What would be a good test route?** Terminals with queuing problems such as Mukilteo or Edmonds.

## VI. Strategy Disposition

Carry this strategy forward for its operational and customer convenience benefits, which can be gained at little cost or effort to WSF.

# Strategy Evaluation Worksheet

**Name:** Provide hill-climb assistance for pedestrians and bicyclists.

**Description:** The geography surrounding many WSF terminals includes steep grades, which can limit the feasibility of biking and walking to access the terminals for many passengers who otherwise might be able to (especially passengers with mobility impairments and/or those that live within ¼ to ½ mile from the terminal). Offering hill-climb assistance to pedestrians and bicyclists via specialized "people mover" or "bike stairs" infrastructure or a circulator shuttle service to supplement existing fixed-route transit at terminals where hill climbs are especially steep could result in increased biking and walking to the terminals.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

    a. **Encourages mode shift**: Medium. Hills can be a significant obstacle influencing the decision to walk or bike.
    b. **Encourages time shift:** Low. No impact
    c. **Attracts new demand to available capacity:** Medium. By encouraging a shift to walk and bike on modes of access, excess passenger capacity will be better utilized.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. Does not apply.
    b. **Reduces ticketing time:** Low. Does not apply.
    c. **Reduces queue lengths:** Medium. With enough mode shift, auto queues could be shortened..
    d. **Improves operating cost per rider:** Low. Any mode shift would be offset by additional capital and operating/maintenance costs for hill climb assistance infrastructure or circulator service.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** High. Improves access for walking and biking passengers, especially those with mobility impairments.
2. **Positive community impacts:** Medium. In addition to shortening queues, hill climb assistance would also benefit the surrounding community.
3. **Positive environmental impacts:** Medium. Making bike-on and walk-on access more attractive could potentially reduce vehicle trips and related emissions.

## III. Implementation and Cost

1. **Ease of implementation:** Low. People movers or bike stairs infrastructure would require designing, permitting, and/or constructing in public right-of-way of host communities.
2. **Capital costs:** High. Any uphill hill climb assistance requires mechanical devices or vehicles.
3. **On-going operating cost:** Medium. Varies depending on particular hill climb assistance method implemented.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but the likely negligible mode shift impacts and operational benefits of implementing this strategy alone could be significantly leveraged by increased financial incentives for passengers who walk and bike and partnering with host communities to build complete bicycle and pedestrian networks.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. The strategy is only worth considering at terminals where surrounding geography includes steep grades that are so severe as to limit the feasibility of biking and walking for a significant number of passengers and it is not cost-effective to increase existing fixed-route transit service in hilly areas.

2. **Terminal by Terminal Applicability:**

    a. **Mukilteo:** Medium
    b. **Clinton:** Medium
    c. **Edmonds:** Low
    d. **Kingston:** Low
    e. **Bainbridge:** Low
    f. **Bremerton:** Low
    g. **Colman Dock:** High
    h. **Southworth:** Low
    i. **Vashon:** Medium
    j. **Fauntleroy:** Low
    k. **Pt. Townsend:** High
    l. **Keystone:** Low
    m. **Anacortes:** Low
    n. **San Juans:** Low
    o. **Pt Defiance:** Low
    p. **Tahlequah:** Low

3. **What would be a good test route?** Colman Dock connections into Seattle's central business district and Third Avenue transit corridor..

## VI. Strategy Disposition

This strategy should be carried forward, but on a very limited basis. Due to its relative implementation difficulty and associated cost, it should only be considered for terminals where the surrounding geography includes steep grades that are so severe as to limit the feasibility of biking and walking for a significant number of passengers, and where many nearby destinations and attractions exist within biking and walking distance of the terminal.

# Strategy Evaluation Worksheet

**Name:** Expanded fare card coordination and marketing

**Description:** WSF's Wave to Go electronic fare cards allow users to use their cared to pay their bus and ferry fares. The cards significantly reduce ticketing time for walk-ons compared to cash fare payment, increase customer convenience and reduce the agency's fare collection and verification costs. In order to expand usage of Wave to Go and leverage the benefits to both customers and the agency, WSF could increase marketing of Wave to Go electronic fare cards, and allow users to use their cards to pay for bike sharing and car sharing, and expand the application of the card to additional connecting transit services.

## I. Evaluation Against Primary Screening Criteria

### 3. Manages Demand

a. **Encourages mode shift**: Medium. Making it more convenient to pay for transit fares, bikes and carshare vehicles can help shift customers to walk on and bike on access.
b. **Encourages time shift:** Low. Does nothing to encourage passengers to shift to off-peak travel times.
c. **Attracts new demand to available capacity:** Low. It is unlikely that expanding the applicability of the fare card to new services, and encouraging expanded use of the cards, would alone incentivize passengers to travel at times or on routes with surplus capacity.

### 4. Increases Operational Efficiency

a. **Reduces loading/unloading time:** Low. Does not apply.
b. **Reduces ticketing time:** High. Fare cards are more quickly processed at the ticketing window, so increased use of the cards would speed up the ticketing time.
c. **Reduces queue lengths:** Low. This strategy would do little to reduce queues.
d. **Improves operating cost per rider:** Low. A reduction in total ticketing agents may reduce costs somewhat, but some live ticket sales would continue to be necessary for non-Wave to Go riders.

## II. Evaluation of Secondary Screening Criteria

4. **Positive customer impacts:** High. Improves customer convenience.
5. **Positive community impacts:** Low. No impact.
6. **Positive environmental impacts:** Low. No significant impact.

## III. Implementation and Cost

4. **Capital costs:** Medium. Some initial costs may be necessary to support technology integration with transit, carshare and bikeshare programs. New and/or additional automated card readers may need to be installed.
5. **Ease of implementation:** Medium. would first need to coordinate with existing and new bikesharing, carsharing, and transit providers in the region to ensure that Wave to Go technology could interface with these services.
6. **On-going operating cost:** Low. Labor costs are reduced and only replaced by any promotional/marketing costs.

## IV. Interaction With Other Strategies

3. **Does this strategy need other strategies to work?** Yes. Requires bikesharing and carsharing programs to exist and be located in reasonable proximity to the ferry terminal. Requires reasonably good transit service to be available.
4. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

4. **Potential for System-wide Application:** High.

5. **Terminal by Terminal Applicability:** N/A. Applies to all terminals equally.

    q. **Mukilteo:**
    r. **Clinton:**
    s. **Edmonds:**
    t. **Kingston:**
    u. **Bainbridge:**
    v. **Bremerton:**
    w. **Colman Dock:**
    x. **Southworth:**
    y. **Vashon:**
    z. **Fauntleroy:**
    aa. **Pt. Townsend:**
    bb. **Keystone:**
    cc. **Anacortes:**
    dd. **San Juans:**
    ee. **Pt Defiance:**
    ff. **Tahlequah:**

6. **What would be a good test route?** Any terminal where carsharing, bikesharing, and/or where a good variety of connecting transit services exists.

## VI. Strategy Disposition

Carry the strategy forward for its potential to shift mode of access and reduce ticketing time.

# Strategy Evaluation Worksheet

**Name:** Incentivize carsharing pods to locate at all appropriate terminals

**Description:** WSF could encourage less drive-on traffic by incentivizing carsharing operators like Flexcar to locate at all appropriate terminals. Allows passengers to travel to/from their arrival terminal by vehicle when needed, without needing their personal vehicle, thereby reducing the number of vehicles driven on board and transported by ferries. Incentives provided by WSF to expand carsharing could include offering new/additional parking spaces, promotional support, and direct financial subsidy.

## I. Evaluation Against Primary Screening Criteria:

1. **Manages Demand**

    a. **Encourages mode shift**: Medium. Supports passengers' ability to travel without driving on boats in a private vehicle, even when they need the flexibility of a car to travel to or from either the origin terminal or the destination terminal. Most effective for daily commuters on urban-to-urban routes who may need a car only infrequently.
    b. **Encourages time shift:** Medium. May enable riders to walk-on, bike-on, or use transit during off-peak hours with the knowledge that a fast, direct vehicle connection is available at the other terminal.
    c. **Attracts new demand to available capacity:** Medium. May support off-peak travel and walk-on ferry access.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No impact.
    b. **Reduces ticketing time:** Low. No impact.
    c. **Reduces queue lengths:** Medium. A significant shift of SOV riders to other modes could reduce queues.
    d. **Improves operating cost per rider:** Medium. Improves operating cost per rider if boats carry more walk-ons. Could be offset by operating subsidies to support carsharing system.

## II. Evaluation of Secondary Screening Criteria:

1. **Customer impacts:** Medium. Provides another land-side amenity for riders.
2. **Community impacts:** Medium. May slightly reduce queuing. The carsharing service will be available as a benefit for neighboring residents and may enable ferry passengers to more easily access local businesses.
3. **Environmental impacts:** Low. No net effect on emissions if private vehicles are still used to reach one terminal and carsharing vehicles are used at the other terminal. May have greater benefit if current drivers switch to transit or non-motorized modes at one end of the route as a result.

## III. Implementation and Cost

1. **Ease of implementation:** Medium. While providing dedicated parking spaces and promotional support is simple, coordination with or development of carsharing services will require development of operating agreements.
2. **Capital costs:** Low.
3. **On-going operating cost:** Low. However, WSF may have to provide a direct financial subsidy for operational support.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** Yes. Transit, bike/ped, and/or rental/taxi connections must be strong at the "origin" and "destination" terminal for this strategy to have beneficial impacts. Strategies to continue or expand existing fare surcharge for vehicles would encourage more passengers not to bring private vehicles on board ferries at their "origin" station and utilize carshares at their "destination" terminal.

2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low. Utilization is highest and operating subsidies lowest on urban-to-urban routes where a high number of WSF passengers are already members of the carsharing operators system and where pods will be utilized by community members when not in use by WSF passengers.

2. **Terminal by Terminal Applicability:**

    a. **Mukilteo:** Low
    b. **Clinton:** Low
    c. **Edmonds:** Medium
    d. **Kingston:** Low
    e. **Bainbridge:** High
    f. **Bremerton:** High
    g. **Colman Dock:** High
    h. **Southworth:** Low
    i. **Vashon:** Low
    j. **Fauntleroy:** Medium
    k. **Pt. Townsend:** Medium
    l. **Keystone:** Low
    m. **Anacortes:** Low
    n. **San Juans:** Low
    o. **Pt Defiance:** Low
    p. **Tahlequah:** Low

**What would be a good test route?** Colman Dock.

### VI. Strategy Disposition

Carry the strategy forward. Carsharing provides immense flexibility for travelers and may represent a noticeable cost savings for SOV commuters avoiding ferry fares.

# Strategy Evaluation Worksheet

**Name:** Real-time transit arrival, departure, and connections information

**Description:** Develop Geographic Positioning System to track the progress of ferry vessels and estimated time of arrival and departure; integrate this system with similar technology for arrivals and departures of transit vehicles connecting to terminals; display real-time information to passengers to allow them to coordinate connecting trips.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

   a. **Encourages mode shift**: Medium. By making transit access to and from the terminal more convenient (especially at terminals/times where transit service is infrequent), could help encourage passengers to shift to non-auto modes.
   b. **Encourages time shift:** Medium. By making access to and from the terminal more convenient (especially at terminals/times where transit service is infrequent), could help encourage passengers to travel at off-peak times.
   c. **Attracts new demand to available capacity:** Medium. By making access to and from the terminal more convenient (especially at terminals/times where transit service is infrequent), could help encourage passengers to travel at off-peak times or on routes with surplus capacity (which correspond to terminals/times when transit service is infrequent).

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. No impact.
   b. **Reduces ticketing time:** Low. Does not apply.
   c. **Reduces queue lengths:** Medium. A significant shift of SOV riders to transit could reduce queues..
   d. **Improves operating cost per rider:** Medium. Depends on the robustness of the mode shift achieved.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** High. Provides passengers with additional information to make accessing the terminal by transit more convenient.
2. **Positive community impacts:** Low, depending on the robustness of the mode shift achieved.
3. **Positive environmental impacts:** Low. Depending on the robustness of the mode shift achieved, could potentially reduce vehicle trips and related emissions.

## III. Implementation and Cost

1. **Ease of implementation:** Low. In order to implement this strategy, WSF would first need to coordinate its own GPS system with multiple regional transit operators, many who may not have such a system. In addition, a signage system for displaying such information would need to be installed at all terminals.
2. **Capital costs:** Medium. Depending on the number of regional transit operators currently using GPS systems, new equipment may be needed for each bus/train. Electronic passenger information signs would be needed.
3. **On-going operating cost:** Low.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but would be leveraged by integration with other real-time information (e.g. parking availability and queuing, departure, and wait times)
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High. Note that while it is simple for WSF to make ferry arrival and departure information available at all terminals, real-time transit arrival and departure information depends on the extent to which regional transit operators are using GPS technology or WSF is capable of supporting its installation.

2. **Terminal by Terminal Applicability:** Applies equally to all terminals.

    a. **Mukilteo:**
    b. **Clinton:**
    c. **Edmonds:**
    d. **Kingston:**
    e. **Bainbridge:**
    f. **Bremerton:**
    g. **Colman Dock:**
    h. **Southworth:**
    i. **Vashon:**
    j. **Fauntleroy:**
    k. **Pt. Townsend:**
    l. **Keystone:**
    m. **Anacortes:**
    n. **San Juans:**
    o. **Pt Defiance:**
    p. **Tahlequah:**

3. **What would be a good test route?** Wherever GPS technology is being utilized, real-time arrival and departure information should be made available to WSF passengers.

## VI. Strategy Disposition

Carry the strategy forward. Real-time transit information is a highly cost-effective strategy for encouraging transit use.

# Strategy Evaluation Worksheet

**Name:** Real-time parking capacity information.

**Description:** Display real-time parking access and capacity information on variable messaging signs in the vicinity of the terminal. Make this information available to customers *before* they begin their trip, online and via cell phone.

## I. Evaluation Against Primary Screening Criteria

3. **Manages Demand**

    a. **Encourages mode shift**: Low. Some mode shift may be possible if drivers realize parking is not available at the terminal if they have other modes available.
    b. **Encourages time shift:** Medium. Real time parking information provided in advance of arrival may encourage drivers to utilize lower-demand sailings.
    c. **Attracts new demand to available capacity:** Low. Advanced knowledge about parking availability will enable new users who prefer to drive and walk-on to use terminals that may reach capacity occasionally.

4. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No impact.
    b. **Reduces ticketing time:** Low. Does not apply.
    c. **Reduces queue lengths:** Low. No impact.
    d. **Improves operating cost per rider:** Low. Some additional walk-ons may be attracted, reducing per rider costs.

## II. Evaluation of Secondary Screening Criteria

4. **Positive customer impacts:** High. Provides passengers with additional information to make more convenient travel choices. If passengers know in advance that parking is not available, they may travel by alternate modes or at alternate times.
5. **Positive community impacts:** Medium. Reduces cruising for parking and spillover parking impacts in host communities.
6. **Positive environmental impacts:** Low. Depending on the robustness of the mode shift effects, could reduce vehicle trips and related emissions associated with the "circling" of vehicles looking for available parking.

## III. Implementation and Cost

4. **Ease of implementation:** Medium. Requires information systems, parking monitoring staff or systems, and information dissemination technologies.

5. **Capital costs:** Medium. Requires data systems, electronic signing, and possibly parking control equipment. WSF's costs could be reduced by partnering with a private vendor that receives a revenue incentive from a small fee for premium services (such as cell phone text alerts).
6. **On-going operating cost:** Low. WSF's costs could be reduced by partnering with a private vendor.

## IV. Interaction With Other Strategies

3. **Does this strategy need other strategies to work?** No, but it would be leveraged by integration with real-time queuing, departure, and wait information.
4. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High, but initial implementation should focus on terminals with constrained customer parking.

2. **Terminal by Terminal Applicability:**

    a. **Mukilteo:** Medium.
    b. **Clinton:** Medium
    c. **Edmonds:** Medium
    d. **Kingston:** Medium
    e. **Bainbridge:** High
    f. **Bremerton:** Low (no WSF parking)
    g. **Colman Dock:** Low (no WSF parking)
    h. **Southworth:** High
    i. **Vashon:** High
    j. **Fauntleroy:** Low (no parking)
    k. **Pt. Townsend:** High
    l. **Keystone:** Low
    m. **Anacortes:** Medium
    n. **San Juans:** Low
    o. **Pt Defiance:** Medium
    p. **Tahlequah:** Medium

3. **What would be a good test route?** Terminals with periodically constrained parking availability, such as Bainbridge or Southworth.

## VI. Strategy Disposition

Carry this strategy forward. Real-time parking information has the potential to increase ferry utilization, especially where parking is somewhat constrained. However, technology costs may not prove cost-effective, and little mode shift is anticipated for existing drivers. A pilot project at one terminal will help assess the cost-effectiveness of the required infrastructure.

# Strategy Evaluation Worksheet

**Name:** Real-time queuing, departure, and wait information.

**Description:** Display next departure, wait time, and queue length information on variable messaging signs in the vicinity of the terminal. Make this information available to customers *before* they begin their trip online and via cell phone.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

    a. **Encourages mode shift**: Low. If drivers have other modal options and are not price sensitive, this information could encourage mode shift if queues are not consistent day to day.
    b. **Encourages time shift:** High. Real time vessel & queue information provided in advance of arrival may encourage drivers to utilize lower-demand sailings.
    c. **Attracts new demand to available capacity:** Medium. Some customers will decide to ride off-peak sailings with available capacity.

2. **Increases Operational Efficiency**

    a. **Reduces loading/unloading time:** Low. No impact.
    b. **Reduces ticketing time:** Low. Does not apply.
    c. **Reduces queue lengths:** Medium. May encourage some drivers to shift to other sailings or modes, reducing queues.
    d. **Improves operating cost per rider:** Low, depending on the robustness of the mode shift and time shift effects.

## II. Evaluation of Secondary Screening Criteria

1. **Positive customer impacts:** High. Provides passengers with additional information to make more convenient travel choices. Improves convenience for walk and bike riders waiting in terminals.
2. **Positive community impacts:** Medium, This strategy could help shorten peak period queues spilling into adjacent roadways.
3. **Positive environmental impacts:** Low. Impact would be negligible.,

## III. Implementation and Cost

1. **Ease of implementation:** Medium. Requires communications with the ferry and a queue monitoring system as well as information dissemination technology.
2. **Capital costs:** Medium. An active queue monitoring system is likely to be necessary, as well as communications technologies.

3. **On-going operating cost:** Low. WSF's costs could be reduced by partnering with a private vendor.

## IV. Interaction With Other Strategies

1. **Does this strategy need other strategies to work?** No, but would be leveraged by integration with real-time information on availability of customer parking.
2. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** High, but initial implementation should focus on terminals with constrained holding areas and/or severe queuing problems.

2. **Terminal by Terminal Applicability:**

   a. **Mukilteo:** High
   b. **Clinton:** Medium
   c. **Edmonds:** High
   d. **Kingston:** Medium
   e. **Bainbridge:** High
   f. **Bremerton:** Medium
   g. **Colman Dock:** High
   h. **Southworth:** High
   i. **Vashon:** Medium
   j. **Fauntleroy:** High
   k. **Pt. Townsend:** Low
   l. **Keystone:** Low
   m. **Anacortes:** Low
   n. **San Juans:** Low
   o. **Pt Defiance:** Low
   p. **Tahlequah:** Low

3. **What would be a good test route?** Terminals with queuing problems, such as Bainbridge or Southworth.

## VI. Strategy Disposition

Carry the strategy forward. Real time departure and queue information improves the overall ease of using the ferry system, encouraging greater flexibility by its users to travel closer to departure times or by a different mode.

# Strategy Evaluation Worksheet

**Name:** Reduced schedule

**Description:** Reduce schedule frequency by eliminating sailings determined to be too expensive to run due to lack of utilization.

## I. Evaluation Against Primary Screening Criteria

1. **Manages Demand**

   a. **Encourages mode shift**: Medium. Many will be forced to other modes reluctantly due to reduced vehicle capacity. Reduced frequency may cause some customers to forgo ferry trip altogether and travel by other means (most likely by private vehicle).
   b. **Encourages time shift:** Low.. Most likely impact is to shift some passengers formerly traveling on low-demand sailings to higher-demand sailings.
   c. **Attracts new demand to available capacity:** Low. Overall demand will reduce.

2. **Increases Operational Efficiency**

   a. **Reduces loading/unloading time:** Low. Does not apply.
   b. **Reduces ticketing time:** Low. Does not apply.
   c. **Reduces queue lengths:** Low. Likely to greatly increase queues on many sailings.
   d. **Improves operating cost per rider:** High. Greater utilization of remaining sailings increases efficiency. Improved cost per rider also comes from savings due to reduced sailing frequency net any lost revenues from customers who forgo ferry trips.

## II. Evaluation of Secondary Screening Criteria

4. **Positive customer impacts:** Low. Reduces customer choice, convenience, and flexibility.
5. **Positive community impacts:** Low. Could increase existing queues, reduce access to and from host communities, as well as limit economic development.
6. **Positive environmental impacts:** Low. Increased queues will cause more idling and congestion, negatively impacting air quality.

## III. Implementation and Cost

1. **Ease of implementation:** High.
2. **Capital costs:** Low.
3. **On-going operating cost:** Low. Goal is to reduce per-rider operating costs.

## IV. Interaction With Other Strategies

3. **Does this strategy need other strategies to work?** No.
4. **Are there other strategies that might compromise this strategy's effectiveness?** No.

## V. Applicability to Terminals

1. **Potential for System-wide Application:** Low.

2. **Terminal by Terminal Applicability:** Varies, but largely routes with significantly underutilized sailings.

    a. **Mukilteo:** Low
    b. **Clinton:** Low
    c. **Edmonds:** Low
    d. **Kingston:** Low
    e. **Bainbridge:** Low
    f. **Bremerton:** Low
    g. **Colman Dock:** Low
    h. **Southworth:** Medium
    i. **Vashon:** Medium
    j. **Fauntleroy:** Medium
    k. **Pt. Townsend:** Medium
    l. **Keystone:** Medium
    m. **Anacortes:** Medium (in off peak season)
    n. **San Juans:** Medium (in off peak season)
    o. **Pt Defiance:** Medium
    p. **Tahlequah:** Medium

3. **What would be a good test route?** Routes with underutilized sailings could pilot test a reduced schedule to evaluate both operational and community access impacts.

## VI. Strategy Disposition

Screen out due to negative impacts on customers and host communities. Implement strategies to manage existing capacity more efficiently and achieve operational savings.

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX I
## JOINT WSF/WSTC RECOMMENDATIONS ON ADAPTIVE MANAGEMENT STRATEGIES

# JOINT RECOMMENDATIONS ON ADAPTIVE MANAGEMENT STRATEGIES

## 1. OVERVIEW

Passed by the 2007 Legislature, Engrossed Substitute House Bill (ESHB) 2358 – "The Ferry Bill" – includes a number of directives related to how the Washington State Department of Transportation Ferries Division (WSF) is providing services and how it should be planning to meet the needs of the organization in the future. Specifically, the legislation requires WSF to "adopt adaptive management practices in its operating and capital programs so as to keep the costs of the Washington state ferries system as low as possible while continuously improving the quality and timeliness of service."

ESHB 2358 also requires that WSF and the Washington State Transportation Commission (WSTC) make joint recommendations to the legislature for improvement of operational strategies. This document details those joint recommendations.

### 1.1 The Intent of Adaptive Management Strategies

In this context, "adaptive management" refers to a process for learning from outcomes of operational programs and continually improving management practices to achieve the desired outcomes. With respect to the strategies proposed herein, the desired outcomes are twofold:

1. **Demand management** – Maximize use of existing assets through pricing and operational strategies that encourage customers to shift travel modes and times, spreading existing demand to times and modes that have excess capacity.

2. **Increase operational efficiency** – Employ operating strategies that reduce operating costs, queue length, and time spent in terminals to make more efficient use of existing resources.

### 1.2 Relationship to WSF Revised Draft Long-Range Plan

The Revised Draft Long-Range Plan, released by WSF on January 31, 2009, includes a number of pricing and operating strategies designed to achieve demand management goals and improve operational efficiency. The strategies included in the Revised Draft Plan were those determined to have the greatest demand management and operational efficiency impacts, while minimizing potentially negative impacts for customers and communities. They are described identified as "Highest Priority Strategies" and described in **Section 2** below.

The Revised Draft Long-Range Plan relies on a reservation system as the ferry system's primary demand management tool. By moving existing queues into a virtual environment, providing more information about sailing availability, and guaranteeing spots on vessels, a reservation system would

eliminate the need for costly additional terminal holding space, facilitate time shift out of the peak, and provide a customer convenience.

While a reservation system is thought to be the most effective demand management tool at this time, it is certainly not the only option available. Preliminary analysis showed that congestion pricing, for example, could also be quite effective. However, there are a number of implementation and customer relation challenges associated with congestion pricing. Due to the system's existing one-point toll collection policy, toll collection booths would need to be built and staffed in a number of terminals, fare collection technology would need to be changed to stored value instead of trips, and frequent user policies would need to be revised.

For these reasons, a reservation system is thought to be the more effective initial demand management tool. A cost-benefit analysis will be undertaken as part of the system pre-design efforts. Additionally, the capital investments associated with the reservation system establish the toll collection systems through which congestion pricing (or other pricing strategies) could be more easily implemented as need arises. In fact it is likely that congestion pricing would work more effectively if implemented within a system of reservations than as a stand alone strategy.

In addition to congestion pricing, the analysis of operating and pricing strategies undertaken by WSF identified a number of other options that would also have positive demand management and operational efficiency outcomes. Depending upon the effectiveness of the strategies proposed in the Revised Draft Long-Range Plan (particularly the reservation system), WSF will pursue other strategies not specifically included in the Plan.

**Section 3** identifies a comprehensive list of what those potential additional strategies are. They include strategies with smaller demand management benefits that could be considered for implementation in the near term. They also include strategies that are expected to be effective demand management tools, which may have greater negative customer impacts. As the economic conditions and ridership characteristics that affect the system are continually changing and evolving, these strategies will be frequently re-evaluated and implemented as needed. Both WSF and WSTC are in agreement that the list of strategies identified here merit additional consideration and depending upon the needs of the system, may be adopted at the route or system level.

## 2. HIGHEST PRIORITY STRATEGIES

The following strategies were included in the Revised Draft Long-Range Plan. Together, they represent a package of adaptive management strategies that will help the system to manage demand through mode and time shifting incentives as well as improve operating efficiencies. WSF will pursue implementation of these strategies in the short term, and depending on outcomes will consider implementing additional strategies as needed.

## 2.1 Operational Strategies

### Reservation System

A reservation system allows WSF to move vehicle queues from the physical environment of terminals to the digital environment, thereby reducing need for additional space at terminals. Furthermore, a reservation system can act as a demand management tool by providing information and helping to move riders who are time-flexible into less crowded sailings and it provides the infrastructure needed for some of the targeted pricing strategies recommended in this document. A reservation system is the primary demand management strategy proposed in the Revised Draft Long-Range Plan.

### Transit Enhancements

These are defined as strategies encouraging the use of public transit systems and thereby increasing mode shift. The WSTC customer survey corroborates the notion that transit enhancements are likely to have a significant mode shift impact. Particularly on commuter routes, a large portion of ferry customers identified inadequate transit connections and other transit related issues as a significant driver of mode choices.

To effectively implement a package of transit enhancements most likely to result in mode shift behaviors, WSF will need to coordinate closely with local transit agencies. It is expected some of the costs for improvements would be borne by WSF, while local transit organizations would need to provide other service improvements. However, it is recognized that local transit agencies are also hard pressed for funding service enhancement. While the support of local transit agencies is desirable and provides the biggest mode shift impact, there are still mode shift benefits to be gained by the WSF only improvements, and those will be pursued.

The following is a list of recommended transit enhancements:

- Extend transit routes closer to the ferry
- Construct dedicated, convenient, sheltered (ferry to bus without getting wet) transit/ferry transfer facilities within the terminals.
- Coordinate transit schedules with ferry schedules
- Improve transit connections and frequencies
- Install inter-operable communications to ensure delayed buses or late ferries do not automatically mean missed passenger connections.
- Provide real time transit arrival, departure, and connections information
- Coordinate transit fare media with fare payment media used on ferries via a “universal smart card”

- Provide an overall benefit to users of the "universal smart card" by providing a discount walk-on ferry fares so that the total amount paid under the universal card is less than if a person were to pay for their transit and ferry fares separately.
- Utilize transit priority, bus lanes, or queue jumpers to ensure buses avoid traffic queues
- Provide new routes that serve the ferry and directly connect with employment centers or intermodal hubs (such as King Street and Westlake intermodal hubs)
- Provide connector shuttles to circulate passengers between the terminal and transit hubs, rental car agencies, activity centers or parking garages
- Increase passenger awareness of connecting transit routes, schedules, and fares, perhaps by training all employees or a single employee (e.g. a "mobility concierge" at each terminal)
- Construct new park-and-rides with good transit connections to terminals
- Expand vanpool and carpool fleets, and include dedicated priority access and staging of vanpools at terminals
- Pursue co-location of carsharing pods at all ferry terminals with reservations/usage potentially linked to electronic fare media use for ferries

### Fuel Conservation

Fuel costs comprise a significant portion of WSF's operating costs, and to the extent that operating strategies can reduce fuel consumption, they should be considered.

- Vessel modifications – The Revised Draft Long Range Plan identifies a number of strategies specific to vessel classes that are designed to make these vessels more fuel efficient
- Tie-up methods – WSF could attempt to develop alternate vessel tie-up methods that allow for a reduction in shaft speed (or shut down of shafts) while docked
- Boat speed – Travel speed of vessels is a major factor affecting fuel consumption. As travel speeds increase, so does fuel consumption. Following this logic, it may be beneficial to reduce the speed of boats, especially during off-peak times, to reduce operating costs while minimizing negative impacts to customers.

## 2.2 Pricing Strategies

ESHB 2358 requires WSF to review fares and pricing policies annually, with the Commission approving and adopting by rule fares for the ensuing year. The legislature has provided specific direction regarding the use of pricing as part of an adaptive management approach to help regulate demand while maintaining an awareness of the impact of fares on communities and users. ESHB 2358 requires that "the department shall annually review fares and pricing policies applicable to the operation of the WSF…the department shall develop fare and pricing policy proposals that must:

- Recognize that each travel shed is unique, and might not have the same farebox recovery rate and the same pricing policies;
- Use data from the current market survey conducted by the WSTC;
- Be developed with input from affected ferry users by public hearing and by review with affected ferry advisory committees, in addition to the market survey:
- Generate the amount of revenue required by the biennial transportation budget;
- Consider the impacts on users, capacity, and local communities; and,
- Keep the fare schedules as simple as possible.

While developing fare and pricing policy proposals, WSF must consider the following:

- Options for using pricing to level vehicle peak demand; and
- Options for using pricing to increase off-peak ridership."

Using new information from the WSTC-commissioned survey, WSF undertook a thorough review of pricing strategies as part of its long-range planning effort. A number of strategies were identified as having demand management benefits (for a more thorough review of the potential effectiveness of these strategies in achieving demand management outcomes, please refer to the Revised Draft Long-Range Plan). As a reservation system is proposed as the primary demand management strategy in the Plan, many of the pricing strategies considered were not explicitly included in the Plan.

The Revised Draft Long-Range Plan identifies no fees for reservations, a fuel surcharge, and differential passenger and vehicle pricing as the pricing strategies to pursue in the short term in order to meet the fare revenue requirements of the Transportation Budget, mitigate operating cost risk, and increase mode shift behaviors. This package of pricing strategies assumes a reservation system will be WSF's primary demand management tool.

### Differential Vehicle and Passenger Pricing

Differential vehicle and passenger pricing refers to how specific fare categories could be increased to achieve the annual fare increase required to meet Transportation Budget revenue requirements. Increasing passenger fares at a slower rate than vehicle fares in the near term, allows the differential between the two fare categories to grow more rapidly, creating a stronger pricing incentive for mode shift. WSTC survey results showed that this could be an effective strategy, and it is currently included in the Revised Draft Long-Range Plan.

### Reservation System Pricing

As currently proposed, the reservation system does not include any additional fees for reservations. There would need to be some form of prepayment to address the potential for no-shows, however, since this is proposed as the primary demand management tool, it is important to make it as attractive as possible to gain broad acceptance of the system and minimize negative impacts to customers.

### Fuel Surcharge

While it doesn't have an explicit demand management benefit (except to the extent that changes in total ticket price impact ridership through elasticity effects), a fuel surcharge is intended to mitigate operating cost risk with respect to fluctuating fuel prices. A fuel surcharge would automatically adjust fares up and down to reflect increases and decreases in fuel prices above a pre-determined base fuel price. Under this program, a customer's total fare would be subject to automatic increases in periods of rapid fuel price escalation, effectively passing on this direct operating expense to those benefiting from the service. The surcharge would be reduced when fuel prices fell. A key analytical question for this strategy involves how to determine the current base fuel price from which future fuel surcharges would be pegged.

# 3. STRATEGIES FOR FURTHER CONSIDERATION

Given that the economic conditions and reidership characteristic affecting the system are continually evolving and difficult to predict, WSF may need to consider additional options for achieving demand management and operational efficiency goals. Consistent with the "adaptive management" directive put forth by the Legislature, WSF and WSTC will continually monitor the outcomes of implemented operational and pricing strategies, making adjustments or pursuing new strategies as necessary. To that effect, the adaptive management strategies listed below are recommended for further consideration, as each was determined to be potentially effective.

## 3.1 Operational Strategies

In response to ESHB 2358, and as part of its long-range planning efforts, WSF conducted a comprehensive review of options and best practices to improve operating efficiencies. It considered the experience of transportation industry professionals and included an extensive national and international best practices review. Through these avenues a wide range of strategies was identified,

and over 90 discrete operational strategies were ultimately identified as having efficiency benefits for the ferry system. The strategies that merit additional consideration are discussed below.

### Non-motorized Enhancements.

These are strategies designed to improve ease with which customers can walk-on or ride bicycles in lieu of driving on, thereby increasing mode shift behaviors.

- Provide or improve sidewalks between nearby housing and commercial centers to ferry terminal
- Provide or improve bicycle connections (bike lanes, paths, wide shoulders) accessing the terminal
- Provide bicycle hill-climb assistance via specialized equipment or vehicles
- Provide secure bike parking at terminals
- Provide or improve pedestrian and bicycle wayfinding signage around terminals and throughout nearby business districts
- Increase passenger awareness of bike and pedestrian amenities, connections, and resources perhaps by training all employees or a single employee (e.g. a “mobility concierge” at each terminal)
- Develop a bike sharing program at all ferry terminals with reservations/usage potentially linked to electronic fare media use for ferries.
- Install countdown timers indicating time to next boat departure for walk-on passengers to gauge the wait (and whether they need to rush)

### Optimized Fare Collection Techniques.

These strategies are intended to reduce ticketing time and therefore queue lengths outside the tollbooth, generating a positive community impact.

- E-ticketing – WSF could implement on-line ticketing similar to an airline e-ticket website.
- Remote ticketing – Tickets could be sold and received in a remote holding location. Vehicles entering on-dock holding or loading would already be ticketed.
- Tandem ticketing – Booths could be added to each ticket lane, allowing two vehicles in each lane to be processed simultaneously.
- Payment method ticketing – Utilize booths specific to the method of payment, to allow pre-ticketed vehicles quicker access.
- Pre-paid/monthly transponders – Utilize in-vehicle RFID transponders tied to pre-paid credit accounts to process entering or exiting vehicles automatically.

- Round-trip ticketing – Encourage round-trip ticketing for trips departing from less congested terminals or during off-peak travel periods in order to allow more efficient boarding for return trips from congested terminals or during peak periods. Incentives might include providing a small discount for round trips or priority/early boarding for round trip ticket holders.
- Improved utilization of EFS system – The new fare collection system for the ferries seems to offer some opportunity for improved efficiency.
- Fare card/ Parking coordination – Use the same media for parking payment and WSF fares to encourage use of parking and mode shift.
- Limit accepted payment formats – Currently, the options include everything from personal check or cash to corporate account and Wave2Go cards, increasing processing time for employees who must negotiate the various fare media.
- Incentives for preferred payment – Offer reduced fares to those who utilize transponders, advance payment or whatever other service speeds the ticketing process

### Enhanced User Information

These strategies are intended to encourage mode and time shift through better information and trip planning tools.

- Automated route planning
- Real-time queuing, departure and wait information
- Wayfinding: bicycles and pedestrians
- Wayfinding: parking
- Wayfinding: outside of terminals for vehicles
- Real-time parking capacity information

### Scheduling

These strategies are designed to better accommodate vehicle demand through sailing schedule adjustments like extending schedules with the existing fleet type or more frequent sailings on smaller vessels. (*Note: the JTC Vessel Study will explore the costs and benefits of these options in more detail).*

- Extended ferry schedule with existing fleet type, if demand warrants and cost/benefit analysis determines it to be feasible
- Reduced schedule, eliminating sailing determined to be too expensive to run due to lack of utilization

### Traffic and Dock Space Management

These strategies could reduce queuing outside of the holding area and lessen negative community impacts.

- Traffic management to restrict the formation of queues on local streets with ordinances, signing, channelization, and enforcement
- Metered exit queuing to reduce the rate of vehicles arriving at congested intersections
- Minimize employee parking at terminals
- Reorganize flow and lane usage
- Relocate non-essential function from immediate holding area

### Promotion and Marketing of Non-SOV Modes

These strategies may encourage customer mode shift by providing information and incentives pertaining to increased use of HOV options.

- Partnering with Transportation Management Associations (TMAs)
- Expanded carpool definition and expanded HOV loading priority
- Creation of car-sharing pods at terminals and incentives for their use
- Subsidization of tax and/or rental car services
- General ongoing marketing and promotion of non-SOV modes of ferry access and amenities
- Development and implementation of a long-term marking plan to encourage customer behavior shifts and reinforce desirable customer behaviors

### Parking and Holding

These strategies increase parking supply and efficiency, thus encouraging mode shift.

- Parking reservation system
- Shared parking
- Decentralized holding
- Increase parking capacity at terminals
- Remote holding

## 3.2 Pricing Strategies

Depending on the needs of the system and the effectiveness of any other operational or pricing strategies that have been implemented, WSF may need to pursue additional pricing strategies to better manage demand. Given their expected benefits in this respect, the following pricing strategies should be regularly evaluated and considered for inclusion in the tariff structure.

### Pricing Strategies for Near Term Consideration

The pricing strategies listed below could augment the pricing strategies included in the Revised Draft Long-Range Plan, providing additional mode and time shift benefits. As such, they may be considered in the short to medium term.

Passenger Discounts. Similar to the differential vehicle and passenger pricing strategy, a passenger discount could be considered to induce mode shift behavior. Given the negative revenue impacts of this strategy, it would likely need to be offset by a surcharge elsewhere.

Seasonal Surcharge. WSF's fare structure currently contains a seasonal surcharge component for the months May – October. Actual ridership trends show a seasonal peak that is not evenly spread between May and October. July and August represent the "peak of peak" with much higher proportions of cash-paying recreational users. Therefore, WSF could consider adding a third level to its seasonal pricing structure that allows for a higher surcharge during July and August and additional demand management benefits during times when capacity constraints are most severe.

Small Car Discounts. WSF already charges vehicles based on their size, and a small car discount would be a special incentive to encourage people that must drive-on to take smaller cars, allowing more vehicles to fit on deck. It has the advantage of increasing vessel carrying capacity by reducing average vehicle size and providing a lower cost vehicle option that still offers a demand management benefit to the system.

Progressive Pricing for Larger Vehicles. The concept underlying the small vehicle discount would also apply to the possibility of charging proportionally more for larger vehicles as well, in order to accommodate more total vehicles (especially during peak periods).

Non-Resident Pricing. Another strategy that may have some demand management benefits and takes a different approach to fare equity, is a non-resident pricing program though which out-of state residents pay higher relative fares.

### Other Pricing Strategies

The following list of congestion-related pricing strategies includes other options that could be effective demand management tools. Given the negative impact some of these could have on customers or ferry system revenues, they are not currently being considered. As a reservation system has been proposed as the system's primary demand management tool, WSF does not envision the need to implement these strategies in the near term. However, depending upon the

effectiveness of the reservation system as a demand management tool, WSF may wish to revisit these strategies in the future.

WSF and WSTC will continually monitor the outcomes of implemented pricing and operational strategies, making adjustments or pursuing new strategies as necessary.

Congestion Pricing (Time of Day Surcharge). The pricing strategy with the greatest potential to shift travel behavior is congestion pricing. If reservations alone are not sufficient to shift demand then it may be necessary to evaluate a reservations plus a variable congestion pricing approach.

Congestion Pricing (Off Peak Discounts). Off-peak discounts are a pricing incentive designed to encourage existing vehicle travelers to use lower demand sailings (thereby reducing pressure during peak periods) and to attract new riders to the system. While preliminary analysis shows that this strategy would have negative revenue impacts and only minor demand management benefits, it could be used in conjunction with tools such as surcharges to maximize demand management benefits while maintaining revenue neutrality. It could also be used as part of a larger commercial customer pricing program that seeks to accommodate large commercial vehicles on sailings with excess capacity.

Vehicle Frequent User Policies. Under the current frequent user policies a significant number of vehicle trips are paying the cheapest possible vehicle fare during the system's most congested times. To achieve its demand management goals, it may become necessary to revisit this policy and vary frequent-user fares based on congestion pricing principles in the future.

Variable Pricing Among Substitutable Routes. If travel patterns are not sufficiently rebalanced through reservations alone, it may be desirable to consider a pricing mechanism to encourage the use of underutilized routes where customers have a choice (i.e. Bremerton versus Bainbridge or Point Defiance-Tahlequah versus Vashon-Fauntleroy).

While these pricing strategies are recommended for future consideration, any change in fares will require WSF and WSTC to go through the process of modifying the Washington Administrative Code, including developing a specific fare proposal, seeking public comment, conducting a hearing and adopting by rule the proposed changes. As a result, this recommendation serves to identify the list of pricing strategies that will be considered during future tariff review cycles.

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX J
## PROPOSED TRANSIT ENHANCEMENTS BY TERMINAL

# TRANSIT ENHANCEMENTS BY TERMINAL

This maxtrix is a working doument that takes into consideration the unique configuration of each of WSF's terminals and summarizes transit enhancements that could be effective at each of those in increasing mode shift from drive-on to walk-on.

# Mukilteo

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • Some routes have infrequent service<br>• Transit connections not timed well to ferry (esp. #113, #417, #880, #23 in PM, ST commuter rail)<br>• Lack of wayfinding<br>• No direct transit connections to nearby park-and-ride lots (Eastmont, McCollum, Martner) | **Service**<br>• Better coordinate Route 113 (Lynnwood Transit Center – Mukilteo) with ferry schedule— leaving 5-10 minutes later in the morning.<br>• Increase the frequency of #190 (Mukilteo to Edmonds Community College) especially in the morning; improve PM arrivals to coordinate with the ferry schedule.<br>• Better coordinate the Sound Transit commuter rail, Everett Transit #23 (Mukilteo-Everett Station) and ferry afternoon schedules.<br>• Add mid-day service on #417 to Seattle and #880 to University District; coordinate all arrivals/departures with ferry schedule<br>• Add new transit connections to three nearby park-and-rides<br><br>**Facilities**<br>• Sheltered transit facility with seating<br>• Pedestrian crossing with no conflict<br><br>**Information**<br>• Wayfinding (between transit stop, loading area, nearby services, etc.)<br>• Transit information, including system maps, schedules and park-and-ride information. |
| **Non-motorized Access Enhancements** | • Pedestrian access crosses vehicle access to vessel through 4-way stop city intersection<br>• Bike access is mixed with traffic<br>• Mixed pedestrian and vehicle loading<br>• Lack of pedestrian and bicycle facilities and connections<br>• Lack of wayfinding | • Separate priority loading for pedestrians<br>• Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions.<br>• Establish car sharing pod at terminal |

# Edmonds

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • Some key transit routes are peak-only and stop running before 8 a.m. missing the end of the peak and "shoulder" runs<br>• Ferry schedule and Souder commuter rail schedule are on different headways making schedule coordination a challenge. | **Service**<br>• Coordinate transit and ferry schedules, especially Sound Transit commuter rail service<br>• Extend service on Community Transit #404 to downtown Seattle to all-day. Until commuter rail reaches a higher level of service, all-day express service to downtown Seattle with one intermediate stop at Aurora Transit Center should be developed.<br>• Increase the peak hour frequencies of #870 (Edmonds to University District), to all day service.<br><br>**Facilities**<br>• Construct sheltered transit facility at terminal with seating.<br>• Provide queue jump lanes for transit vehicles at intersection of Main and Sunset.<br><br>**Information**<br>• Wayfinding (between transit stop, loading area, nearby services, etc.)<br>• Transit information, including system maps, schedules and park-and-ride information. |
| **Non-motorized Access Enhancements** | • Pedestrians delayed at light across from terminal during on and off loading | • Pedestrian overpass over Railroad and/or Sunset Avenues, providing safe connections directly to Sound Transit station and the covered pedestrian loading area.<br>• Pedestrian and bike safety improvements around Railroad Ave. /railroad tracks.<br>• Dedicated bike facilities in the vicinity of, or connected to, the terminal.<br>• Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions.<br>• Establish car sharing pod at terminal |

# Colman Dock

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • The main transit artery is located about 1/3 mile up a very steep hill.<br>• No frequent connections to King St. station and Westlake (other two regional downtown hubs)<br>• No place to stage vanpool vehicles | **Service**<br>• Improved, more frequent east-west transit connections, i.e. through a new transit spine on Madison and/or Marion Street connecting Colman Dock to First Hill and to Yesler St and Pioneer Square Tunnel Station<br>• Increase frequency of routes serving terminal to, at a minimum, every 7 minutes and/or<br>• Provide high-frequency new transit connection on First Ave. closer to terminal, such as the proposed First Ave. streetcar ("Central Line")<br>• Remove bus route layover from Colman Dock<br>• Downtown circulator shuttle (in partnership with cruise ship companies?)<br><br>**Facilities**<br>• Expanded vanpool staging at Colman Dock<br>• Sheltered transit facility at terminal with seating<br>• Improve pedestrian path from vessel to transit<br><br>**Information**<br>• Wayfinding to nearby transit (i.e. to LINK, 3rd Ave, 1st Ave. trolley, RapidRide at Main and Washington), pedestrian loading and ticketing area, nearby services, etc.)<br>• Transit information, including system maps, schedules and park-and-ride information. |
| **Non-motorized Access Enhancements** | • Pedestrians delayed at light across from terminal during on and off loading | • Widen existing pedestrian walkway from terminal to First Ave, connecting directly to proposed Central Line streetcar service.<br>• Well-defined pedestrian connection up the hill from 1st Ave. to 3rd Ave. transit spine<br>• Secure, covered bike parking<br>• Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions.<br>• Establish car sharing pod at terminal |

# Kingston

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • Insufficient transit service both in peak and off-peak.<br>  - E.g. no good transit connections to two of the AM peak sailings<br>• Kitsap Transit drops riders across the holding area from the pedestrian overhead loading area – rider drop-off should be closer and more convenient. | **Service**<br>• New shuttle service from George's Corner to terminal<br>• Increased frequency on route #91 (Kingston to Bainbridge Island ferry) during peak hours; add off-peak service.<br>• Expand service of #92 to Poulsbo in the evening<br>• Improve connections between Jefferson County and Kingston terminal<br>  - New transfer point at George's corner for in-bound Jefferson Transit route to Poulsbo<br>• Coordinate transit schedules with the ferry schedule.<br><br>**Facilities**<br>• Better bus access needed into terminal:<br>  - Move Kitsap Transit stop to Washington Blvd west of 104 with sidewalks connecting to a covered pedestrian loading area.<br>• Add carpool parking to park-and-rides when lots approach capacity.<br>• Expand park-and-ride capacity (in 5+ years)<br>• Construct sheltered transit facility with seating at terminal.<br><br>**Information**<br>• Wayfinding (between transit stop, loading area, nearby services, etc.)<br>• Transit information, including system maps, schedules and park-and-ride information. |
| **Non-motorized Access Enhancements** | | • Trail connecting Arborwood development site and terminal<br>• Secure, covered bike parking<br>• Dedicated bike facilities in the vicinity of, or connected to, the terminal, such as the installation of a dedicated lane on SR 104 and Bond Rd. and paved shoulders on other routes.<br>• Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions. |

# Bainbridge Island

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • Much of the service is very peak-oriented, with no mid-day service.<br>• Poor transit connections to shoulder sailings (e.g. 8:45 a.m. to Seattle) | **Service**<br>• Add off-peak service, with connections coordinated to mid-day sailings (many routes)<br>• Continue to study HCT options for the SR 305 corridor, implementing a viable alternative that provides frequent, reliable and fast service between Poulsbo and the Bremerton Ferry Terminal<br><br>**Facilities**<br>• One or more new park-and-ride(s) off of SR 305 needed to the north.<br>• Provide queue jump lanes for transit vehicles entering/exiting the terminal at 305 and Winslow Way.<br>• Sheltered transit facility with seating at terminal<br>• Revised Transit hub that is level with pedestrian loading level and larger than current area. Transit access that allows outbound buses to merge with off-loading autos.<br><br>**Information**<br>• Wayfinding (between transit stop, loading area, bike barn, nearby services, etc.)<br>• Transit information, including system maps, schedules and park-and-ride information. |
| **Non-motorized Access Enhancements** | • Pedestrians and bikes conflict with autos on Olympic Drive.<br>• No good bike route on SR 305 (intermittent shoulders, high speeds) | • Develop bike-sharing program as part of “Bike Barn” facility.<br>• Pedestrians (and perhaps bikes) should be better separated from vehicles on Olympic Drive, perhaps by off-loading pedestrians to the west side.<br>• Pursue expansion of existing car-sharing pod.<br>• Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions.<br>• The City of Bainbridge Island’s non-motorized transportation plan includes projects that, if implemented, would address many of the ferry terminal’s bicycle and pedestrian access concerns. Some of these elements include:<br>- Dedicated bike lanes along SR 305 and other island transportation corridors<br>- Wider sidewalks and increased separation from vehicle traffic in the vicinity of the ferry terminal<br>• Additional recommended improvements could include:<br>- Provide a bike and pedestrian path on the Agate Pass bridge<br>- Dedicated bike lanes on the peninsula side of SR 305 into Poulsbo |

# Bremerton

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • Insufficient frequencies and service coverage on some routes | **Service**<br>• Continue to study HCT options for the SR 303 corridor, implementing a viable alternative that provides frequent, reliable and fast service between Silverdale and the Bremerton Ferry Terminal<br>• Improve connections from West Bremerton:<br>- Route KT #12 (to Silverdale West) to ferry terminal, eliminating the transfer.<br>• Evaluate added service to West Bremerton<br>• Expand capacity and frequencies on the Kitsap Transit Foot Ferry, providing better connections from Port Orchard.<br><br>**Facilities**<br>• Add new park-and-rides at key locations that would compliment new HCT service in the SR-303 corridor.<br><br>**Information**<br>• Wayfinding (between transit stop, loading area, nearby services, etc.)<br>• Transit information, including system maps, schedules and park-and-ride information. |
| **Non-motorized Access Enhancements** | | • Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions.<br>• Improve Pacific Ave. and the expand boardwalk to Evergreen Rotary Park (in Bremerton's downtown plan)<br>• Provide separate bicycle lanes on the new Manette Bridge<br>• Provide safe access and connections throughout the downtown core<br>• Connect existing paths together into an integrated network.<br>• Establish car sharing pod at terminal |

## Fauntleroy

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • Bus drop-off located at top of dock on city street (long walk for pedestrians).<br>• Bus and ferry schedules are not consistently coordinated | **Service**<br>• Coordinate route #54 with ferry schedules, especially the express runs from downtown during the afternoon peak hours.<br>• Ensure new Rapid Ride service to downtown Seattle has adequate frequency to resolve transit/ferry scheduling issues.<br>• Enhanced frequency on Sound Transit #560 (Sea-Tac-Renton-Bellevue) to improve airport and Eastside connections.<br><br>**Facilities**<br>• Widen and cover walkway, and extend as close to street as possible.<br>• Improve pedestrian crossing, and accessibility of Fauntleroy Way bus stops<br>• Improve capacity (number of waiting passengers) of stop on northbound Fauntleroy Way.<br>• Construct sheltered transit facility with seating at terminal.<br><br>**Information**<br>• Transit information, including real-time arrival/departure information.<br>• Wayfinding (between transit stop, loading area, nearby services, etc.). |
| **Non-motorized Access Enhancements** | • Poor pedestrian access.<br>• No bicycle facilities and poor access, ( bikes speed down Fauntleroy, turn right at the terminal and enter in the exit lane to stage with motorcycles at front of loading area). | • Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions.<br>• Establish car sharing pod at terminal |

## Vashon

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • Park-and-ride at top of hill is at capacity<br>• WSTC survey indicates these customers want more and better transit service.<br>• #118 and #119 busses have service gaps in peak hour schedules sometimes resulting in one hour headways | **Service**<br>• Expand service on routes #118 and #119 (downtown Seattle-Fauntleroy-Vashon-Tahlequah). Increase service during peak hours, creating regular shuttle service between terminal and town center.<br><br>**Facilities**<br>• Expanded capacity at existing park-and-rides (Ober Park, Valley Center, Episcopal Church)<br>• Provide queue jump lanes at intersections in the vicinity where feasible for transit vehicles trying to access the terminal.<br>• Sheltered bus stop at with seating terminal.<br><br>**Information**<br>• Transit information, including real-time arrival/departure information.<br>• Wayfinding. |
| **Non-motorized Access Enhancements** | • Mixed pedestrian, bike and vehicle loading (except for POF).<br>• Lack of bicycle and pedestrian facilities and connections.<br>• No ADA accessibility measures beyond crew help.<br>• Lack of wayfinding. | • Installation of dedicated bike lanes or wide striped shoulder along Vashon Highway<br>• Covered and separated pedestrian loading zone near transit stop<br>• Secure, covered bike parking<br>• A pedestrian sidewalk between the ferry terminal and the nearby park-and-ride would improve pedestrian safety.<br>• Improved priority loading for pedestrians.<br>• Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions. |

# Southworth

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | • | **Service**<br>• Increase service of the #85 bus to Mullenix P&R from peak hours only to all-day service.<br>• Increase service of the #86 to the Port Orchard Foot Ferry terminal to all-day service by adding morning service.<br>• Provide new express service between the Port Orchard foot ferry and Southworth (allows Seattle bound customers to use either Seattle-Bremerton or Fauntleroy-Southworth interchangeably)<br><br>**Facilities**<br>• Create a new park-and-ride to the west or northwest of the terminal, (e.g. Phillips Rd. or Route 16 and Sedgwick Road) with direct transit service or shuttle service to the dock (e.g. extension of route 85 or new shorter, direct line on Route 160).<br>• Provide sheltered transit facilities with seating within the public parking area.<br><br>**Information**<br>• Provide transit information, including real-time arrival/departure information.<br>• Wayfinding (between transit stop, loading area, nearby services, etc.). |
| **Non-motorized Access Enhancements** | • Lack of bicycle and pedestrian facilities and connections.<br>• For walk-ons in particular this can be a confusing terminal, especially ticketing procedures.<br>• No separate pedestrian loading area causes off-load delay for vehicles<br>• Bike access mixed with auto traffic<br>• No ADA accessibility measures beyond crew help. | • Widen and cover pedestrian walkway.<br>• Provide dedicated bicycle lanes along Sedgwick Rd., Mile Hill Dr., and Southworth Dr.<br>• Provide secure, covered bicycle parking and storage in the immediate terminal area.<br>• Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions. |

# ALL TERMINALS (System-wide Application)

| Strategy Group | Needs and Challenges | Possible Strategies |
|---|---|---|
| **Transit Access Enhancements** | | **Service**<br>• Coordinate transit and ferry schedules with transit arriving 10-15 min. before sailings and departing 5 to 10 minutes after scheduled arrival. Dedicated service with arrivals 5 minutes ahead and immediately after arrival and pedestrian load is preferred.<br>• Transit information, including system maps, schedules and park-and-ride information (at terminals, on the website)<br><br>**Facilities**<br>• Sheltered transit facilities with seating.<br><br>**Information**<br>• Add information. about specific transit routes serving each terminal, with links to schedules, on WSF's Terminal Information web pages<br>• Wayfinding (between transit stop, loading area, nearby services, etc. |
| **Non-motorized Access Enhancements** | | • Wayfinding to ticketing, loading area, transit, concessions, nearby services and attractions. |

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX K
## PRICING STRATEGIES EVALUATION

# PRICING STRATEGIES EVALUATION

The selection of pricing strategies to be evaluated for consideration in the Long-Range Plan was identified through legislative requirements, the recent best practices review of operating and pricing strategies (see Appendix H for discussion of operating strategies), and many years of work with the former Tariff Policy Committee.

Evaluation of the strategies in terms of demand management effectiveness and potential revenue impacts had the benefit of results from the WSTC-commissioned survey and new findings with respect to customer price elasticity and mode shift likelihood (see Appendix F).

The documents included in this Appendix are a collection of working papers that demonstrate the process through which strategies were ultimately chosen for inclusion in the Plan. There were a number of strategies found to be effective with respect to demand management (like peak period surcharges) that are not a part the Final Plan. Depending upon performance against LOS standards and the effectiveness of other operational strategies, like the proposed reservation system, WSF may elect to re-visit the other effective strategies and implement them as appropriate.

The following documents are included in this Appendix:

1. **Pricing Strategies: Situation Assessment**. This doument was written at the outset of the long-range planning process. It explains the legislative context of this work and includes a preliminary list of strategies to be studied with challenges and considerations for the ferry system.
2. **Evaluative Framework and Criteria**: This document summarizes the criteria against which operational and pricing strategies are evaluated.
3. **Pricing Policy Concept and Options**. This document lays out a more refined list of pricing strategy options, identifying the pros and cons of the options under consideration.
4. **Effectiveness Analysis**. This document evaluates each of the five main pricing strategy options identified above using the elasticity and mode shift information gathered through the WSTC.

On their own, these papers do not constitute a recommendation on priciing strategies. They reflect the process that was undertaken to identify the strategies that are proposed in the Long-Range Plan and summarize findings from an extensive financial and ridership modeling effort.

# PRICING STRATEGIES: SITUATION ASSESSMENT

During the 2007 legislative session, the Legislature passed Engrossed Substitute House Bill 2358 (ESHB 2358) - "the Ferry Bill" - and the associated biennial transportation budget ESHB 1094. Each of the pieces of legislation contains specific policy and operational directives to assess the efficiency and costs related to how Washington State Department of Transportation (WSDOT)/Washington State Ferries (WSF) provides service. The results of the studies conducted to address the legislation are intended to derive strategies for how WSDOT/WSF operates in the future.

The legislation identifies specific topics for study and requires new levels of cooperation and collaboration among the Legislature (through the Joint Transportation Committee (JTC) and the new JTC Ferry Policy Subcommittee), the Washington State Transportation Commission (WSTC), and WSDOT/WSF. These directives follow from the December 2006 JTC Ferry Financing Study (also referred to as Ferry Financing Phase 1 or the Cedar River Group Report) and are the next steps in the process of developing a policy framework to address the long-term sustainability of WSDOT/WSF.

The legislation specifically spells out a list of tasks and a rough timeline that are designed to begin to address the questions raised in the Ferry Financing Study and to develop an information base that can support the ultimate question of how to address the long-term WSF funding requirements. Specifically ESHB 2358 and many of the Budget Provisos are designed to:

1. **Provide new, improved and "audited" information** – Ridership forecast reconciliation, life cycle cost model (LCCM), customer survey, cost allocation methodology, JTC Ferry Policy Working Group Studies, pre-design study requirements
2. **Develop strategies to minimize costs or increase revenues** – Terminal design standards, operational strategies, pricing policy changes, co-development study, evaluate one-point toll collection, re-establish vehicle LOS

This situation assessment provides a foundation for the identification, analysis and adoption of **pricing strategies** as required by ESHB 2358. This component of the work plan is the key element of a pivotal shift in how WSF plans for its service and investment needs. Historically, ferry investments were driven by changes in demand and the objective was to maintain a reasonable level of service. This approach suggested that WSF would adjust investments and services to keep pace with changes in demand. The new approach requires WSF to try to proactively manage the demand for ferry services through the use of operational and pricing strategies to maximize the use of existing assets and minimize the need for additional investments. The balance of this memo addresses the following key issues:

- Legislative direction
- Work that has already been done
- Preliminary identification of pricing strategies
- Potential operational issues
- Key evaluative criteria for potential strategies

- Relationship to other work elements
- Next steps

## Legislative Direction

With the enactment of ESHB 2358, the Washington State Legislature provided new policy direction regarding how fare schedules should be developed in the future. The Legislature had, in the past, provided limited guidance on tariff policy. RCW 47.60.326, which was repealed by ESHB 2358, included ten considerations that the WSTC could, but was not required to, consider including:

- The amount of subsidy available to the ferry system for maintenance and operation.
- The time and distance of ferry runs.
- The maintenance and operation costs for ferry runs, with a proper adjustment for higher costs of operating outmoded or less efficient equipment.
- The efficient distribution of traffic between cross-Sound routes.
- The desirability of reasonable rates for persons using the ferry system to commute daily to work and other frequent users who live in ferry-dependent communities.
- The effect of proposed fares in increasing walk-on and vehicular passenger use.
- The effect of proposed fares in promoting all types of ferry use during non-peak periods.
- The estimated revenues that are projected to be earned by the ferry system from commercial advertisements, parking, contracts, leases and other sources.
- The pre-purchase of multiple fares, whether for a single rider or multiple riders.
- Such other factors as prudent managers of a major ferry system would consider.

Now the Legislature has provided specific direction regarding using pricing as part of an adaptive management approach to help regulate demand while maintaining an awareness of the impact of fares on communities and users. ESHB 2358 requires that “the department shall annually review fares and pricing policies applicable to the operation of the WSF…the department shall develop fare and pricing policy proposals that must:

- Recognize that each travel shed is unique, and might not have the same farebox recovery rate and the same pricing policies;
- Use data from the current market survey conducted by the WSTC;
- Be developed with input from affected ferry users by public hearing and by review with affected ferry advisory committees, in addition to the market survey:
- Generate the amount of revenue required by the biennial transportation budget;
- Consider the impacts on users, capacity, and local communities; and,
- Keep the fare schedules as simple as possible.

While developing fare and pricing policy proposals, WSF must consider the following:

- Options for using pricing to level vehicle peak demand; and
- Options for using pricing to increase off-peak ridership.

One of the significant changes in legislative direction is the change from language suggesting a range of issues that the Commission and WSDOT ***could*** consider to language that emphasizes the issues that ***must*** be considered in setting fare rules. While the Transportation Commission and WSDOT/WSF did consider the language in RCW 47.60.326 in formulating its policy proposals, there was significant latitude in choosing which factors to emphasize or how different objectives might be prioritized.

The other significant change is that the new language is broader, with fewer specific fare-setting considerations and a greater emphasis on the desirable outcomes of changes in fare rules. This change provides substantial flexibility to WSTC and WSDOT/WSF to focus on pricing options that might support *"adaptive management practices in its operating and capital programs so as to keep the costs of the Washington state ferries system as low as possible while continuously improving the quality and timeliness of service."* (ESHB 2358)

An example of where this flexibility will be critical is in the evaluation of current frequent-user policies. The previous legislative language listed "the desirability of reasonable rates for persons using the ferry system to commute daily to work and other frequent users who live in ferry-dependent communities" as a consideration in setting fares. Currently, on some of the commuter-oriented routes the percent of vehicles traveling using the frequent-user discounted fare (the lowest applicable vehicle fare) can be between 50% and as much as 80% during commute periods. A strategy designed to promote walk-on traffic or to level vehicle demand during the peak will likely need to address the current practice of charging the lowest price when there is the greatest demand which may work well to encourage walk-on use and less well to discourage vehicle use on congested sailings.

In addition to these changes in legislative direction, ESHB 2358 also directs the Transportation Commission to change the implementation date for fare increases from the traditional May time period to the fall, to better align fare proposals with the Legislative budget calendar. Under the new schedule, the legislature will be able to set the revenue requirements in the budget during the spring and then leave it to the Commission and WSF/WSDOT to develop and implement fare proposals that will generate the necessary revenues. The legislation also precludes the Transportation Commission from raising fares until September 2009 or until pricing policies are modified to meet the new legislative direction, whichever is later.

The new legislative framework does not substantively change the process for setting fares or the authority to establish specific fare rules, leaving this authority with the Washington State Transportation Commission and WSDOT/WSF.

## Tariff Policies and Existing Pricing Rules

In 1991 the Washington State Transportation Commission initiated the Tariff Policy Committee to evaluate WSF fare revenue requirements and make policy recommendations regarding both the structure and the amount of ferry fares. The Committee included a representative mix of

policymakers, ferry riders, and representatives of constituent groups. The initial charge was to develop a policy rationale and a set of fare rules that would provide a basis for fare setting given the legislative direction at that time. When the Committee was formed, the fare structure was largely a legacy of the original fare structure that was in place when WSF took over the ferry operation from the private operator in 1952.

Over the next decade, WSF developed and implemented a series of fare policies designed to provide a clear basis for setting fares based primarily on a systemwide perspective. These fare policies did not include any consideration of demand management or other forms of adaptive management now required by the legislature.

For the period before 2000, the focus was not on revenue generation, but rather on developing a rationale for how the cost burden was to be shared among the different customer classes. The key components of the current pricing rules were largely developed during this timeframe and included:

- **CUBE policy.** This policy framework states that vehicles should pay in proportion to the volume of space they use on the vehicle deck. The result of this is that every vehicle fare on a given route is pegged to the standard auto/driver fare (up to 20-feet in length). For example a 40-foot standard height vehicle with pay twice the car/driver fare. Overheight vehicles pay double the length-based standard height fare under the rationale that by providing overheight space, WSF cannot double deck the entire vehicle deck.
- **Tariff Route Equity.** This policy was developed to establish a time-based element to derive fares on different routes, somewhat analogous to a parking lot. The concept was an extension of the CUBE concept where in addition to paying in proportion to the space used, vehicles should also pay in proportion to the amount of time that they use the space. The only exception to the time-based rules occurs when routes are in a common travel shed and there are clear substitution possibilities. In these cases the routes in a common travel shed share the same fares to remove price from the consideration of route choice.
- **Vehicle to passenger ratio.** The relationship of the vehicle and passenger fares is a policy variable that has largely been unchanged since the WSTC normalized this ratio over all routes in the system in the 1970's.
- **Peak season surcharge.** A peak season surcharge is applied only to vehicle fares (except for the San Juan Islands and International Routes were passenger fares are also increased in the peak season) and is designed to reflect the increased demand for service during the May through October period. The majority of regular ferry users are able to avoid the peak season surcharges, as they do not apply to the multi-ride frequent user fare products.
- **Discounts.** There are a variety of discounts offered to classes of ferry customers, including senior/disabled passengers, youth passengers, and frequent users willing to purchase multi-ride fare products. The senior/disabled discount is a federal requirement for public transportation agencies receiving federal funding. The others are a matter of policy.
- **Other policies.** There a number of other policies designed to address specific areas of policy interest such as the program for Agencies serving In-need populations, HOV and vanpool pricing and preferential loading policies, and the recreational vehicle promotional fare on the International route during the peak season.

In 2007, the WSTC disbanded the Tariff Policy Committee. In developing a set of pricing strategies that will be responsive to the new legislative direction, it will be necessary for WSTC and WSDOT/WSF to revisit the policy basis for the existing fare rules and determine how and if certain policy structures should be modified or amended to meet legislative direction.

While Washington State Ferries may not have a significant demand management component to its current policy framework, congestion conditions are already an ad hoc demand management tool. Lengthy wait times can and have resulted in a shift in modes—from vehicles to walk-ons, motorcycles, and vanpools—as well as shifts in time. It is important to be aware that ferry users already adapt their behavior to the existing incentives and disincentives of the system in place. The examination and recommendation of pricing strategies is a way to approach demand management and incentive structures more consciously, effectively, and efficiently.

## Preliminary List of Pricing Strategies

The strategies that follow are an initial list of ways that WSF can manage demand and increase efficiency in asset utilization. All of these strategies have a pricing and operations component. Variations of each strategy and existing models in operation are added where relevant. These and other strategies should be viewed as a menu of options that could be combined in various ways to create a coherent package that reflects the needs of terminals, routes, travel sheds and the system as a whole.

- **Congestion pricing** is a policy that charges a user fee in order to reflect the value of using a scarce resource—here, space on a ferry and terminal docks. Congestion pricing comes with many names—such as peak-load, value, time-of-day or discriminatory pricing—but the most important differences relate to the implementation of the fee structure. Implementation forms include:

  - Uniform tolls during a set time period based on typical congestion patterns at the location;
  - Variable tolls across locations based on real-time monitoring of congestion conditions.

  Given the nature of WSF as a system with a set number of sailings that can service a finite number of users in a given time period, the first implementation method seems more appropriate. Variable tolls based on real-time monitoring of congestion conditions are likely better suited to a more fluid system, like roadways.

  In contrast, for the better part of the past 30-40 years, WSF customers who traveled the most frequently enjoyed the best per trip price through the use of frequent-user coupon books. As such, a high percentage of regular commuters traveling during the most congested periods are in fact paying the lowest possible price for their trip.

  As applied to WSF, congestion pricing would most likely be considered primarily for vehicle users since capacity for autos is the existing and foreseeable constraint on the system. Congestion pricing could on one or more routes include lowering non-peak fares in order to 1) shift demand from peak periods; 2) increase overall ridership; and, (3) shift vehicle users to walk-on passengers. Information on elasticity and likely responses will be gathered by route to help inform this analysis.

Consistent with ESHB 2358's direction that pricing and operational strategies may vary by route, congestion pricing could take different forms on WSF's routes. The definition of peak will also vary by terminal and route, with a decision to be made whether congestion pricing is applied only to the most heavily used sailing of the day or to all sailings within the defined peak period.

- **Fees that would support operational strategies.** There are a number of operational strategies that may require a pricing component to be effective. These are likely to include:
- **A reservation system** is "a means of controlling traffic demand to fit available service capacity," according to the 1991 WSDOT *San Juan Ferries Reservations Program Feasibility Study*. This would be an extension of the WSF reservation system already provided for international travel routes (Anacortes-Sidney). Passengers could reserve space on a vessel via phone, internet, or terminal stations and counters. Pricing components of the reservation system that would require further study include:
    - o Existence of a reservation fee, and its amount;
    - o Reservation cancellation policy, and associated fee;
    - o Treatment of distinct ferry users (commuters, island residents, tourists, etc).

  Since there are fewer constraints on passenger walk-on service, reservation policies may potentially be applicable only to auto traffic and may vary both by route and by type of vehicle (i.e. passenger auto, freight trucks, recreational vehicles).
- **High-occupancy toll (HOT) lanes** are a hybrid system that combines voluntary congestion pricing and reservations. This strategy would require a creation of high-occupancy vehicle (HOV) lanes—such as those on freeways—at ferry terminals that would give priority to vehicles willing to pay a toll for assured passage on the next ferry. The lanes could also give priority to high-occupancy vehicles, such as its freeway counterpart does, or other sub-groups of vehicles deemed appropriate.
- **Mode shift strategies.** Given that on most routes there is a ready availability of passenger capacity even during the most congested periods for vehicle demand, the most effective demand management tools might be to encourage ferry passengers to use other modes (walk-on, bicycle, motorcycle, vanpool, and transit) of travel to access ferry services. Pricing mechanisms for implementing mode shifts include:
    - o Pricing vehicles at a higher rate than other modes;
    - o Eliminating certain vehicle discounts or offering additional discounts to passengers for travel during non-congested periods.

  Vehicle pricing and transit connections were identified respectively as "a potentially high-benefit" and "most promising" strategies in the *WSF White Paper*.
- **Discounts for off-peak travel.** A potential strategy that could be complementary to a congestion pricing strategy is to offer discounts for travel during off-peak periods or in the off-peak direction during peak periods. This would potentially bring new riders to the system, shift some existing riders out of the congested periods and increase the overall utilization of the system's assets.

## Relationship of Pricing Strategies to Fare Collection Systems

A consideration for any new pricing strategy will be the ability for WSF to implement the pricing structure which will be largely dependent on the capabilities of the fare collection systems. WSF currently uses its new Electronic Fare System (EFS) for fare collection. EFS uses a stored ride method for tracking fares. This means that a customer buys a given number of trips at a set fee (either a single ride or multiple rides often at a discount). These trips are stored on a card, and each time the customer rides a ferry, one of the trips is deducted from his card. This type of stored-ride system creates additional challenges relating to implementing certain types of pricing strategies such as varying the price based on time of day or for certain peak period trips for a given route (customers might need to purchase different products – a peak pass and a non-peak pass) .

In 2008, WSF plans to add the SmartCard system used by other WSDOT entities like rail and buses. SmartCard is based on a stored-value system. In practice this means that a customer puts a set amount of money on his or her card, and money is deducted when the customer uses the card to purchase rides. This type of system allows greater flexibility in the types of pricing strategies that could be employed by WSF.

Another potential fare collection system to be considered is use of the vehicle transponders that WSDOT uses for highway toll collection. This may provide a convenience to customers who already use the vehicle transponders, but given the operational and terminal impacts that adopting this fare collection system would entail, it is likely to be quite costly and potentially infeasible.

## Relationship of Pricing Strategies to Other Transportation System Components: Areas for Further Study

The potential effectiveness of the pricing strategies WSF chooses to employ is directly related to other transportation system components. If customers have a mode of transportation available to them other than ferries (like bridges, highways, etc), the cost in terms of dollars and time of the other mode will affect the customers' decision. With that in mind, the following areas require further study:

- **One-point versus two-point toll collection.** On many routes, WSF only collects fares from travelers headed in one direction. If a potential customer has the ability to drive one leg of his or her trip and return via ferry without paying a fare, this causes shifts in ridership patterns and potential revenue losses that may be undesirable in the aggregate. To effectively employ certain types of pricing strategies, WSF may need to switch to two-point toll collection. This switch entails operational and cost impacts that need to be further analyzed
- **Tacoma Narrows Bridge (TNB) toll.** The toll recently instituted on the TNB has the potential to change WSF ridership patterns. These shifts, and the ability to manage them using pricing strategies is an area for further study

## Potential Operational Issues

The strategies listed above require varying degrees of operational changes. Potential implications of implementing the strategies that warrant further study include:

- **WSF staffing requirements**: Extra terminal staff may be needed for the implementation of reservation systems, HOT lanes, and additional holding facilities in order to take reservations or

direct vehicle traffic and segregation. eTicketing and the SmartCard systems, on the other hand, may reduce tollbooth staffing. The costs associated with changes in staff size must be considered in further analysis of these options.

- **Schedule modifications:** Changes in schedules may have terminal and operational impacts.
- **Increase in terminal capacity and facilities**: Vehicle segregation and holding require increased space on-dock or off-dock. Increased transit connectivity may require additional terminal facilities, such as ramps, waiting spaces, etc. Congestion pricing, HOT lanes, and reservations may also require additional terminal tolling booths, and the possible reinstatement of two-point tolls for all routes. There are significant capital investments and operating costs that come with these additions. The physical, environmental, political, and fiscal feasibility of enhancing capacity should be evaluated at each terminal location.
- **Technology and systems impacts**: Variable congestion pricing, HOT lanes, and reservations require an expansion of technology capacity. Existing technology—such as the system in place for international reservations—as well as developing technology in WSF and WSDOT—such as EFS and “Good to Go!” HOT lane transponder—should be leveraged and integrated wherever possible.
- **Development of new protocols and procedures**: With any significant change in operations, WSF staff must be informed and trained. The time involved in doing so could vary considerably depending on the strategy being introduced.

## Relationship to Other Work Elements

The identification, analysis and recommendation of pricing strategies will be closely aligned with several other concurrent tasks including: the WSTC customer survey; the development of terminal design standards; the re-establishment of vehicle LOS standards; the analysis of operational strategies; and, the updated and reconciled ridership forecasts. In addition, the pricing strategies will be a key component of the Long-Range Plan.

# EVALUATIVE FRAMEWORK AND CRITERIA

The Final Long-Range Plan is intended to guide future service and investment decisions for the Ferries Division of WSDOT through 2030. In contrast to the Draft Long-Range Plan of 2006, which detailed a capital investment plan that responded to growing demand and long-established level of service standards, the Final Long-Range Plan considers the provisions of ESHB 2358, details updated LOS standards, and describes a recommended set of operating and pricing strategies intended to maximize efficiency within the system and manage demand.


The overarching challenge inherent in developing the Final Long-Range Plan was to develop a set of recommendations and strategies that (1) lead to greater operational efficiency (2) help to manage demand, and (3) provide a framework for strategic decision-making around how and when to add system capacity. This framework is consistent with WSDOT's overall mission and strategic direction.

## How did pricing and operating strategies shape the Final Long-Range Plan?

In determining recommendations, pricing strategies were evaluated by their impact on: 1) demand 2) customer service 3) revenue generation and 4) impact on users, capacity and communities. While these criteria are mentioned in the Ferry Bill or have been used in prior WSF evaluations, no explicit prioritization is stated. In later stages of analysis, prioritization and the balancing of these considerations should be clear or further guidance may be warranted. Below are some initial questions that guided data collection and analysis as well as began to frame how individual strategies were evaluated.

**Demand Impacts.** Managing ferry demand—and vehicle ferry demand in particular—is an integral part of the Legislature's directive. Questions included:

- What is the estimated demand elasticity for vehicles, walk-ons, bicycles, motorcycles, and vanpools?
- What is the estimated cross-elasticity for walk-ons, bicycles, motorcycles, vanpools, and transit if vehicle fees are increased?
- Do terminals have the added facility capacity to handle the estimated increase in demand of other modes?
- How does demand elasticity differ for rider sub-groups (commuters, tourists, island residents, etc)?
- How does demand elasticity differ by travel routes?
- How does one measure the effectiveness of demand response?

**Customer Service.** "Improving the quality and timeliness of service" is a stated goal in the Ferry Bill. Therefore, it is important that each operational strategy was evaluated according to its effects and perceived effects on the service toward different customer groups. For example, a reservation system may be seen by tourists as an improvement in customer service, but as a hindrance to island residents who would now have to plan their ferry trips further in advance. Questions included:

- How do the system's different users define "customer service improvements" (more efficient loading/unloading, more amenities on the ferries and in the terminals, etc)?
- How would the public respond to the new strategy and its perceived effect on service?
- Does the strategy affect different user groups in different ways? If so, how? Do certain user groups have special needs that should be addressed?

**Revenue Impacts.** ESHB 2358 requires that fares be set to recover enough funds to meet the needs of the biennial transportation operating budget. It also precludes fares from being used to support capital expenditures, unless such capital support is separately identified in the fare. Before evaluating individual strategies, it was important to ask: What level of revenue generation is desirable and expected? For example, HOT lane and congestion pricing tolls may be priced in a way to recover the costs associated with implementing the systems or in a way to make money for WSF general operations.

**Impacts on Users, Capacity and Communities.** WSF is an extension of the state highway system. Certain pricing strategies may be seen by users, policymakers, and elected officials as an "unfair" burden. The analysis of options considered the potential for perceived and/or actual equity concerns and identified how these might be mitigated while achieving the broader demand management or revenue goals. Questions included:

- What groups, if any, face a disproportionate burden or benefit from the proposed pricing strategy? Can the strategy be modified to address these concerns? Are there other ways of mitigating these potential impacts while maintaining the demand management or revenue benefits of the strategy?
- What is the public perception of the strategy?
- How might customer behavior change as a result of a proposed pricing strategy? What do the results of the WSTC survey suggest about customer reactions?
- How does this strategy affect users, system capacity, and communities?

This element of the analysis required coordination with the Washington State Transportation Commission's customer survey to gain a better understanding of the implications and reactions of a broad base of ferry customers to potential pricing strategies or fare concepts.

# FRAMEWORK FOR EVALUATION OF STRATEGIES

## How will pricing and operating strategies shape the revised Long Range Plan?


## How will strategies be evaluated and selected?

**PRINCIPAL EVALUATION CRITERIA**

How well does the strategy achieve:

- Changes in customer behavior/shifts in demand
- Improvement in cost or service efficiency

**ADDITIONAL EVALUATION CRITERIA**

What are the expected impacts on:

- Operating and capital costs
- Revenue generation
- Terminal and fleet operations
- Customers
- Communities

# PRICING POLICY CONCEPTS AND OPTIONS

The 2007 Legislature directed WSF to use pricing strategies as part of an adaptive management approach to help regulate demand while maintaining an awareness of the impact of fares on communities and users. ESHB 2358 requires that "the department shall annually review fares and pricing policies applicable to the operation of the WSF…the department shall develop fare and pricing policy proposals that must:

- Recognize that each travel shed is unique, and might not have the same farebox recovery rate and the same pricing policies;
- Use data from the current market survey conducted by the WSTC;
- Be developed with input from affected ferry users by public hearing and by review with affected ferry advisory committees, in addition to the market survey:
- Generate the amount of revenue required by the biennial transportation budget;
- Consider the impacts on users, capacity, and local communities; and,
- Keep the fare schedules as simple as possible.

While developing fare and pricing policy proposals, WSF must consider the following:

- Options for using pricing to level vehicle peak demand; and
- Options for using pricing to increase off-peak ridership.

During the 2008 Legislative session, an additional item was added to the list of considerations for setting fare policy. The following was Included as a proviso in the supplemental transportation budget (ESHB 2878):

- While developing fare and pricing policy proposals, the department may consider the desirability of reasonable fares for persons using the ferry system to commute daily to work and other frequent users who live in ferry-dependent communities.

The 2009 Legislature also provided guidance on fare policy through the transportation budget which stated, "The commission may only approve ferry fare rate changes that have the same proportionate change for passengers as for vehicles." This direction effectively of limits or eliminates altogether some of the demand management pricing strategies discussed in the following sections, at least during the 2009-2011 biennium.

## Approach, Policy Principles and Outcomes

The fare structure that Washington State Ferries employs serves two important policy functions: (1) it must generate enough revenue to meet the budget requirements established by the legislature; and, (2) it distributes the system's operating cost burden to classes of customers in such a way as to meet various state policy objectives.

Currently, the policy framework imbedded in the fare structure was under the pre-ESHB 2358 policy guidance and focused primarily on equity issues. The direction contained in ESHB 2358 provides a

new policy framework that WSF and the WSTC must consider in setting fares, one that puts demand management as a key policy objective in how pricing is established.

At this time, the focus of the pricing strategies analysis is to revisit and revise the policy framework for how the cost burden is distributed to classes of customers and to ensure that the pricing structure is optimized around the demand management goals. While the revenue implications of demand management strategies must be analyzed and understood, the purpose of this conceptual pricing strategy is to lay out options that would address the second objective. To that end, the concept and options put forward in this document adhere to the following principles:

- **Simplification.** Wherever possible, the fare structure will be simplified. However, where the goal of simplification conflicts with improving the ferry system's ability to manage vehicle demand, fare policy tools that allow for better demand management will have priority.
- **Transportation Demand Management.** Use price to modify travel behavior in such a way as to maximize the use of existing assets before making strategic investments in new capacity.
    - **Incentives.** The fare and pricing policy proposal will include incentives that encourage (1) an increase in total passenger ridership, (2) an increase in vehicle to passenger mode shift, (3) an increase in vehicle or total ridership during low demand periods, and (4) a decrease in the average size of passenger vehicles boarding during peak periods.
    - **Disincentives.** Given that system capacity constraints exist primarily for vehicles during peak travel times, the fare and pricing policy proposal is designed to manage vehicle demand during peak periods and discourage peak period vehicle ridership where appropriate.

In reviewing the current fare structure in light of the overarching policy principles, it is suggested that the pricing policy concept that will ultimately guide the development of the Long-Range Plan should focus on the following key elements:

- **Passenger fares.** The passenger fares should be simple and provide incentives for mode shift and increased walk-on ridership
- **Vehicle fares.** The vehicle fares should be designed to manage demand in peak periods and increase ridership during periods where excess capacity exists

## Passenger Pricing Policy

Given that there are very few capacity constraints for passengers on the ferry system, the passenger pricing structure provides the greatest opportunity for simplification and the provision of incentives to grow demand. Passenger pricing policies geared towards simplification of the fare structure and maximum incentives for mode shift fall along the following spectrum of options:

**Option 1: Lower fares but maintain existing relationship among routes and passenger classes**. This option keeps the existing passenger fare structure in place and either decreases all fares proportionally or maintains fares while certain classes of vehicle fare rise relative to passenger fares. Passenger frequent user discounts and youth discounts could be maintained or increased to provide further mode shift incentive.

| *Pros* | *Cons* |
|---|---|
| • Maximize ridership potential through reduced passenger fares<br>• Promote mode shift through incentives<br>• Customer base is already familiar with the fare structure | • Does not offer any advantages in terms of simplifying the fare structure<br>• Even with more riders, there will be a reduction in overall revenues that must be made up in other parts of the fare structure. |

**Option 2: One passenger fare for Down Sound routes and one passenger fare for San Juan Islands routes.** This option sets one passenger fare (and one senior/disabled passenger fare) for most routes and greatly simplifies the fare structure. While they add a layer of complexity back into the system, frequent user discounts and/or youth discounts could be maintained to provide reasonable fares to commuters and increase mode shift incentives. While the amount of the fare remains to be determined, the table below provides one possibility (fare set to lower than the Mukilteo-Clinton frequent user fare), designed to give all passengers a discount from the current fare:

**Example of a Simplified Passenger Fare Structure**

| | South, Central and North Sound Routes | Domestic Anacortes to/from San Juan Islands Routes |
|---|---|---|
| Passenger RT fare | $3.00 | $6.00 |
| Senior Passenger RT fare | $1.50 | $3.00 |

| *Pros* | *Cons* |
|---|---|
| • Simplifies fare structure greatly with a common fare on most routes<br>• Customer base receives discount from current fare<br>• Provides significant mode shift incentives<br>• Increases passenger ridership | • Not all routes will benefit equally from reduced fares.<br>• Even with more riders, there will be a reduction in overall revenues that must be made up in other parts of the fare structure. |

**Option 3: Fare-free passenger service.** A fare-free passenger service would maximize simplicity in the fare structure in addition to providing maximum mode shift incentives. Under this scenario, revenue loss implications are severe enough that additional tax funding for the system might be required to support operations, especially if the system wants to pursue a vehicle pricing strategy that provides pricing incentives for vehicles in low demand periods.

| *Pros* | *Cons* |
|---|---|
| • Maximum fare structure simplification<br>• Maximum mode shift incentives<br>• Increases passenger ridership<br>• Simplifies terminal operations, both in the terminal building and at the toll booths<br>• Reduces operating costs associated with fare collection | • Substantial revenue loss<br>• Potentially increased operating costs for passenger deck maintenance and cleaning<br>• Without a fare, there is a high likelihood that the system will attract problem riders increasing security and vandalism related costs |

## Vehicle Pricing Policy

Given that system capacity constraints are largely tied to peak period vehicle ridership, the greatest fare increases (i.e. disincentives) should be targeted to this group of riders. Ultimately the future vehicle pricing structure should be based on the premise that vehicle deck space is WSF's most valuable asset. There is more demand than available vehicle deck space at many times, and we need to use pricing to try to bring supply and demand in better alignment.

- **Vehicle pricing should be tied to demand and supply factors only.** Price vehicles based solely on factors associated with the value of the car deck and vary that price as demand varies:
  - **How much space they use**. Continue with some form of the CUBE policy
  - **How long they use the space**. Continue with some variation of the current TRE policy
  - **When they use the space**. Continue with some form of seasonal pricing and add (where applicable) day-of-week and time-of-day congestion pricing

In general, the pricing strategies detailed below are grouped by these categories, though there are a couple of over-arching vehicle pricing concepts that merit discussion upfront. These include:

- **Frequent User Discounts.** In order to allow for maximum demand management flexibility, elimination of frequent user discounts for vehicles will need to be seriously considered. Under the current system, frequent users are given the best possible price without restriction as to when they can ride. This results in a large portion of vehicles boarding paying the lowest fares during the most congested times and significantly reduces the ferry system's ability to manage demand during peak periods.

  If it is determined that vehicle frequent user discounts are an important and necessary component of providing reasonable fares to commuters, a frequent user discount could be applied in combination with any of the strategies mentioned below. However, to maintain the demand management paradigm, a vehicle frequent user discount ought to be applied as a discount against the fares as outlined below instead of a flat rate for travel at any time. In this way there could still be a frequency benefit, though the frequent user price would adjust based on congestion.

  The options with respect to frequent user discounts can thus be summarized as follows:

  **Option 1:** Eliminate frequent user discounts from the fare structure entirely

**Option 2:** Change frequent user discounts to be a percentage discount against the cash fare

**Option 3:** Allow frequent user discounts only during off-peak time periods

**Option 4:** Keep the current flat fare frequent user discount

- **Reservation System.** A reservation system would greatly facilitate the implementation of some of the strategies noted below – particularly time of day pricing – by mitigating some of the operational and queue-sorting issues inherent in the existing fare collection system. A reservation system has the added advantage of providing a guaranteed load incentive to partially compensate for the higher costs likely under the vehicle pricing strategies that target demand management in the peak. This would likely require a substantial capital investment by the ferry system, and it would also require additional policy decisions around what percent of the boat could be reserved during different time periods and associated fees (if any). These issues are being considered as part of the development of operational strategies.

## Pricing by How Much Deck Space a Vehicle Uses

The current CUBE policy uses a pricing by space occupied philosophy to price vehicles proportional to the amount of space they use. One strategy that would effectively decrease congestion is by reducing the average vehicle size during the peak. Thus the same vessel might accommodate more total vehicles and reduce the number left behind for a given sailing. The following options could be explored with respect to how WSF charges based on size of vehicle:

- **Option 1: Progressive pricing for larger vehicles**. WSF might consider a graduated pricing system that progressively prices large vehicles more for extra space used during peak periods. This would discourage large vehicles during peak periods and help ease congestion. This might be done in concert with incentives for larger vehicles to travel during lower demand periods.

- **Option 2: Pricing by Foot**. Instead of pricing by pre-defined size categories, the ferry system might consider pricing by foot. This would send a clear message that every foot counts and might encourage shifts into smaller vehicles in all current vehicle fare categories. A system like this would require investment in technology, but it has the potential to decrease congestion during peak periods by increasing vehicle throughput.

- **Option 3: Small Car Pricing**. Creation of a new, discounted small vehicle category would encourage passengers to shift into smaller cars where possible and increase total vehicle throughput during the peak. In a scenario where the frequent user discount is eliminated, this small car category might be priced at a level similar to the current vehicle frequent user discount price. Thus, the system would offer the same price option but change the incentive from frequency to smaller vehicles. The size requirements defining a “small car” remain to be determined, but should be set taking into account recent auto industry trends toward smaller vehicles and the growth in the market for urban commuter cars (e.g. the Smart Car, developed by Mercedes-Benz, which was recently introduced to the U.S. market).

## Pricing by How Much Time a Vehicle Occupies Deck Space

The existing tariff route equity (TRE) policy essentially prices routes relative to each other depending upon how much time a vehicle occupies space on each route. Within a given travel shed, prices are equalized so that price is not a factor in the choice among competing routes. For routes that do not have potential substitution effects, this policy provides a solid rationale for how fares on different routes relate. Where substitution effects do exist, WSF might consider modifications designed to manage demand:

- **Option 1: Pricing Southworth Routes Similar to Other Central Sound Routes.** For a number of reasons, including the interconnectivity between Southworth and Vashon and arrival at Fauntleroy versus Colman Dock, Southworth has been considered a South Sound route for pricing purposes. As Southworth and Bremerton are viable substitutes and Southworth experiences significantly more congestion than Bremerton, WSF might consider raising prices for Southworth routes to encourage more of a shift to the Bremerton route or to avoid incenting travelers to use the more congested corridor.

- **Option 2: Differential Pricing on Routes with Substitution Options.** Where customers have a choice about which route to use, the ferry system could explore differential pricing to move customers from a more congested route to a less congested one. This would apply to the following points of origination:

    - Bainbridge
    - Bremerton
    - Southworth
    - Vashon

## Pricing According to When a Vehicle Uses Deck Space

The current pricing structure includes some elements of a congestion and demand management system like seasonal surcharges and day of week variation on San Juan Islands routes. However, these variations are only evident to the cash fare customer and do not affect frequent users. For this reason, they have somewhat limited demand management benefits. The policies below assume elimination of frequent user discounts for vehicles, or at a minimum, a frequent user discount that would be applied to demand-adjusted fare.

Also, to fully implement these concepts and realize the full value of the demand management benefits, WSF would need to influence decisions in both directions on Island routes which currently collect fares in only one direction. These strategies might require toll collection in both direction or a reservation system which would address most of the toll collection requirements through pre-payment of fares.

- **Option 1: Time of day pricing**. Time of day pricing would include surcharges during the peak periods to manage demand and possibly discounts during off peak periods to increase ridership where the system has capacity. While possible without a reservation system, terminal operating challenges and the ability to provide the incentive of a guaranteed load to customers, make day

of day pricing more attractive if it goes hand in hand with a reservation system. While time of day pricing adds a significant amount of complexity to the existing vehicle fare structure, it allows for maximum flexibility in the provision of incentives and disincentives to manage vehicle demand.

- **Option 2: Day of Week Pricing.** This pricing structure could be extended to other routes (in addition to the San Juan Islands routes) that experience more pronounced congestion on certain days of the week.
- **Option 3: Seasonal Pricing.** The current pricing structure recognizes only two seasons: peak and non-peak. Actual ridership varies quite a lot within these seasonal windows, and WSF might consider changing its pricing structure to reflect three seasons: summer peak (likely July/August), shoulders (May-June and September-October), and winter (November-April). During the winter season, there are holiday weekends with significant demand which could be priced at a premium as well. This type of seasonal structure is currently in place on BC Ferries. This structure could also be used to help increase ridership during off-peak times when the system has excess capacity.

## Pros and Cons of the Potential Vehicle Pricing Policy

The vehicle pricing structure detailed above represents a radical shift from the current vehicle pricing structure and would need to be implemented incrementally. While different combinations of strategies provide different advantages and pose varying challenges, the pros and cons of a vehicle pricing strategy that prioritizes demand management can be summarized as follows:

***Pros***

- Significantly decreased congestion during peak periods (especially with a reservation system)
- Guaranteed load for customers during peak periods (with a reservation system)
- Increased flexibility to manage demand during daily, weekly and seasonal peak periods
- Support mode shift by making SOV travel more expensive during peak
- Depending on reduction in passenger fares, overall cost of an HOV might be mitigated
- Increased ridership in off peak periods
- Potentially increased vehicle throughput, if trips can be incented to shift to lower demand periods
- Potentially increased revenue potential to offset decreased passenger revenues and meet the transportation budget requirements
- Alternatives provided to customers could mitigate fare increases (i.e. elimination of frequent user discounts replaced by the addition of a small car fare)

***Cons***

- Increased vehicle prices during peak periods negatively affects many customers
- Increased complexity in the pricing system makes it more difficult to explain to customers
- Additional capital investment required (reservation systems and vehicle measurement systems)

# EFFECTIVENESS ASSESSMENT OF POTENTIAL PRICING STRATEGIES

The purpose of this analysis is to evaluate the potential effectiveness of possible pricing strategies that could be implemented as part of the overall operational and strategic initiatives contained in the Long Range Plan. This analysis considered a short list of potential pricing strategies that would address either revenue adequacy or transportation demand management goals.

Where possible, the WSTC-commissioned survey was used to assess the effectiveness of potential pricing strategies. The survey identified customers' willingness and ability to shift travel times and mode as well as their price sensitivity. The conjoint analysis, a survey module designed to analyze customers' mode shift decisions as they relate to price, was used to develop elasticity coefficients for subcategories of customers. The onboard survey results and conjoint analysis form the basis of the analysis that follows on the effectiveness of specific pricing strategies.

## Revenue Adequacy Strategies

The biennial transportation budget sets a revenue target for the ferry system. To meet this target, general fare increases above the 2.5% annual inflationary increases might need to be enacted.

### Fuel Surcharge

Fuel is a large and growing portion of the ferry system's operating costs. The volatile cost of fuel adds uncertainty to Ferries' operating expenses and in recent years has led to decreasing farebox recovery rates. For ferries to have self-sustaining operations, the risk associated with fluctuating fuel costs needs to be mitigated.

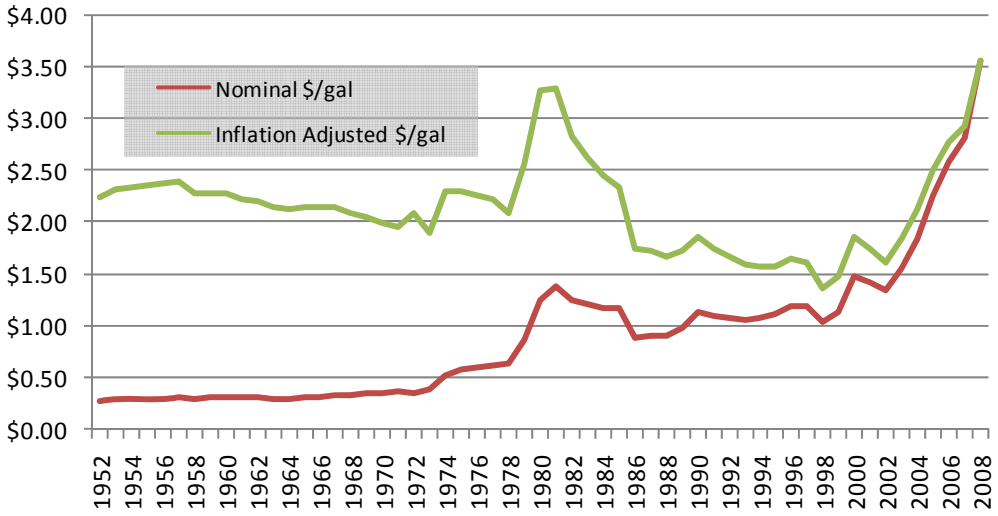
To mitigate this fuel risk, Ferries could implement a fuel surcharge that would automatically adjust fares to reflect increases in fuel prices above some pre-determined base fuel price. Under this program, a customer's total fare would be subject to automatic increases in periods of rapid fuel price escalation, effectively passing on this direct operating expense to those benefiting from the service.

A key analytical question involves how to determine the current base fuel price from which future fuel surcharges would be pegged. For the purposes of this Draft Plan it is assumed that the base price of fuel be set at a price equal to the average fuel costs as defined by the inflation-adjusted average cost of diesel from 1952-2008.

As shown in Exhibit 1 below, with a few notable exceptions, the average per gallon price of diesel fuel has been relatively stable over the period in question. As a result, setting the base price to the long-tem inflation-adjusted price of fuel would incorporate the "typical" level of fuel costs experienced by Ferries.

To the extent that the actual current cost of diesel would differ substantially (20% or more perhaps) from this long-term average, a fuel surcharge would need to need to be introduced.

## Exhibit 1
## Historic Fuel Prices (1952-2008)




**Source: , 2008.**

An approach to developing a fuel surcharge would be to establish a base fuel cost "budget" which reflects the long-term average cost of fuel and anytime the actual fuel costs exceed this "base budget" amount, a fuel surcharge would be added to the fare to cover the difference. To illustrate the potential impacts of such a surcharge, Exhibit 2 shows how the assumed 2.5% annual fare increases would be affected by the addition of a fuel surcharge. The November forecast of fuel prices would result in a relatively small overall fuel surcharge impact (0.6% per year) and would push average annual fare increases to 3.1% from the base 2.5%.

The September forecast included substantially higher future fuel prices, which would add a total of $270 million to the total fuel costs over the 22 year planning horizon. To meet this higher fuel cost requirement, fuel surcharges would need to average 2.0% per year and push the overall average annual fare increase to 4.5%.

## Exhibit 2
## Fare Implications of Fuel Surcharges

| | Average Annual Fare Changes | | |
|---|---|---|---|
| | Base Fare | Fuel Surcharge | Total |
| Base Fare | 2.5% | | |
| **Fuel Surcharge Scenarios** | | | |
| Global Insights Baseline (Nov) | 2.5% | 0.6% | 3.1% |
| Global Insights Baseline (Sept) | 2.5% | 2.0% | 4.5% |

## Transportation Demand Management

In addition to meeting revenue goals, fare policy will need to incorporate demand management strategies. The demand leveling called for by ESHB 2358 will be accomplished primarily through the extensive use of a reservation system, and the following analysis details options and incentives Ferries can use in conjunction with a reservation system to illicit mode shifts and other desirable behavior.

## Evaluative Criteria

Evaluation of pricing strategies began with a long list of options culled from other transportation systems in Washington and beyond, as well as the current research on transportation demand management.

In addition to the demand management impacts they are designed to produce, these options were evaluated against the following criteria:

Customer Service. “Improving the quality and timeliness of service” is a stated goal in the Ferry Bill. Therefore, it was important for pricing strategies to be evaluated according to their effects and perceived effects on the service provided to different customer groups. Questions included:

How would the public respond to the new strategy and its perceived effect on service?

Does the strategy affect different user groups in different ways? If so, how? Do certain user groups have special needs that should be addressed?

Impacts on Users, Capacity, and Communities. Ferries is an extension of the state highway system. Certain pricing strategies could be seen by users, policymakers, and elected officials as an “unfair” burden. The analysis of options considered the potential for perceived and/or actual equity concerns and identified how these might be mitigated while achieving the broader demand management or revenue goals. Questions included:

- What groups, if any, face a disproportionate burden or benefit from the proposed pricing strategy? Can the strategy be modified to address these concerns? Are there other ways of mitigating these potential impacts while maintaining the demand management or revenue benefits of the strategy?
- What is the public perception of the strategy?
- How might customer behavior change as a result of a proposed pricing strategy? What do the results of the WSTC survey suggest about customer reactions?
- How does this strategy affect users, system capacity, and communities?

Under these evaluative criteria, strategies like high occupancy tolling lanes (HOT) lanes and other programs that would allow customers to pay to jump the line were eliminated. These types of strategies had little impact on reducing peak period demand and raised significant equity concerns.

## Methodology

Pricing strategies intended to have demand management benefits were evaluated in terms of their impact on ridership and revenues by route.

### *Ridership*

For the purposes of evaluating pricing strategies targeted at specific times of day and classes of rider, projected annual ridership by route and customer class was needed (see Appendix G for ridership annualization methodology). This had to be extrapolated from other inputs. The following list includes the data used for this purpose:

- Wednesday in May westbound 4-hour peak projections for vehicles, walk-ons, and total riders (by route for the years 2006, 2010, 2020, 2030)
- Actual ridership by route, sailing, and ticket type (cash and pre-paid vehicles, cash and pre-paid motorcycles, vehicles 20-49', vehicles 50' and over, passengers by fare type) for the following weeks:
  - January 14, 2006
  - May 13, 2006
  - August 12, 2006

Using the ratio of peak 4-hour projections in May 2006 to actual peak 4-hour ridership on a Wednesday in May 2006, weekly May westbound projected ridership that corresponded to the 2006, 2020, and 2030 4-hour projections was calculated. Using these same route-level ratios, weekly August and January ridership was calculated. These numbers were then annualized assuming that May ridership levels for 24 weeks, January levels ridership for 19, and August ridership levels for 9. This formed the basis from which ridership fluctuations were calculated under different pricing scenarios.

Fluctuations in ridership were calculated using results from the WSTC-commissioned survey where available. As riders were surveyed about price sensitivity and ability to shift time or mode, analysis of the conjoint results provided elasticity coefficients by travel shed for walk-on and vehicle riders making discretionary and non-discretionary trips during the peak window or other times. A unique set of coefficients was provided to analyze each increment of price increase or discount under the following independent scenarios:

- Peak period surcharge
- Off-peak discount
- Walk-on discount
- Differential Vehicle and passenger price increases

The following example shows these coefficients were used to analyze ridership impacts for a 10% peak period surcharge.

## Exhibit 3
## Step By Step Example to Calculate 2030 Ridership Fluctuations in the Central Sound Resulting from a 10% Peak Period Surcharge

**Step 1:** Elasticity Coefficients from the Conjoint Analysis specific to a 10% peak surcharge:

| | Discretionary Trips | | | | | Non-Discretionary Trips | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Walk* | *Peak* | *Early* | *Late* | *None* | *Walk* | *Peak* | *Early* | *Late* | *None* |
| *South* | 0.46 | -1.20 | 0.63 | 0.64 | 0.65 | 0.43 | -1.06 | 0.58 | 0.57 | 0.54 |
| *Central* | 0.27 | -1.02 | 0.54 | 0.55 | 0.52 | 0.33 | -0.94 | 0.50 | 0.49 | 0.46 |
| *North* | 0.29 | -0.80 | 0.41 | 0.42 | 0.39 | 0.25 | -0.60 | 0.35 | 0.34 | 0.34 |
| *Island* | 0.19 | -1.23 | 0.60 | 0.63 | 0.58 | 0.86 | -1.40 | 0.85 | 0.76 | 0.83 |
| *Multi -ride* | 0.31 | -1.01 | 0.54 | 0.55 | 0.50 | 0.35 | -0.87 | 0.50 | 0.50 | 0.48 |
| *Full Fare* | 0.25 | -1.00 | 0.51 | 0.52 | 0.52 | 0.30 | -0.98 | 0.48 | 0.46 | 0.44 |
| *Peak* | 0.28 | -1.01 | 0.53 | 0.54 | 0.51 | 0.33 | -0.90 | 0.50 | 0.49 | 0.47 |
| *Off-Peak* | 0.30 | -0.97 | 0.52 | 0.52 | 0.53 | 0.31 | -0.90 | 0.46 | 0.45 | 0.42 |
| ***Overall Avg.*** | **0.28** | **-1.01** | **0.53** | **0.54** | **0.51** | **0.33** | **-0.90** | **0.49** | **0.49** | **0.47** |

**Step 2:** Projected 2030 Annual ridership by travel shed (assume 55% are discretionary trips and 45% on non-discretionary trips per WSTC survey):

| | ***Weekday Peak Vehicles*** | ***Total Vehicles*** | ***Total Passengers*** | ***Average Vehicle Fare (2006)*** | ***Average Passenger Fare (2006)*** |
|---|---|---|---|---|---|
| ***South*** | 776,664 | 2,900,574 | 2,203,459 | 7.33 | 1.56 |
| ***Central*** | 1,906,068 | 6,528,644 | 10,516,167 | 11.86 | 2.35 |
| ***North*** | 813,470 | 3,413,166 | 4,037,725 | 7.55 | 1.59 |
| ***Island*** | 302,427 | 1,212,988 | 1,465,294 | 18.85 | 5.20 |
| ***TOTAL*** | 3,798,629 | 14,055,372 | 18,222,645 | 10.48 | 2.32 |

**Step 3:** Calculate Vehicles lost from peak due to 10% surcharge

For Central Sound: [-1.02 * 10% * (1,906,068 * 55%)] = -107,000

\+ [-0.94 * 10% * (1,906,068 * 45%)] = - 81,000

- 188,000

**Step 4:** Calculate Vehicles who would switch to an earlier or later non-peak time:

For Central Sound: (0.54 + 0.55)/(0.54+0.55+0.27+0.52)* 107,000 = 62,000

\+ (0.50 + 0.49)/(0.50+0.49+0.33+0.46)* 81,000 = 45,000

107,000

**Step 5**: Calculate Vehicle who would shift to walk-on:

For Central Sound: (0.27)/(0.54+0.55+0.27+0.52)* 107,000 = 15,000

\+ (0.33)/(0.50+0.49+0.33+0.46)* 81,000 = 15,000

30,000

**Step 6**: Calculate Vehicles who would leave the system:

For Central Sound: (0.52)/(0.54+0.55+0.27+0.52)* 107,000 = 30,000

\+ (0.46)/(0.50+0.49+0.33+0.46)* 81,000 = 21,000

51,000

**Step 7**: Repeat for other travel sheds

### *Revenue*

For each of the pricing strategies examined, the incremental revenue impacts were calculated by applying corresponding fares to the revised ridership numbers. Using the example in Exhibit 3 above, the incremental revenue impacts of a 10% peak period surcharge in the Central Sound would be calculated as follows:

| | |
|---|---|
| Peak Vehicle Riders: | (1,906,000 - 188,000) * (11.86 * 10%) = $2,038,000 |
| + Non-Peak Vehicle Riders: | $0 (time shifting vehicles pay same fare as they had previously) |
| + Mode Shift: | 30,000 * (2.35 – 11.86) = - $ 285,000 |
| + Left the System: | - 51,000 * 11.86 = - $ 605,000 |
| = Incremental Impact: | $ 1,148,000 |

The remainder of this document describes the ridership and revenue impacts of various pricing strategies using the methodology just described.

## Key Strategies

The following five strategies represent incentives and disincentives that were identified to have the greatest potential impact with respect to transportation demand management goals while minimizing potential negative impacts to customers and communities

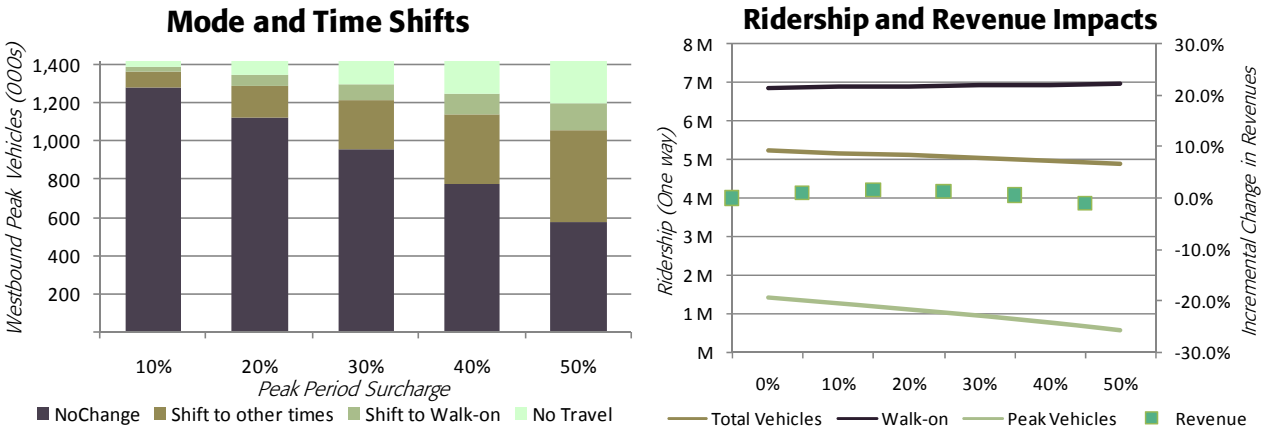
### Peak Period Surcharges

“Peak” periods can be defined as a time of day (as with the 4-hour afternoon peak discussed earlier), days of the week (on certain commuter routes), or seasons during the year. A surcharge could be applied during any one of these peak periods to reduce demand during that period. Ferries currently applies a surcharge of 25% in the summer (35% on Anacortes/San Juan Islands routes) to its fare structure.

**Time of Day Pricing.** A time of day pricing would target vehicles traveling during the most congested times of day, when capacity constraints are at their tightest. Based on survey responses, many riders have some flexibility in when they could travel, and a time of day surcharge would be an effective way to encourage time shifts out of the peak, as well as mode shifts.

Exhibit 4 below shows the estimated system-wide effects of a time of day surcharge. Under increasingly higher peak period surcharges, vehicles priced out of the peak would primarily move to other times, some would leave the system, and a smaller portion would shift to walk-on. While these shifting effects are large (at a 50% peak period surcharge, over half of the vehicles normally traveling during the peak would change behavior), the revenue gains are small. Furthermore, at the high end of surcharges analyzed, the revenue impacts would be negative.

**Exhibit 4**
**Estimated Effects of a Time of Day Peak Surcharge**




Because of the negative effects a time of day surcharge would have on customers (especially those unable to shift travel patterns) and because of the minimal revenue benefits, this strategy is not currently being considered by Ferries. For the purposes of this Draft Long-Range Plan, peak period vehicle capacity constraints will be addressed primarily through a reservation system. However, this is an effective demand management strategy and, as such, it is recommended that Ferries revisit the potential for time of day pricing periodically in the future.

**Seasonal Surcharges.** Ferries' fare structure currently contains a seasonal surcharge component. From the months of May to October, the cash fare is increased on all routes by 25% and on Anacortes-San Juan Islands routes by 35%. Because customers who use the frequent user and multi-ride fare purchase options are exempt from this surcharge, it has the desirable effect of targeting recreational users.

Actual ridership trends show a seasonal peak that is not evenly spread between May and October. July and August represent the "peak of peak" with much higher proportions of cash-paying recreational users. As vehicle capacity constraints are significantly worse during these months, Ferries should consider adding a third level to its seasonal pricing structure that allows for a higher surcharge during July and August.

Because this surcharge would target just a small portion of riders (discretionary trips in July and August), revenue impacts are also small. Assuming a July/August cash fare surcharge of an additional 20%, Ferries might expect to increase total annual revenues by approximately 2% (based upon elasticity assumptions from the Ferries revenue model). With respect to ridership effects, this same scenario would have the effect of decreasing July/August vehicle ridership by 1.5-4.0%, depending upon the route. Routes with more summertime tourist traffic, like Anacortes and Port Townsend, would see larger effects.

**Frequent User Policy.** Under the current system, frequent users are given the best possible price without restriction as to when they can ride. This policy results in a large portion of vehicles paying the lowest fares during the most congested times, and significantly reduces the ferry system's ability to manage demand during peak periods. However, frequent user discounts are viewed by regular customers as an important and necessary component of providing reasonable fares to daily commuters.

A couple of options for modifying frequent user discounts were considered, including applying the discount to the posted cash fare (instead of maintaining it as a flat price) or applying the discount to the posted cash fare but exempting certain surcharges (like a potential time of day or seasonal surcharge).

Because frequent users represent a large portion of trips year round, policy changes like these would have significant effects on revenue and ridership, depending upon other elements of the fare structure. Given their potentially harmful effects to customers with the least amount of flexibility to change trip time and mode, they are not proposed in the current Draft Long-Range Plan.

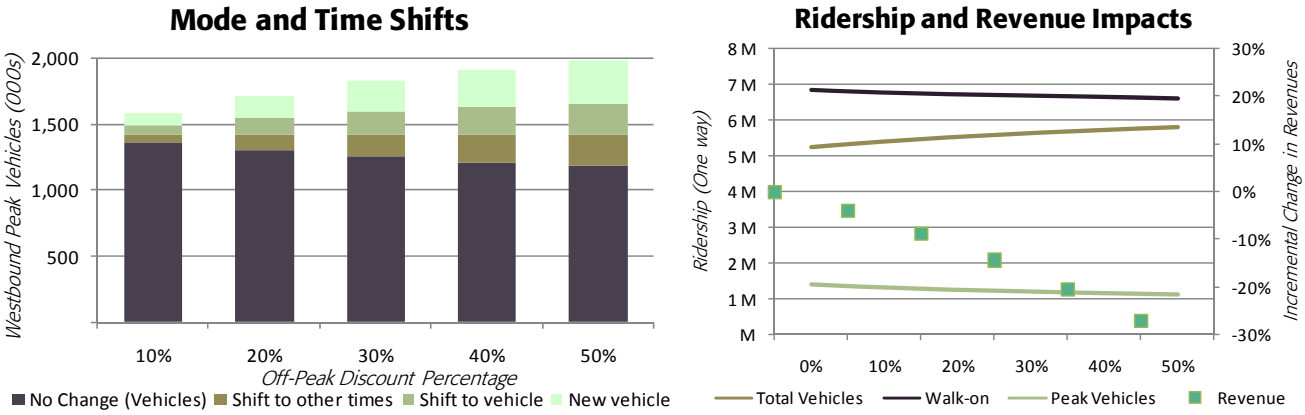
### Off-Peak Discounts

Off-peak discounts are a pricing incentive designed to encourage existing vehicle travelers to use lower demand sailings (thereby reducing pressure during peak periods) and to attract new riders to the system (such as commercial and recreational vehicle traffic) that can make use of low demand periods but might be priced out of the system today.

Exhibit 5 below shows the estimated system-wide effects of an off-peak discount program. Under increasingly higher discounts, vehicles currently traveling in the peak would be incentivized to move to other times, new vehicles would come to the system and some customers currently walking-on would drive instead.

While these shifting effects are large (at a 50% off-peak discount, almost 20% of the vehicles normally traveling during the peak would change behavior), the revenue losses are also large (nearly 30% decrease in total revenues at the far end of the scale). Furthermore, some less desirable shifting effects from walk-on to drive-on are likely to occur.

## Exhibit 5
## Estimated Effects of an Off-Peak Discount



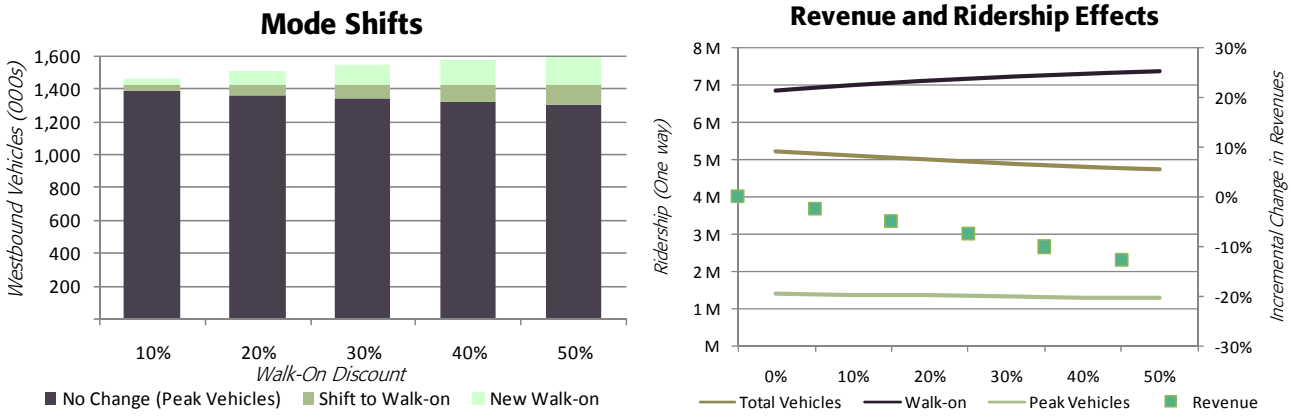

Because of the substantial negative effects an off-peak discount would have on system revenue, a large-scale application of this strategy is not currently being considered by Ferries. Depending upon the availability of other operating revenues and subsidies, Ferries might choose to pursue a more targeted discount programs for commercial or recreational vehicles, for example.

### Passenger Discounts

Like off-peak discounts, passenger discounts are a pricing incentive designed to encourage existing vehicle travelers to shift modes and to attract new passengers to the system. A passenger discount program would likely have a greater impact in conjunction with the transit enhancements described above.

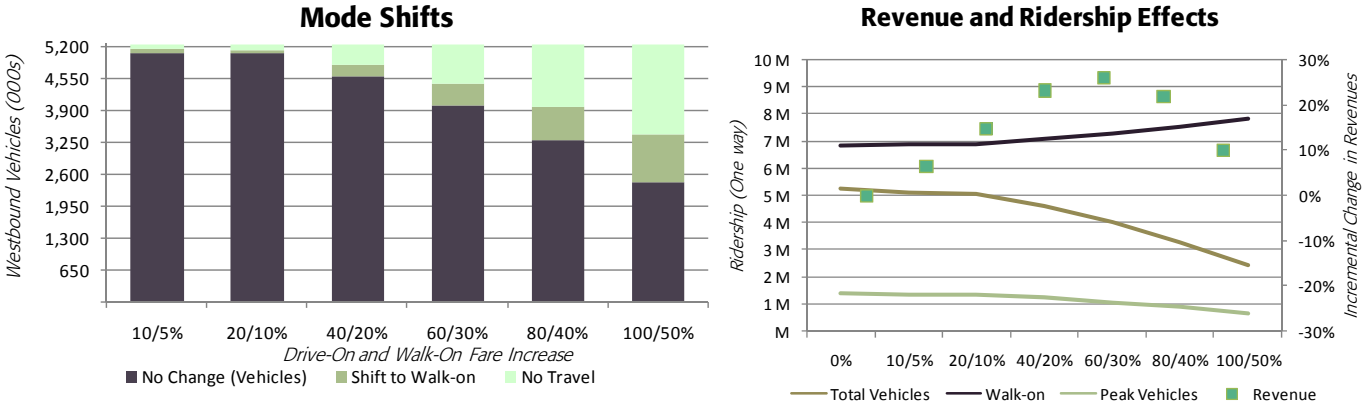
Exhibit 6 below shows the estimated system-wide effects of a passenger discount program. Under increasingly higher discounts, vehicles currently traveling in the peak would be incentivized to mode shift to walk-on (though not at high rates), and new passengers would come to the system. While the shifting effects are not as large as with other strategies, partly because passenger fares are quite low to begin with, and even a 50% discount is not much in terms of dollar amount (especially relative to vehicle fares). Furthermore, there are significant negative revenue impacts associated with this strategy.

## Exhibit 6
## Estimated Effects of a Passenger Discount




Because of the substantial negative effects a passenger discount would have on system revenue, this strategy is not currently being considered by Ferries. Instead, with any across the board fare increase Ferries needs to enact in order to meet revenue requirements, passenger fares will be increased at only half the rate of vehicle fares. Exhibit 7 below shows general vehicle fare increases, with passenger increases at half of vehicles.

## Exhibit 7
## Estimated Effects of Differential Vehicle and Passenger Fare Increases




This strategy has a couple of advantages. First of all, an increasing differential between vehicle and passenger fares encourages vehicles to mode shift, and secondly, the strategy is revenue positive (although less so at high ends of the scale). It is important to note that these price increases are intended to occur over the 22-year planning horizon, and any fare increases will be implemented gradually and with opportunity for public input.

It should also be noted that this analysis is using short term elasticity effects from the WSTC-commissioned survey, and there is much greater uncertainty about these effects in the long run (see section 0 for a more complete discussion).

### Small Car Discounts

Ferries already charges vehicles based on their size, and a small car discount would be a special incentive to encourage people that must drive-on to take smaller cars, effectively allowing more vehicles to fit on deck. It has the advantage of increasing vessel carrying capacity by reducing average vehicle size and providing a lower cost vehicle option that still offers a demand management benefit to the system.

As with the July/August summer surcharge, a small car discount would target a very small portion of total riders. Depending how the discount is set and what size vehicle would qualify, it could attract some new riders to the system, but would likely draw most of its participants from the pool of standard vehicles. The net revenue effects would therefore be negative but probably on a very small order of magnitude (1-2% system-wide assuming the size cut-off is quite restrictive).

A policy decision exists around the definition of a “small car.” Most newer vehicles classified as “subcompact” have a length at or just over thirteen feet, though some very small commuter cars that are popular in Europe and Asia are being successfully introduced to the US market. A “small car” would likely be defined as a vehicle less than 12-14 feet in length.

### Non-Resident Pricing

Another strategy that may have some demand management benefits and takes a different approach to fare equity, is a non-resident pricing program. Conceptually, Washington State residents are contributing to Ferries through their taxes and also when they use the ferry system through their fares. This would increase somewhat the total contribution from the non-resident to be more on par with the resident.

Per initial research undertaken by the Office of the Attorney General, such a program might be feasible as long as “non-resident” is defined as out-of-state. It is uncertain the ridership or revenue impact such a policy might have, and Ferries will continue to evaluate this option for potential future implementation.

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX L
## ONE-POINT TOLL COLLECTION TECHNICAL MEMORANDUM

Washington State Department of Transportation

Washington State Ferries

# OVERVIEW OF ONE-POINT TOLL COLLECTION POLICY

## OVERVIEW

Per legislative direction included in the 2008 Transportation Budget, The Washington State Department of Transportation Ferries Division (WSF) was asked to "develop pricing policy proposals and evaluate the one-way fare policy in effect on some routes" (section 225 (8)(a)(iii)). The one-way fare policy for passengers (and vehicles in certain instances) is thought to have some negative effects: (1) it may lead to some lost revenues to the ferry system; (2) it affects how customers use the ferry system, where there are drive-around options; and (3) it potentially hinders WSF's ability to implement adaptive management pricing strategies. In light of recent long range planning efforts and the specific direction included in ESHB 2358 to evaluate pricing strategies designed to manage demand, the 2008 Legislature requested further analysis of the one-way fare policy (i.e. "one-point toll collection") in effect on many routes.

## ONE-POINT TOLL COLLECTION: WHERE AND WHY

The WSF system carries over 23 million passengers per year. Given the high volume of sailings, the unique geography of the Puget Sound, and the operating expenses associated with fare collection, WSF collects fares in only one direction on many routes in the system. One-point toll collection has been an efficient way to minimize costs for both riders & WSF. Costs associated with toll collection include transaction times for consumers and WSF staff, operating costs to the ferry system, and capital costs for toll collection infrastructure. By not building and staffing additional toll booths at many terminals, WSF has achieved substantial cost savings.

One-point toll collection is based on the assumption that passengers departing from a terminal where passenger tolls are not collected will be returning to their point of origin via a westbound ferry, subsequently paying the fare at the westbound terminal. The premise is the same for vehicles, though one-point toll collection for vehicles exists only on island routes that do not have a drive-around option. Exhibit 1 summarizes toll collection policies by route.

**Exhibit 1**
**Fare Collection Policy by Route**

| Route | Passengers | Vehicles |
|---|---|---|
| **Vashon Island routes** | 1-point toll collection (collected to going to Vashon) | 1-point toll collection (collected to going to Vashon) |
| **Central Sound** | 1-point toll collection (collected Westbound) | Collected each way |
| **Port Townsend-Keystone** | Collected each way | Collected each way |
| **Mukilteo-Clinton** | 1-point toll collection (collected Westbound) | Collected each way |
| **San Juan Islands** | 1-point toll collection (collected to going to Islands) | 1-point toll collection (collected to going to Islands) |
| **International service** | Collected each way | Collected each way |

Source: BERK, 2008.

## EFFECTS OF ONE-POINT TOLL COLLECTION

To date, the policy has been that the total cost savings associated with one-point toll collection outweigh potential negative effects. The negative impacts can be divided into two categories, those that affect current operations and those that may have an impact on the potential for new operational and pricing strategies.

The impacts associated with current operations are the result of travel behavior effects of the one-point toll collection of passenger fares on routes where there is a drive-around option. As a result, the relevant cost savings is the avoided cost of collecting passenger fares on the Central Sound routes (Fauntleroy-Southworth, Seattle-Bremerton, Seattle-Bainbridge, Edmonds-Kingston) and the Mukilteo-Clinton route.

In 2004, as part of a review of the one-point toll collection policy for the Tariff Policy Committee, WSF estimated that these avoided costs would amount to $2.2 M in annual terminal operating costs and approximately $900,000 in one-time costs for terminal modifications to install fare collection equipment. Updating these costs to reflect inflation since 2004 would result in annual operating cost savings of $2.5M and a one-time capital cost savings of $1M.

However, these cost savings do come at a cost. The undesirable consequences for the ferry system of collecting passenger fares in one direction on routes where there is a drive-around option are the result of customers choosing to travel more frequently in the eastbound direction.

### Traffic Imbalance

As a result of one-point toll collection Due to the policy, the system experiences more eastbound than westbound trips on average. It is difficult to measure this imbalance precisely, since information on eastbound passengers is not collected on affected routes. Using vehicle traffic as a proxy for passenger traffic, the 2004 analysis found that:

- There was a considerable imbalance in travel on several routes, in particular Fauntleroy-Southworth and Seattle- Bremerton
- The imbalance in travel had been exacerbated by the increase in fares. During the period studied total travel declined, and westbound trips declined faster than eastbound trips
- The "free" passenger fares in the eastbound direction seemed to lead to higher eastbound traffic

The 2006 Origin-Destination Survey corroborated these findings. It noted that the vast majority of ferry travelers in 2006 make a round trip on the same day. A high percentage of people (93%) taking round trips use the same ferry on their return trip, with four percent returning on another ferry route, and the remaining three percent driving around. While there is more variance at the route level, the 3% systemwide average reflects the imbalance in traffic caused by the one-point toll collection policy.

With the recent opening of the Tacoma Narrows Bridge (TNB), driving around has become a more attractive option to commuters whose destination is either Bremerton or Southworth, as these commuters now have easier access and shorter drive times. A roundtrip that includes an eastbound ferry ride and a westbound drive over the Tacoma Narrows Bridge is also increasingly attractive given that TNB also has a one-point toll collection policy in the opposite direction. To use TNB, eastbound drivers are tolled but westbound drivers are not. Therefore, by taking an eastbound ferry and returning westbound over the TNB, a passenger pays no toll (though there would be a charge for the vehicle on the eastbound ferry trip).

## Revenue Effect

The imbalance in traffic described above results in some amount of "lost" passenger revenues for the ferry system. The precise amount of revenue lost is difficult to calculate for a couple of reasons. First, eastbound passenger information is not collected on affected routes, and therefore the true passenger traffic imbalance is unknown. Assuming vehicle trips are a reasonable proxy for passenger trips, it is still not appropriate to assume that 100% of eastbound passengers would take a westbound trip if they paid half of the fare at each terminal. Some riders are likely to be lost off the system entirely due to price sensitivity, while others simply make one-way trips and return via other manners due to the unique nature of their trips.

Assuming the vehicle and passenger eastbound/westbound traffic imbalance are the same (with one to two passengers per vehicle) and assuming all eastbound trips should have a corresponding westbound trip, lost passenger revenues are likely in the range of $1-2 million annually. For the reasons stated above, this estimate probably overstates the amount of revenue that could be recaptured if tolls were collected in both directions.

While this number is not insignificant, it represents a very small portion of the system's total annual fare revenues. Furthermore, the combined capital and operating costs required to implement toll collection at every terminal are estimated at to be greater than this amount.

# ONE-POINT TOLL COLLECTION AND ADAPTIVE MANAGEMENT STRATEGIES

In addition to revenue impacts, the one-point toll collection policy needs to be evaluated in the context of adaptive management strategies included in the Long-Range Plan.

## Pricing Strategies

Part of the recent long range planning efforts included analysis of pricing strategies like peak period surcharges and off peak discounts, designed to change passenger behavior and alleviate congestion during the peak. To the extent that fares are not collected at every terminal and a pricing signal cannot be sent, the one-point toll collection policy could render these types of pricing strategies ineffective. A peak period surcharge could not be enacted to reduce congestion during the morning commute off of Vashon Island, for example, without a different toll collection policy.

Pricing strategies that would be impacted by one-point toll collection, like peak period surcharges, are geared towards vehicle traffic (where capacity constraints are most severe). Vashon Island routes and the San Juan Islands routes are the only ones in the system with a one-point toll collection policy for vehicles. If it were determined that congestion pricing should be implemented to better balance demand, then fares would need to be collected in both directions. However, at this time congestion pricing is not recommended. Rather, the principal demand leveling strategy (at least initially) is proposed to be a vehicle reservation system.

## Operating Strategies

A reservation system is the key adaptive management strategy put forth in the Long-Range Plan. With the potential implementation of a reservation system, WSF will need to evaluate and potentially modify toll collection policies more broadly for both vehicles and passengers. A fully integrated reservation system is tied to fare collection, with the expectation that fares will be collected at the time of reservation. This raises a number of questions regarding fare collection that go well beyond one-point toll collection policies.

An extensive reservation system pre-design that includes examination of fare collection policies (including one-point toll collection) to identify where changes would need to occur and the cost of those changes is expected during the 2009-11 budget cycle. Until that effort is complete, firm recommendations on what, if any, changes are needed to the one-point toll collection policy are premature.

# NEXT STEPS

If it proceeds with a reservation system, WSF will need to ensure that the system is fully integrated with fare collection systems and policies. It is expected that some modifications to fare collection policies will be proposed as part of the reservation system pre-design effort. Depending upon what those modifications are, one-point toll collection may become less of an issue. If not, WSF may need to revisit one-point toll collection policies in conjunction with other fare collection changes needed to successfully implement a reservation system.

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX M
## SCENARIO A AND SCENARIO B

# SCENARIO A AND SCENARIO B

## INTRODUCTION

Given the economic conditions prior to and during the 2009 legislative session, and the scale of the funding needs that the State was facing in the highway program, in addition to the continuing ferry needs, it was necessary to consider the implications of a future where state funding could not realistically keep up with the needs of the ferry system.

As a result of these challenges, the Revised Draft Plan put forward two different visions of a future for WSF for consideration. These scenarios represented the realistic bookends of a range of service and capital investments that sought to balance service goals and long-term funding requirements.

Scenario A assumed that current levels of service remained constant with minor improvements, operational strategies were implemented over time, and several new vessels would come online. Scenario B assumed a reduced State-run marine highway system. These scenarios were an initial response to ESHB 2358, and described a range of possible futures for the State ferry system. They provided the 2009 State Legislature with a framework for decision-making about service and capital investments, and long-term funding needs.

Scenario A and Scenario B as described in the Revised Draft Plan are presented below.

## 1. SCENARIO A

Scenario A starts with the assumption that WSF will continue to own and operate the current system. It will build a program that meets the legislative intent of ESHB 2358, while considering the funding realities facing not only WSF, but the overall state transportation system.

A key planning objective for Scenario A is to first maximize the use of existing assets and facilities through the deployment of the adaptive management strategies (operating and pricing) discussed previously. Capacity improvements were then evaluated in terms of the relative costs and benefits of each.

It is important to note that WSF is facing a significant level of capital reinvestment over the next 22 years as almost half the fleet and several of the busiest terminals will need to be renovated in this timeframe. These investment needs are a higher priority than any investments in new capacity and were a key factor in weighing the relative costs and benefits of expanding services.

As discussed previously, Scenario A should be viewed as WSF's proposal for the most that can be reasonably delivered over the next 22 years, given the needs of the ferry system and the funding constraints.

## 1.1 Operating Program

The package of operating and pricing strategies will improve the overall effectiveness of ferry services and increase the utilization on many routes. The proposed vehicle reservation system will be such a fundamental change in how customers will make use of ferry services that it is very difficult to estimate the actual ridership response. As a result of this, and the overall funding challenge facing WSF at this time, Scenario A proposes minor service expansions. There will also be minor capacity improvements related to the vessel procurement program.

### Proposed 2030 Service Details

The proposed 2030 vessel deployment plan is shown in Exhibit 1.

**Exhibit 1**
**Summary of Proposed Fleet Deployment for Scenario A**

| | | Proposed Fleet Deployment Plan: Scenario A | | |
|---|---|---|---|---|
| **Route** | **# of Vessel** | **Fall, Winter, Spring** | **Shoulder** | **Summer** |
| Bainbridge | 2 | 2 Jumbo | | |
| Bremerton | 2 | 2 Large | | 1 Large<br>1 Jumbo |
| Clinton | 2 | 1 Large<br>1 Medium | | 2 Large |
| Kingston | 2 | 2 Jumbo | | |
| Point Defiance | 1 | 1Small | | |
| Port Townsend | 1 or 2 | 1 Small | 2 Small | |
| San Juans & Sidney | 3 or 4 | 2 Large<br>1 Med. (Sidney ex. Winter) | | 3 Large<br>1 Med |
| Interisland | 1 | 1 Sm. (winter) | 1 Mid-Size | |
| Southworth-Fauntleroy | 1 | 1 Medium | | |
| Vashon-Fauntleroy | 2 | 2 Medium | | |
| Vashon-Southworth | 1 | 1Small | | |
| **Total Deployed** | | **18** | **19** | **20** |

| Vessel class | Vehicle capacity |
|---|---|
| Jumbo | 188-202 |
| Large | 144 |
| Medium | 124 |
| Mid-Size | 87-90 |
| Small | 34-64 |

### Potential Future Service Additions

Scenario A adds modest amounts of vehicle carrying capacity to the WSF system by replacing some retiring vessels with ones that are slightly larger.

After transit enhancements, reservations, and pricing strategies are in place, WSF should re-examine their effectiveness in managing vehicle demand.

If traffic grows faster than anticipated and there is a need to add service to routes, potential improvements are:

- Create a Southworth to downtown Seattle route.
- Add service hours to one of the Anacortes/San Juan Islands vessels during the summer schedule to allow an additional mid afternoon sailing and a late evening sailing.
- Add service hours to one of the Port Townsend/Keystone vessels in the summer months.
- Add service hours to the Seattle/Bremerton route to close some of the gaps in the mid-day and late evening schedule.
- Add a third boat to Edmonds-Kingston, requiring a new operating slip and railroad grade separation at Edmonds.

### Seattle-Bainbridge

- Two 202-car Jumbo Mark II vessels year round.

### Seattle-Bremerton

- With the completion of the third new 144-car vessel in 2017, this route's assignment is two 144-car vessels in the fall/winter/spring; one 144-car and one 188-car for the 14-week summer.

### Mukilteo-Clinton

- Two 144-car vessels in summer, one 144-car and one 124-car in the fall/winter/spring. The first new 144-car vessel would be assigned to the route summers only starting in 2013. The second 144-car vessel would be assigned to the route year-round starting in 2015.

### Edmonds-Kingston

- One 202-car Jumbo Mark II and one 188-car Jumbo Mark I year-round.

### Fauntleroy-Vashon

- Two 124-car vessels, operating in direct service between Fauntleroy and Vashon.
- The two 87-car Evergreen Class vessels would be retired in 2015 and 2017 and replaced on the route with 124-car vessels.

### Fauntleroy-Southworth

- One 124-car vessel, operating in direct service between Fauntleroy and Southworth.

### Vashon-Southworth

- A small vessel, operating between Vashon and Southworth to allow for direct service on Fauntleroy-Vashon and Fauntleroy-Southworth and increase the overall capacity on both of these routes.

### Point Defiance-Tahlequah

- This route would be served by a 64-car Island Home Class vessel on a 16 hour/day schedule, replacing the 48-car Rhododendron by 2012.

### Port Townsend-Keystone

- Under this proposal, one 64-car Island Home Class vessel would be assigned to the route year round by mid-2010. A second 64-car Island Home vessel would be assigned to the route for eight hours/day in the shoulder and summer schedule periods starting in 2011.

### San Juan Islands and International

Winter. Currently there is no Sidney service during the winter. Under this proposal, the San Juan Islands would be served by two 144-car vessels, one 124-car vessel, and a 64-car Island Home as the interisland boat. As with the existing winter schedule, the interisland vessel would not operate on weekends, and one of the 144-car vessels would be crewed nine hours per day Monday through Thursday.

Spring and Fall. Sidney service would be provided for one round trip per day with the 124-car vessel Chelan. Anacortes-San Juan Islands service would be provided by two 144-car vessels for 16 hours/day and with the 124-car vessel when it is not engaged in Sidney service. The 90-car Sealth would provide interisland service and is available to make one round trip to Anacortes on weekends to assist with peak weekend traffic. This vessel assignment would be implemented with the construction of the first 144-car vessel in 2013.

Summer. Two round trips to Sidney with the 124-car Chelan, three 144-car vessels would be assigned to the route from Anacortes to the San Juan Islands.

Interisland. The interisland vessel provides necessary connections between the four ferry-served San Juan Islands. By utilizing one vessel to provide interisland service, the other vessels on the route are able to be scheduled in more efficient ways to move traffic between the San Juan Islands and the Anacortes/Skagit County mainland. For instance, a mainland vessel can make up to five round trips in a 16-hour operating day if it does not have to operate on the interisland circuit; making interisland stops would reduce its overall capacity to three round trips in a 16-hour operating day.

As there is a considerable amount of truck traffic on the interisland route, and there are multiple destinations, so traffic either has to turn around on the vessel or back on, it is important that the interisland vessel has a relatively unobstructed vehicle deck. For future projected winter service volumes, an Island Home class 64-car vessel should be adequate for the service. For the Spring, Summer, and Fall, however, the 90-car Sealth is proposed as an interisland vessel for these reasons:

- Unobstructed car deck for turning large interisland vehicles around instead of backing on
- Flexibility to use on Anacortes based route on weekends when interisland traffic is lower; potentially to address recreational travel sensitivity tests which indicate the possibility for higher growth rates during those time periods.

### Changes in Financial Assumptions

Since release of the Draft Long Range Plan on December 19, 2008, a number of changes have been made to the revenues and costs presented in this document.

Many of the updates reflect programmatic changes that are discussed in detail in this Revised Draft Plan.

In addition to the programmatic changes, a number of other refinements and modifications were made as follows:

- Revenue forecasts updated to November 2008 State forecast
- Review and modifications to cost escalation assumptions
- Refined fuel surcharge methodology
- Re-scoped several terminal projects
- Updated cost estimated for reservations
- Reduced administrative and support costs associated with on-going capital support functions

## 1.2 Capital Program Needs

While the operating program is largely unchanged over the planning horizon, there are significant capital needs in both WSF's vessel and terminal programs.

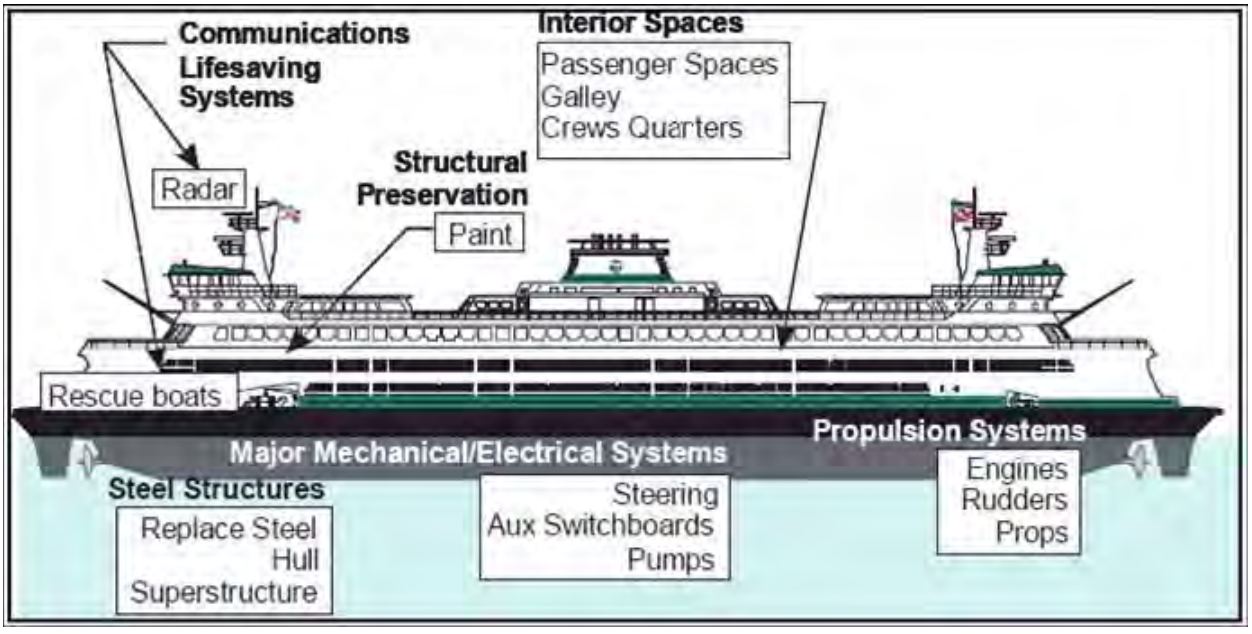
### Vessel Program

WSF faces a significant fleet recapitalization requirement over the next 22 years. The fleet is among the oldest of any major ferry operator, with an average vessel age of more than 35 years (with oldest vessel being 62 years old, and the newest being 11 years old). The needs are significant over the next 22 years, as WSF will continue to invest in the ongoing preservation of its aging fleet as well as invest in a significant new vessel construction program to replace retiring vessels. The elements of the vessel program include:

1. Preservation
2. Procurement of new vessels
3. Improvements

For purposes of the following discussion, Exhibit 2 below shows examples of vessels systems that typically require preservation and improvements.

**Exhibit 2**
**Examples of Vessel Systems**



Vessel Preservation. Vessel preservation needs are developed using the LCCM which identifies when assets are expected to be replaced, based on current condition ratings and an expected useful life. Scenario A would:

- Fully fund the preservation needs for all assets related to the structural integrity of the vessels. This includes steel preservation, propulsion, major mechanical and electrical systems, and related communication systems. The total preservation need for these assets in the Scenario A is $285.2 million ($'08).
- Fund preservation items that are not directly related to the structural integrity of the vessel based on actual condition ratings and strategically defer or re-scope to optimize funding needs. These preservation items include topside paint, passenger and crew spaces, and security, and total $478.1 million ($'08).
- To the extent possible, limit investments for vessels nearing retirement.

Vessel Procurement. The most significant capital funding need over the next 22 years is related to new vessel acquisitions to support the upcoming retirements of several aging vessels in the fleet. The proposed procurement program, summarized in Exhibit 3 includes the following elements:

- In the near-term, acquire three Island Home Class vessels estimated to cost a total of approximately $226.5 million ($'08).
- Invest approximately $20 million in the Hyak to extend its life 20 years.
- Begin major vessel construction program in 2012 to construct seven 144's to be delivered between 2013 and 2025. Total cost of this program is estimated to be $991 million ($'08).
- Replace the 34-car Hiyu in 2027 with a used 40-50 car vessel at a cost of $12 million ($'08).
- Throughout the 22-Year Plan the vessel procurement program will maintain a de-crewed vessel to serve as standby. The de-crewed vessel is maintained and preserved, such that it will be available for emergency backup service.

The plan proposes constructing three small 64-car vessels of the Island Home design (the contract to build the first one has been awarded) to serve routes with traffic needs and physical constraints that require a vessel of that size. These three vessels would serve the Port Townsend-Keystone route, the Point Defiance-Tahlequah route, and during the winter months, the San Juan Interisland route. As there is an immediate need to restore full service on the Port Townsend-Keystone route and retire the current vessel on the Point Defiance-Tahlequah route, these vessels should be constructed first.

Subsequent to that, it is proposed that seven large size vessels be constructed to replace WSF's aging fleet. The 144-car size vessel is felt to be the most applicable on WSF routes since it can effectively substitute for smaller and larger vessels, giving the ferry system additional operational flexibility. The 144-car vessels would be the same size or larger than the vessels being replaced. They would also be the most efficient in terms of operating costs per vehicle space, with an operating profile similar to the current Issaquah Class vessels, which are among the most efficient ships in the fleet.

This approach also provides some marginal increase in capacity on several routes in the system, and restores the system's capability of having a standby vessel so that service can be maintained in the event of a vessel breakdown.

The timing of construction is one new vessel approximately every two years, to allow steady vessel construction opportunities for shipyards and the ability to take advantage of economies of scale in building multiples of the same vessel. This approach presents several benefits.

- A steady / constant shipbuilding rate - enables shipyards to invest in capital improvements to increase efficiency and productivity, thus lowering vessel construction costs. Doing so avoids the cost of developing a new construction capability within the Puget Sound shipbuilding sector multiple times.
- It allows shipyards to maintain their workforce and gain maximum labor efficiency.
- It enables reduced production costs per vessel since design, tooling, start-up, and learning curve costs get spread over more vessels. Thus, each boat is cheaper than that one purchased before it.

This vessel procurement program results in a fleet of 23 vessels, which provides sufficient capacity to meet fleet preservation needs while maintaining a standby vessel at all times.

**Exhibit 3**
**Vessel Procurement**

| Year | Vessel | Notes |
|---|---|---|
| 2010 | Island Home #1 | Replace a Steel Electric (Port Townsend) |
| 2011 | Island Home #2 | Replace a Steel Electric (Port Townsend) |
| 2011 | Hyak reinvestment | Invest in the Hyak to extend life 20 years |
| 2012 | Island Home #3 | Replace the Rhododendron (go to Point Defiance) |
| 2013 | 144-car vessel #1 | Replace the Evergreen State |
| 2015 | 144-car vessel #2 | Restore standby/reserve capacity; Hyak moved to standby |
| 2017 | 144-car vessel #3 | Replace the Tillikum |
| 2019 | 144-car vessel #4 | Replace the Klahowya |
| 2021 | 144-car vessel #5 | Replace the Elwha |
| 2023 | 144-car vessel #6 | Replace the Kaleetan |
| 2025 | 144-car vessel #7 | Replace the Yakima |
| 2027 | Small Vessel #1 | Replace the Hiyu |

This procurement schedule is different than the one that has been put forward previously and that had been the basis of the 2008 Legislative Financial Plan. The procurement program was developed in response to several changes in conditions, including:

1. Financial and funding challenges in the next biennial budget
2. Updated cost information from the recent Island Home and Steilacoom II bids
3. Preliminary findings and recommendations from the JTC Vessel Acquisition Sizing and Timing report

The revised program also better reflects the current and expected needs of the system, assuming a continuation of current services.

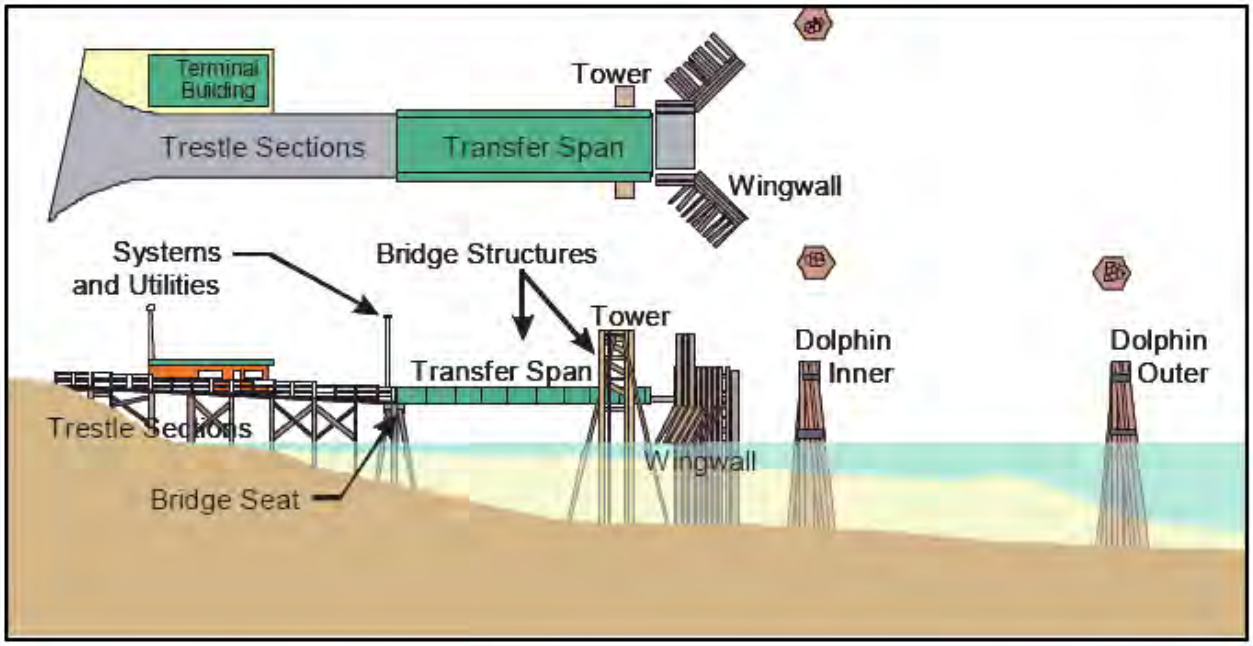
Vessel Improvements. Scenario A includes approximately $50 million over 22 years to address future vessel improvement needs. These include investments in the following three areas:

- Fuel conservation. There are approximately $10 million in vessel investments designed to support the fuel conservation program in the 2009-11 biennium. No further investments are assumed. In new vessels, fuel conservation measures will be incorporated in the design.
- Regulatory-related and other target improvements. This is a biennial allowance of $3.6 million to address issues raised by regulatory compliance agencies, such as the Coast Guard or the EPA, as well as the kind of vessel investments which cannot be foreseen. An example of this type of investment is the fuel conservation investments in the 2009-11 Biennium.

### Terminal Program

For purposes of the following discussion, Exhibit 4 below shows examples of vessels systems that typically that require preservation and improvements.

**Exhibit 4**
**Examples of Terminal Systems**




Terminal Preservation. The preservation program for terminals focuses on identifying the needs of operating at the current service level and maintaining, preserving, and replacing existing capital assets. As with vessels, terminal preservation needs are developed using an LCCM, which has been updated for current facility condition ratings and to reflect current costs of asset replacement.

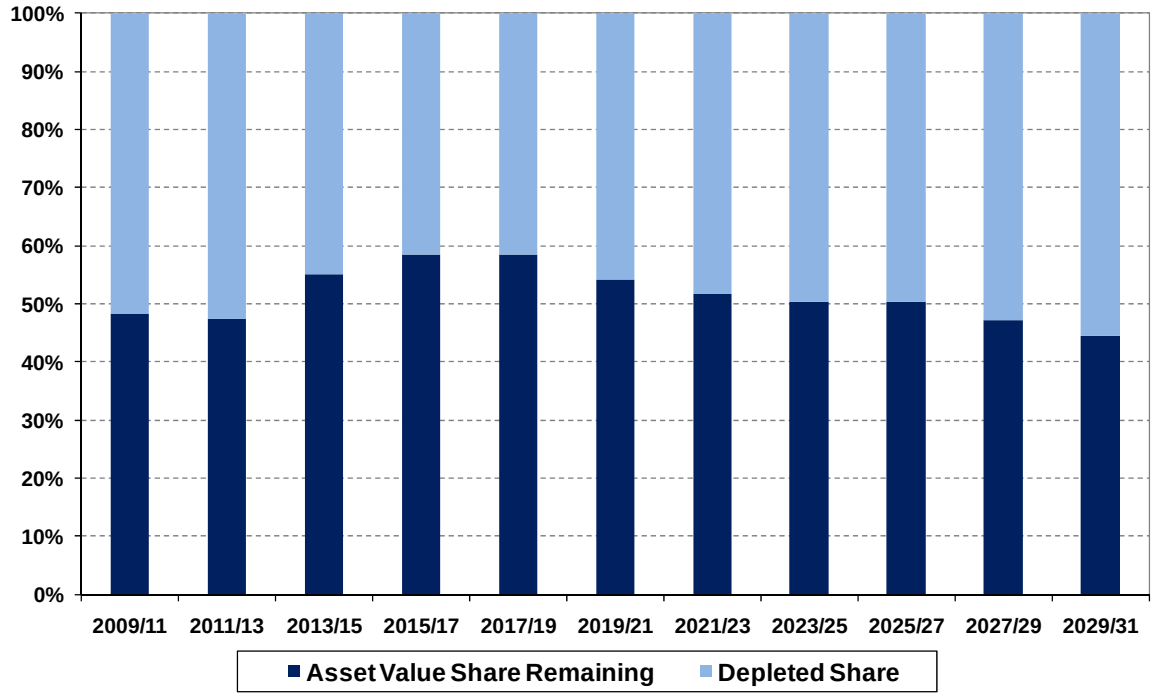
Exhibit 5 provides a brief summary of the key preservation activities at each facility:

## Exhibit 5
## Terminal Preservation Summary ($ '08 millions)

| Terminal | Slip Preservation | Trestle | Wingwalls & Dolphins | Buildings & Overhead Loading | Other | Total |
|---|---|---|---|---|---|---|
| Point Defiance | $1.1 | $5.0 | $10.6 | $0.9 | $0.6 | **$18.2** |
| Tahlequah | $1.1 | $6.2 | $5.1 | $0.4 | $1.2 | **$14.0** |
| Fauntleroy | $1.9 | $48.9 | $7.1 | $1.7 | $2.2 | **$61.7** |
| Southworth | $1.0 | $7.3 | $7.9 | $2.5 | $2.2 | **$20.9** |
| Vashon | $2.3 | $40.5 | $18.5 | $5.2 | $1.0 | **$67.4** |
| Seattle | $31.0 | $148.6 | $20.4 | $87.9 | $2.6 | **$290.5** |
| Bremerton | $9.6 | $0.0 | $18.2 | $3.4 | $1.7 | **$32.9** |
| Bainbridge | $4.1 | $0.0 | $14.1 | $8.7 | $2.1 | **$29.0** |
| Edmonds | $0.0 | $8.0 | $1.5 | $0.0 | $2.2 | **$11.7** |
| Kingston | $7.7 | $1.0 | $28.3 | $1.4 | $1.6 | **$39.9** |
| Clinton | $2.0 | $0.0 | $13.0 | $2.4 | $2.8 | **$20.2** |
| Mukilteo | $2.5 | $0.0 | $6.1 | $0.0 | $0.0 | **$8.6** |
| Keystone | $9.9 | $0.0 | $8.5 | $0.0 | $1.9 | **$20.4** |
| Port Townsend | $22.0 | $0.0 | $8.3 | $0.3 | $2.8 | **$33.5** |
| Anacortes | $8.0 | $17.7 | $25.2 | $39.7 | $9.1 | **$99.6** |
| Friday Harbor | $1.5 | $11.4 | $7.9 | $1.9 | $3.4 | **$26.1** |
| Orcas | $4.6 | $4.1 | $7.3 | $1.0 | $2.8 | **$19.8** |
| Lopez | $11.7 | $2.2 | $8.4 | $0.0 | $2.4 | **$24.8** |
| Shaw | $1.3 | $3.2 | $3.8 | $0.1 | $0.5 | **$8.9** |
| Eagle Harbor | $3.8 | $13.6 | $34.4 | $15.7 | $3.0 | **$70.6** |
| **Total** | **$127.1** | **$317.6** | **$254.7** | **$173.3** | **$45.8** | **$918.6** |

As shown in Exhibit 6, the result of this level of preservation investment is that the average remaining value of the terminal asset base will fluctuate between approximately 40% and 59% throughout the planning horizon.

**Exhibit 6**
**Asset Value Remaining per Biennium (All Terminals)**




Terminal Improvements**.** The terminal improvement program proposes $376 million in Scenario A and reflects the following major elements, as shown in Exhibit 7:

- Addition of ferry-funded transit enhancements to improve transit connectivity and passenger comfort at WSF terminals.
- Addition of reservation system modifications to support the proposed vehicle reservation program.
- Improvements to maintain service and schedule reliability, such as adding overhead loading at some terminals and improving traffic circulation elsewhere to minimize terminal dwell time.
- Major terminal investments are proposed for three terminals: Anacortes, Mukilteo, and Edmonds.
- Other improvements including utility investments, storm water drainage, seismic strengthening and ADA requirements.

**Exhibit 7**
**Summary of Proposed Terminal Improvement Costs ($'08 in Millions)**

| | Transit-Related | Improve Dwell Time | Major Terminal | Reservation System | Other | Total |
|---|---|---|---|---|---|---|
| Point Defiance | | $2.3 | | $0.4 | $1.5 | **$4.1** |
| Tahlequah | | $2.4 | | $0.4 | $0.7 | **$3.6** |
| Fauntleroy | | $17.2 | | $1.9 | $0.8 | **$19.9** |
| Southworth | | | | $1.7 | $11.7 | **$13.4** |
| Vashon | | | | $0.3 | $6.9 | **$7.2** |
| Seattle | | | | $3.2 | $12.3 | **$15.5** |
| Bremerton | | | | $3.3 | $2.1 | **$5.4** |
| Bainbridge | $32.8 | | | $1.8 | $15.5 | **$50.1** |
| Edmonds | | | $26.0 | $3.7 | $1.3 | **$31.1** |
| Kingston | $1.4 | | | $3.7 | $2.6 | **$7.7** |
| Clinton | $9.9 | $21.9 | | $2.1 | $2.5 | **$36.3** |
| Mukilteo | | | $119.8 | $1.7 | $0.9 | **$122.4** |
| Keystone | | $1.7 | | $1.4 | $1.3 | **$4.4** |
| Port Townsend | | $7.6 | | $1.3 | $1.5 | **$10.4** |
| Anacortes | | | $26.1 | $0.2 | $9.6 | **$35.9** |
| Friday Harbor | | $0.2 | | $0.4 | $1.7 | **$2.3** |
| Orcas | | | | $0.4 | $1.2 | **$1.5** |
| Lopez | | | | $0.4 | $1.0 | **$1.4** |
| Shaw | | | | | $0.6 | **$0.6** |
| Eagle Harbor | | | | | $3.1 | **$3.1** |
| **Total** | **$44.0** | **$53.4** | **$171.9** | **$28.4** | **$78.5** | **$376.3** |

The terminal improvements listed above represent a substantial capital investment in the ferry system. It is important to note that all of the projects listed above that are expected to cost more than $5 million will be required to go through a formal pre-design process that will include a thorough cost-benefit analysis and identify the risks associated with the project before construction funding is appropriated.

The following is a brief summary of the major elements of the Terminal Improvement Program.

### Transit-Related Improvements

Transit-related improvements include projects such as improved terminal access for pedestrians and transit vehicles (Exhibit 8 includes a complete list by terminal), which are necessary to accommodate increasing volumes of walk-on customers. These improvements are expected to cost $44 million, with the majority of that cost incurred at the Bainbridge Island Terminal.

To the extent that these improvements can encourage mode shift, it reduces demand on the vehicle deck and forestalls the need to invest in additional vessels, which in addition to the significant capital expense, are also the largest source of fixed operating expense (maintenance and engine room labor).

Targeted transit enhancements that enable and encourage customers to shift modes away from single occupancy vehicles (SOV) are another key component of operating strategies. From existing resources, WSF intends to implement targeted improvements like designated Zipcar spaces at select terminals that don't require major capital investments.

Exhibit 8 includes a list of the specific proposed transit enhancements by terminal that would be funded through the ferry system's capital program. In addition to these investments, further enhancements, requiring coordination with WSDOT and local transit agencies, are necessary for full mode shift benefits. These could include: better coordinated schedules, the provision of real time information on transit departures and new/expanded transit services to better connect ferry customers with their destinations on both sides of the water.

**Exhibit 8**
**Proposed Transit Enhancements Funded by WSF**

| Terminal | Transit Enhancement | Expected Capital Cost Borne by WSF |
|---|---|---|
| Bainbridge | Passenger Pick-up/Drop-off Improvements | $3,939,000 |
| | Transit Facility Improvements | $5,896,000 |
| | Transit-related Improvements to Terminal Building & OH | $18,489,000 |
| | Improved intersection at Winslow Way for bikes and pec | $4,464,000 |
| Kingston | Relocate tollbooth for imporved transit access | $1,377,000 |
| Clinton | Walkway for park n ride | $9,877,000 |
| | | $44,042,000 |

In addition to the transit enhancements WSF intends to fund, there are a number of enhancements WSF will work with local transit agencies to undertake. Appendix F includes a complete listing by terminal of these projects.

### Vehicle Reservation System

A vehicle reservation system is the key adaptive management strategy included in this plan, moving vehicle queues away from the terminals and better distributing traffic. Its main terminal capital components include transponder lanes and ITS equipment at each of the terminals. This equipment allows for fast processing of reservations and real time information available to customers.

The total capital costs of a vehicle reservation system are estimated to be $28.4 million, with system costs accounting for $6 million and terminal-related capital costs estimated at approximately $22.4 million. The $6 million in system costs have been allocated to the Edmonds, Kingston, Port Townsend, and Keystone terminals. The other terminal costs include ITS Equipment required at each of the terminals as well as transponder lanes, assuming one lane per terminal for all terminals where the survey indicates there is a large base of repeat users. Terminals that would not have transponder lanes are those with a largely recreational ridership and/or very small numbers of riders, including: Anacortes, the San Juan Islands, Port Townsend, Keystone, Point Defiance, and Tahlequah.

As discussed in Section 12 a vehicle reservation system helps to move customers with time flexibility out of the peak to better distribute demand and increase asset utilization without requiring investment in additional vessels. Because a vehicle reservation system effectively moves physical queues out of the terminal, it significantly reduces the need for costly terminal expansion and reduces queuing impacts for communities. The transponder lanes are a key component of the system because they allow people to move through the system quickly, avoiding the need for more operating staff, shortening the lead-time that must be allowed for arrivals, and providing more customer convenience.

### Major Terminal Projects

Scenario A includes three major terminal improvement projects. These are designed to address specific operational and facility challenges.

- Mukilteo. The Mukilteo terminal is proposed for relocation to the tank farm site just east of the current terminal. This proposal would address a number of issues that cannot be adequately addressed at the current site, including providing overhead loading, increasing holding, and removing the traffic conflicts at the existing site. The $120 million cost ($'08) will be partially offset by $72 million of avoided preservation needs at the current facility, making the net cost of the new facility $48 million.
- Edmonds. This Scenario assumes that the Edmonds terminal will remain in its current location and that an allowance of $26 million is included to enhance multimodal connections.
- Anacortes. The proposal for Anacortes is to implement the current design for a replacement building and the associated terminal reconfiguration to improve circulation. The building replacement is necessary as a preservation matter, though the new building will be larger and better suited to the longer wait-times that are typical at this facility, especially in the summer.

### Improvements Targeting Dwell Time

This Plan Scenario proposes a number of improvements designed to maintain or improve dwell time in the terminal. These improvements would allow the ferry system to minimize terminal time and maximize capacity during peak periods in order to maintain schedule reliability on routes. The type of improvements include things like overhead loading for passengers or other modifications that improve traffic flow and move customers through the terminals more quickly.

The most significant dwell time improvements are the overhead loading projects proposed for Clinton and Fauntleroy, which continue to load passengers over the auto transfer span and are among the busiest routes in the system. These improvements will also provide passenger comfort and safety benefits that will also support the transit enhancement and mode shift goals.

### Escalation Assumptions and Cost Estimating Risk

The cost estimates prepared for this planning effort have been based on the best available information at the time. In some cases, cost estimates were based on detailed designs and in other cases very preliminary concepts. To manage cost estimating risk, appropriate design and scope contingencies were used, especially where project information is not as well developed. As projects continue to be refined and developed cost estimates will be reviewed and updated,

Besides scope and design risk, the other significant area of risk in the cost estimates are the assumed escalation factors. Costs are estimated using today's prices for labor and materials. However, most of the expenditures in the plan will be in the future, when cost will be higher due to cost escalation. Expectations about cost escalation can vary significantly depending on the type of expense. In the case of WSF, the key to future costs will be escalation for fuel, labor, steel, concrete and ship building and shipyard services. The following are the key escalation assumptions used for this analysis:

- Vessel labor – 3.6% per year based on a 10-year average rate of growth for WSF labor costs.
- Vessel non-labor – 1.9% per year based on forecast of the implicit price deflator (IPD)
- Terminal costs – 3.0% per year based on a blend of labor costs at 3.6% and non-labor costs at IPD
- Fuel costs – based on November fuel forecast adopted by the State Forecast Council (approximately 1% per year)
- All other operating costs, including non-represented labor at IPD.
- Vessel capital costs, including new vessel acquisitions – 4.7% per year based on the 20-year average cost escalation in the U.S. shipyard industry
- Emergency repairs – 4.7% per year since most emergency repairs are related to vessel capital
- All other capital costs – IPD forecast (1.9% per year) consistent with budget assumptions used for all WSDOT projects

## 1.3 Funding Implications

The proposed package of services and investments will result in a significant unfunded gap of approximately $3.3 billion, or approximately $300 million per biennium (ranging from a low of $110 million to a high of $390 million), including capital and operating gaps. This is not a surprise given the reduction in dedicated tax funding for ferries. The magnitude of the gap is noteworthy and reflects a significant recapitalization effort related to aging assets, particularly with vessels, Another noteworthy point is that the funding shortfalls are almost exclusively in the capital program.

To address this need, there are only two sources of potential funding to fill the gap:

1. Reallocation or a higher share of current resources. As discussed previously, WSF has been getting a share of general highway funds to backfill for the lost MVET since 2000. The capital funding outlook already assumes the 2008 Legislative Financial Plan level of continuing highway support, so this would likely mean higher shares of these funds or a new allocation of some other existing state, regional, or local fund source.
2. New revenues. The other possible source is from new revenues, either at the state, regional, or local level. This generally means new or higher taxes.

The question of where additional funding might come from is the subject of the WSTC's Ferry Funding Study, which has been a parallel effort to the development of this Plan. The WSTC is charged with identifying and recommending an approach to restoring WSF to a financially

sustainable condition. The Commission will be basing its funding recommendations on the needs identified in this plan.

Operating Outlook. Providing the service level in Scenario A is estimated to cost approximately $6.4 billion over the 22-Year Long-Range Plan planning horizon. Total revenues are estimated to be approximately $6.2 billion, with $5.3 billion coming from operations and the rest from dedicated tax support and a small amount from transfers from other highway funds.

**Exhibit 9**
**Operating Funding Outlook (YOE$ millions)**

| | LRP (22-Yr) | 16-Year |
|---|---|---|
| **Operating Revenue:** | | |
| Farebox Revenue | $5,165 | $3,352 |
| Miscellaneous Revenue (Concessions, etc) | $122 | $80 |
| **Total Revenue from Operations** | **$5,286** | **$3,432** |
| **Operating Program:** | | |
| Vessel Costs | $4,361 | $2,945 |
| Terminal Costs | $1,098 | $717 |
| Management & Support Costs | $937 | $641 |
| **Total operating program** | **$6,396** | **$4,303** |
| ***Operating revenue as % of Ferries Division cost*** | *83%* | *80%* |
| **Net operating income/(subsidy required)** | **($1,110)** | **($871)** |
| Dedicated Ferry Taxes (Operating Account) | $809 | $561 |
| Administrative Transfers (Operating Account) | $88 | $88 |
| **Estimated Subsidy Available** | **$897** | **$649** |
| **Net operating surplus/(deficit)** | **($213)** | **($222)** |
| *Average per biennium* | ($19) | ($28) |

**Note:** Parenthetical values represent shortfalls in the operating program; positive values represent operating surpluses

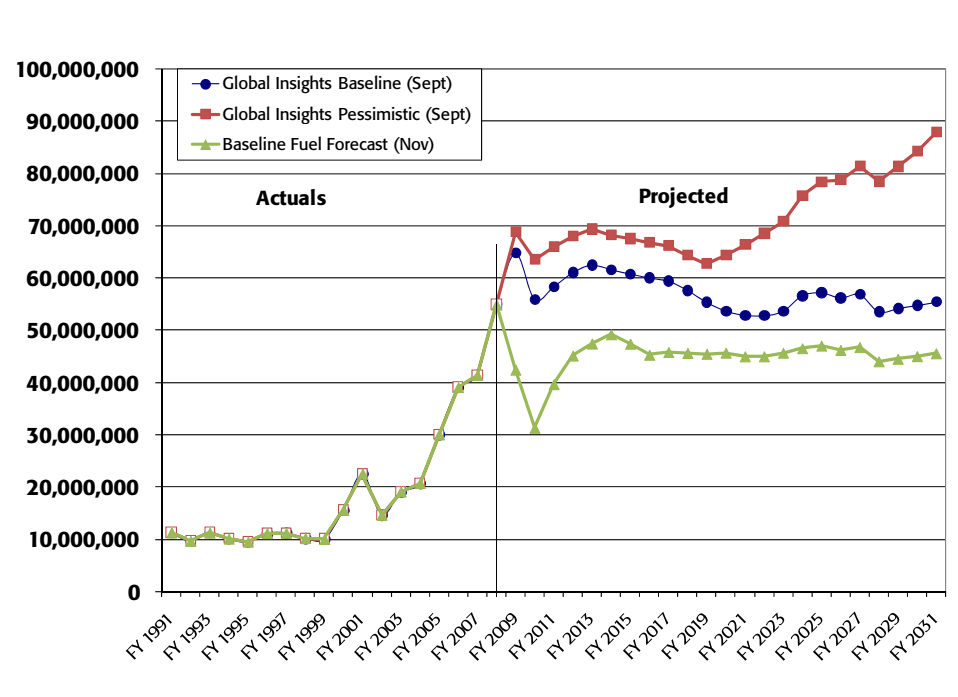
- Ridership growth and fare increases result in an average farebox recovery rate of 83%.
- Base fare assumptions assume the revenue equivalent of the current legislative annual increases of 2.5%. Since passenger fares are proposed to grow at half the rate of vehicle fare, vehicle fares would need to grow an average of 2.8%, while passenger fares would grow at 1.4% per year to generate the same level of revenue.
- Fuel surcharges are set to cover the increased costs of fuel associated with variances in fuel costs beyond the long-term average cost of fuel ($2.15/gallon). Based on the November 2008 forecast of fuel prices, it is assumed that a fuel surcharge would be in effect from fiscal year 2011 – 2020, at which time the charge would be eliminated. Total estimated fuel charge revenues over that period are $50.6 million.
- The funding analysis assumes that WSF will continue to receive the $88 million in support from other transportation funds over the next three biennia (per the 2008 Legislative 16-Year Plan). Following that period, no additional support is anticipated from the motor vehicle fund.

There would be considerable risk in the assumed growth in fuel prices. The costs in Exhibit 9 are based on Global Insights' November 2008 baseline forecast for the 22-Year Long-Range Plan.

Using this forecast decreases total fuel cost estimates by $634 million from the September forecast. The proposed fuel surcharge would significantly eliminate the budget risk of fuel cost variability by shifting this risk to the customer who would face higher fares in the event of significantly higher fuel costs

### *Fuel Price Risk*

The implementation of a fare charge to recover 100% of budgeted fuel costs is designed to negate any fuel price impacts to the operating funding gap. If fuel prices projections were to become higher, the fuel charge would adjust to recover the higher total fuel cost. Because of this higher fuel charge, total fare prices would also increase. To illustrate the challenge, the chart below compares historic fuel costs with projected fuel costs assuming different recent fuel forecasts



Two recent pieces of legislation (RCW 43.19.642 and HB 1303) have the potential to require WSF to power its fleet with biodiesel in the near future. RCW 43.19.642 requires state agencies to use a minimum of 20% biodiesel in their fleets by June 1, 2009, and HB 1303 would require that agencies, to the extent practicable, power their diesel fleets with 100% biodiesel by June 1, 2015.

With these goals, the State is recognizing that biodiesel pollutes less, releases fewer air toxins and cancer-causing compounds, degrades faster, and is less toxic than petroleum diesel. Using biodiesel or biodiesel blends will also help the State comply with ultra-low sulfur diesel requirements, as well as the alternative fuel purchase requirements of the national Energy Policy Act of 1992. In preparation for these requirements, WSF has been testing the use of biodiesel in a pilot program funded by outside grants. The pilot program has been successful, but deploying biodiesel across the fleet will have costs not accounted for in this plan.

There is also considerable risk in the assumed growth in ridership. The interlocking reasons for the decline in ridership from 2000 through 2006 (fare increases, increased telecommuting, rising gasoline prices, economic conditions, etc.) are not well understood.

- The baseline ridership forecast assumes an approximately 36% increase in ridership by 2030 (over 2006 ridership levels).
- If baseline ridership is lower, then demand pressure to improve services will be reduced. Also, lower ridership would mean lower fare revenues, which would increase the operating funding gap.

Capital Outlook. The capital program proposed for Scenario A is estimated to total $5.7 billion over the 22-Year Long-Range Plan horizon. Funding the capital needs of the Revised Draft Plan will require $3.1 billion more than current assumed funding, which includes:

- Transfers from the Motor Vehicle and Multimodal Accounts in the 16-Year Plan (continued through 2031).
- Bond proceeds as per the 2008 Legislative Financial Plan.
- Since the operating program is nearly balanced, the capital needs represent the total funding gap over the next 22 years for Scenario A.

**Exhibit 10**
**Capital Funding Outlook (YOE$ millions)**

| | LRP (22-Yr) | 16-Year |
|---|---|---|
| **USES OF FUNDS** | | |
| Terminals Preservation | $1,137 | $860 |
| Vessel Preservation | $1,544 | $820 |
| New Vessel Construction | $1,793 | $1,474 |
| Terminal & Vessel Improvements | $531 | $452 |
| Existing Debt Service | $212 | $212 |
| Miscellaneous Uses | $453 | $303 |
| **Total core capital program** | **$5,669** | **$4,121** |
| **SOURCES OF FUNDS** | | |
| Dedicated tax distributions to Ferrie | $829 | $685 |
| Administrative Transfers | $1,126 | $736 |
| Federal Funds | $347 | $259 |
| Bond Proceeds | $241 | $241 |
| **Total Sources** | **$2,543** | **$1,921** |
| **Capital Funding Gap** | **($3,126)** | **($2,200)** |
| *Average per biennium* | ($284) | ($275) |

**Note:** Parenthetical values represent shortfalls in the capital program; positive values represent capital surpluses

## 2. SCENARIO B

The goal of Scenario B is to develop a service and investment plan that would support a core domestic marine highway system in order to minimize the capital funding needs of the system. Scenario B would require a very different approach to ferry service, with the state providing and maintaining the core marine highway system and coordinating with local agencies for provision of marine transit.

Since the funding problem is essentially a capital funding challenge, the key question is how large of a capital plan can WSF maintain, preserve, and replace over time, given a particular capital funding level. Considering the current condition of the asset base and looking at the magnitude of WSF's future capital needs that are concentrated in vessel preservation and procurement of new replacement vessels, it is clear that significantly reducing capital expenditures over the next 22 years will require reducing the size of the fleet.

However, reducing the fleet would necessitate real service cuts, as vessels will need to be pulled from service. Since WSF is a part of the state highway system, scaling back service is not a simple matter of reducing until the costs fit within a budget.

Therefore, to meet the goal of this Plan Scenario, it was necessary to develop criteria to determine just where and how to cut services in a way that would be consistent with preserving a core highway system. To accomplish this, Scenario B was developed by starting with Scenario A and then strategically eliminating elements in order to reduce capital funding requirements. Factors that were used to identify what would be eliminated include:

- Continue serving all current domestic destinations
- Consider opportunities for synergy with the PSRC recommended passenger-only routes, other locally-provided transit services, and/or other state transportation investments in landside highway capacity
- Reduce services in corridors where there are alternatives for ferry customers, preferably other ferry alternatives
- Financial performance of a route
- Capital funding needs of terminals

## 2.1 Operating Program

The Scenario B operating program starts with the current service levels and would make the following changes:

2009-2011 Biennium. During the next biennial budget period, reduce services as follows:

- Terminate the Anacortes-Sidney route in September 2009.
    - San Juan Islands (Winter/Spring/Fall) – Two supers on the mainland runs and Sealth on the Interisland.
    - San Juan Islands (Shoulder/Summer) – Above service with an additional super on mainland runs.
- Downsize the Point Defiance-Tahlequah route by substituting the Hiyu and retiring the Rhododendron.
- Keep Port Townsend-Keystone a 1-boat operation.

2011-2013 Biennium. During the second biennium of the plan, reduce services as follows:

- Reduce Bremerton to only 1 boat.
- Eliminate weekday night service between mid-October and mid-May on Edmonds-Kingston route.
- Reduce service in Triangle to two medium vessels (2 medium vessels between Fauntleroy and Vashon, sharing with Southworth with a two-boat schedule.

2013-2030 Biennia. Subsequent service changes are tied to vessel replacements. With construction of two small vessels in 2021 and 2023:

- The Sealth would be replaced on the interisland route in the fall/winter/spring months by a smaller vessel and reassigned to the Fauntleroy route.
- The Kitsap would return to the Bremerton route and replace a super class vessel, allowing the Elwha to be retired.

The net effect of these changes is a reduction in total service hours of approximately 17%, but with the exception of the international route all current routes in the system maintain ferry services. The significant savings from these service cuts come in two parts: (1) the service can be provided with a

fleet of 17 vessels (5 fewer than under Scenario A); and (2) generally the routes that have been cut are also relatively poor financial performers or the proposed service reductions are during low productivity periods.

**Exhibit 11**
**Summary of Proposed Fleet Deployment for Scenario B**

| | Proposed 2030 Fleet Deployment Plan: Scenario B | | | |
|---|---|---|---|---|
| **Route** | **# of Vessel** | **Fall, Winter, Spring** | **Shoulder** | **Summer** |
| Bainbridge | 2 | 2 Jumbo | | |
| Bremerton | 1 | 1 Medium | | 1 Jumbo |
| Clinton | 2 | 2 Medium | | |
| Kingston | 2 | 2 Jumbo | | |
| Point Defiance | 1 | 1Small | | |
| Port Townsend | 1 | 1 Small | | |
| San Juan Islands | 2 or 3 | 2 Large | 3 Large | |
| Interisland | 1 | 1 Small | | 1 Mid-Size |
| Fauntleroy-Vashon-Southworth | 2 | 1 Medium<br>1 Mid-Size | | 2 Medium |
| **Total Deployed** | | **14** | **14** | **15** |

| Vessel class | Vehicle capacity |
|---|---|
| Jumbo | 188-202 |
| Large | 144 |
| Medium | 124 |
| Mid-Size | 87-90 |
| Small | 34-64 |

## Dialogue with Local Governments

WSF recognizes that the service reductions identified in Scenario B would have negative impacts on ferry-served communities in terms of customer service and the local economic environment. If Scenario B is determined by the Legislature to be the future of ferry system, WSF would want to engage local governments in ferry-served communities in a dialogue about how these negative impacts could be mitigated or reduced.

An example of how local governments could help to mitigate the reduction in WSF service would be implementation of local passenger-only ferry (POF) service, as previously authorized by the Legislature. In fact, the Puget Sound Regional Council is concluding a POF study that has confirmed that the most promising cross-sound candidates for POF service are:

- Seattle - Southworth
- Seattle - Kingston
- Seattle - Bremerton

All three of these routes are negatively impacted by the service reductions in Scenario B and would benefit from local POF service.

During the 2009-2011 biennium, before the service reductions on these routes would occur, WSF would want to engage local governments in ferry-served communities in a dialogue on how service might be maintained and supplemented, mitigating potential reductions.

## 2.2 Capital Program

The capital program needs in Scenario B have been significantly reduced. The following are the key assumptions about the Scenario B capital needs.

### Vessel Program

Vessels Preservation. The Scenario B vessel preservation program is based on the same preservation standards as those used to develop the Scenario A program. However, preservation needs are reduced from Scenario A based on the following changes:

- Early retirements for several vessels results in a net reduction in preservation needs.
- By not replacing several retiring vessels, there are no new preservation investments needed for these vessels.

Vessel Procurement. The most significant capital savings in Scenario B come from a reduced vessel procurement program. Instead of an 11-vessel procurement, Scenario B would require a 5-vessel procurement plan. The proposed procurement program, summarized in Exhibit 30, includes the following elements:

- In the near term acquire only one Island Home Class vessel estimated to cost a total of approximately $84 million ($'08).
- Invest approximately $20 million in the Hyak to extend its life 20 years.
- In the 2019-2021 timeframe acquire two small vessels, the first to replace the retiring Elwha and the second to retire and replace the Hiyu.
- The 144-car vessel program is reduced from seven vessels to just two and would not start until 2022. Total cost of this program is estimated to be $226 million ($'08).

**Exhibit 12**
**Vessel Procurement Plan for Scenario B**

| Year | Vessel | Notes |
|---|---|---|
| 2010 | Island Home #1 | Replace a Steel Electric (Port Townsend) |
| 2011 | Hyak reinvestment | Invest in the Hyak to extend life 20 years |
| 2021 | Small Vessel #1 | Replace the Elwha |
| 2023 | Small Vessel #2 | Replace the Hiyu |
| 2025 | 144-car vessel #1 | Replace the Kaleetan |
| 2027 | 144-car vessel #2 | Replace the Yakima |

Vessel Improvements. To be conservative, Scenario B reduces vessel improvement assumptions by only $2 million over the 22-year period relative to Scenario A.

### Terminal Program

Terminal Preservation. Since WSF will continue to provide services to all of its current terminal facilities, there are not expected to be savings to the terminal preservation program.

Terminal Improvements. The terminal improvement program for Scenario B proposes approximately $92.2 million in reductions from the $376 million list of projects in Scenario A. The following are the key terminal improvement facility assumptions:

- Transit-related projects for improved transit access and walkways for Bainbridge, Clinton, and Kingston have been eliminated. However, the building and overhead loading improvements for Bainbridge are still included.
- All dwell time improvements have been eliminated in Plan B.
- Costs for major terminal improvements and reservation system costs remain unchanged from Plan A.
- Other changes include eliminating walkways improvements at Lopez and Bainbridge.

## 2.3 Funding Implications

The reductions of service and fleet have a significant impact on the overall funding needs of the system.

Operating Outlook. As shown in Exhibit 13, the operating costs for Scenario B are estimated to be $5.5 billion over the 22-Year Long-Range Plan horizon. Scenario B operating revenues are estimated to be $5.0 billion over the same period, leaving $550 million to be funded from the dedicated operating subsidy. With dedicated tax subsidies of almost $900 million, there is an estimated cumulative tax subsidy surplus in the operating account of approximately $347 million at the end of the planning period available to transfer to capital needs.

## Exhibit 13
## Operating Funding Outlook (YOE$ in millions)

| | LRP (22-Yr) | 16-Year |
|---|---|---|
| **Operating Revenue:** | | |
| Farebox Revenue | $4,860 | $3,163 |
| Miscellaneous Revenue (Concessions, etc) | $122 | $80 |
| **Total Revenue from Operations** | **$4,982** | **$3,244** |
| **Operating Program:** | | |
| Vessel Costs | $3,667 | $2,527 |
| Terminal Costs | $969 | $642 |
| Management & Support Costs | $896 | $614 |
| **Total operating program** | **$5,532** | **$3,783** |
| ***Operating revenue as % of Ferries Division cos*** | *90%* | *86%* |
| **Net operating income/(subsidy required)** | **($550)** | **($540)** |
| Dedicated Ferry Taxes (Operating Account) | $809 | $561 |
| Administrative Transfers (Operating Account) | $88 | $88 |
| **Estimated Subsidy Available** | **$897** | **$649** |
| **Net operating surplus/(deficit)** | **$347** | **$109** |
| *Average per biennium* | $32 | $14 |

**Note:** Parenthetical values represent shortfalls in the operating program; positive values represent operating surpluses

- Ridership growth and fare increases result in an average farebox recovery rate of 90%.
- The reduced service levels result in lost ridership compared to Scenario A of approximately 9.6% overall (9% reduction in passengers, 10% in vehicles).
- Reduced ridership results in an estimated 6.3% loss in farebox revenues. Revenue loss is lower than ridership loss on a percentage basis because impacted routes are shorter routes with lower than average fares.
- As with Scenario A, the fare increases are assumed to match the current legislative financial plan assumption of average annual increases of 2.5%. In addition, fuel surcharges are set to cover the increased costs of fuel associated with variances on fuel prices beyond the long-term average cost of fuel.
- The funding analysis assumes that WSF will continue to receive the $88 million in support from other transportation funds over the next three biennia (per the 2008 Legislative 16-Year Plan). Following that period, no additional support is anticipated from the motor vehicle fund.
- Relative to Scenario A, operating costs have been reduced by approximately 14%, while operating revenues have been reduced by approximately 6%. As a result, with the same fare policy as Scenario A, Scenario B is almost fully supported by operating revenues.
- The high farebox recovery rate results in a net surplus from operations of $347 million, allowing for some transfers of dedicated operating taxes to help fund the capital program.

Capital Outlook. The capital program proposed for Scenario B is estimated to total $4.2 billion over the 22-Year Long-Range Plan horizon. Funding the capital needs of the Revised Draft Plan will require $1.68 billion more than current assumed capital funding, which includes:

- Transfers from the Motor Vehicle and Multimodal Accounts in the 16-Year Legislative Plan (continued through 2031).
- Bond proceeds as per the 2008 Legislative Financial Plan.
- The capital funding gap is somewhat back loaded with several vessel procurements in the final six years of the Plan. As a result, the 16-year funding gap is only $728 million or less than half of the full 22 year gap.

If the potential transfers of operating tax subsidies that are available from the operating account surplus are included, the overall net funding gap for Scenario B is approximately $1.3 billion. By looking at only the first 16 years, the overall funding gap is half as much at approximately $619 million.

**Exhibit 14**
**Capital Funding Outlook (YOE$ millions)**

| | LRP (22-Yr) | 16-Year |
|---|---|---|
| **USES OF FUNDS** | | |
| Terminals Preservation | $1,138 | $860 |
| Vessel Preservation | $1,239 | $709 |
| New Vessel Construction | $761 | $224 |
| Terminal & Vessel Improvements | $415 | $341 |
| Existing Debt Service | $212 | $212 |
| Miscellaneous Uses | $453 | $303 |
| **Total core capital program** | **$4,218** | **$2,650** |
| **SOURCES OF FUNDS** | | |
| Dedicated tax distributions to Ferri | $829 | $685 |
| Administrative Transfers | $1,126 | $736 |
| Federal Funds | $347 | $259 |
| Bond Proceeds | $241 | $241 |
| **Total Sources** | **$2,543** | **$1,921** |
| **Capital Funding Gap** | **($1,675)** | **($728)** |
| *Average per biennium* | ($152) | ($91) |
| **Net operating surplus/(deficit)** | **$347** | **$109** |
| **Total Funding Gap** | ($1,328) | ($619) |

**Note:** Parenthetical values represent shortfalls in the capital program; positi
values represent capital surpluses

Scenario B still shows a capital funding gap, even after the significant reductions in service and capital investments discussed above. To close this gap will require additional revenues, higher fares or additional service and investment reductions or some combination of thereof. It is important to

note, that further service reductions that might make a meaningful impact on the funding gap will require closing some domestic routes.

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX N
## PROPOSED VESSEL ASSIGNMENTS

Washington State Department of Transportation

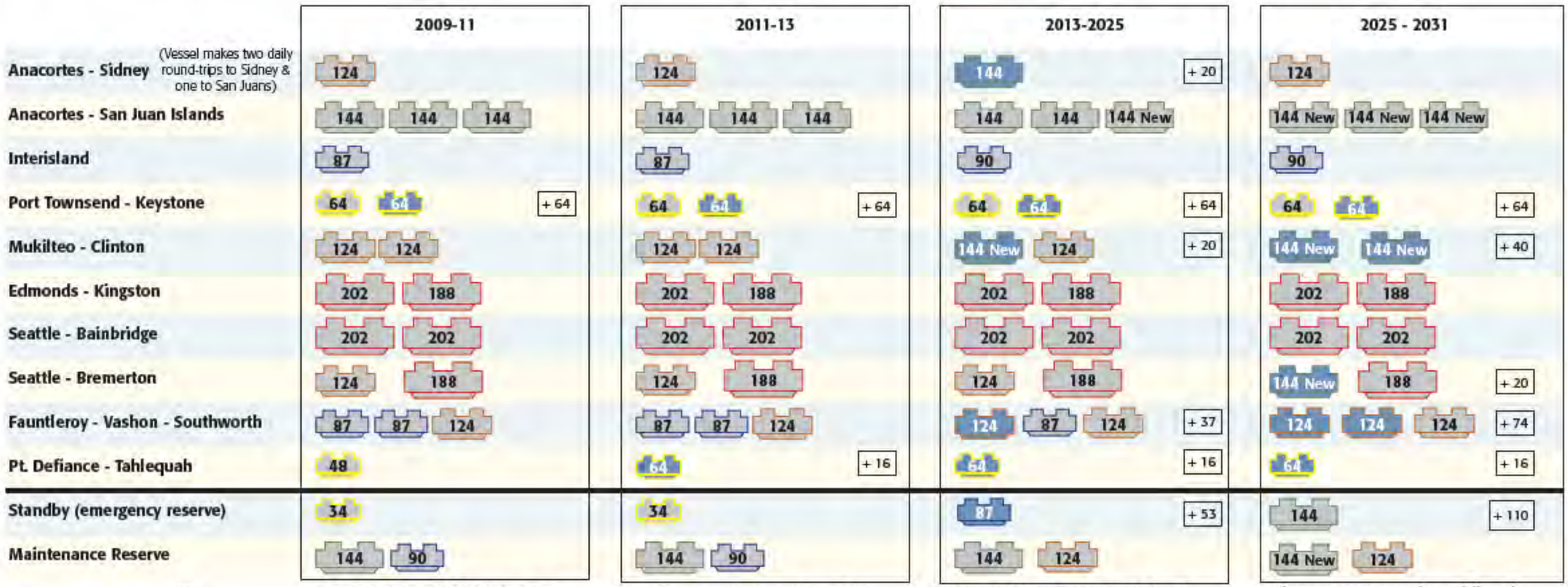
Washington State Ferries

# LONG-RANGE PLAN PROPOSED VESSEL ASSIGNMENTS

## INTRODUCTION

The proposed vessel deployment plan by season is shown below. The first three columns highlight the first vessel major procurement cycle up until FY 2015. There are no vessel replacements or changes in deployment between FY 2015 through FY 2025 (shown in the third column below). The last column illustrates the impact of the second vessel procurement cycle up through FY 2031. The specific impacts including new vessel deliveries, vessel retirements, and significant route capacity changes are detailed at the bottom of each column.

# VESSEL ASSIGNMENTS & PROCUREMENT IMPACTS - FINAL LRP PLAN SUMMER



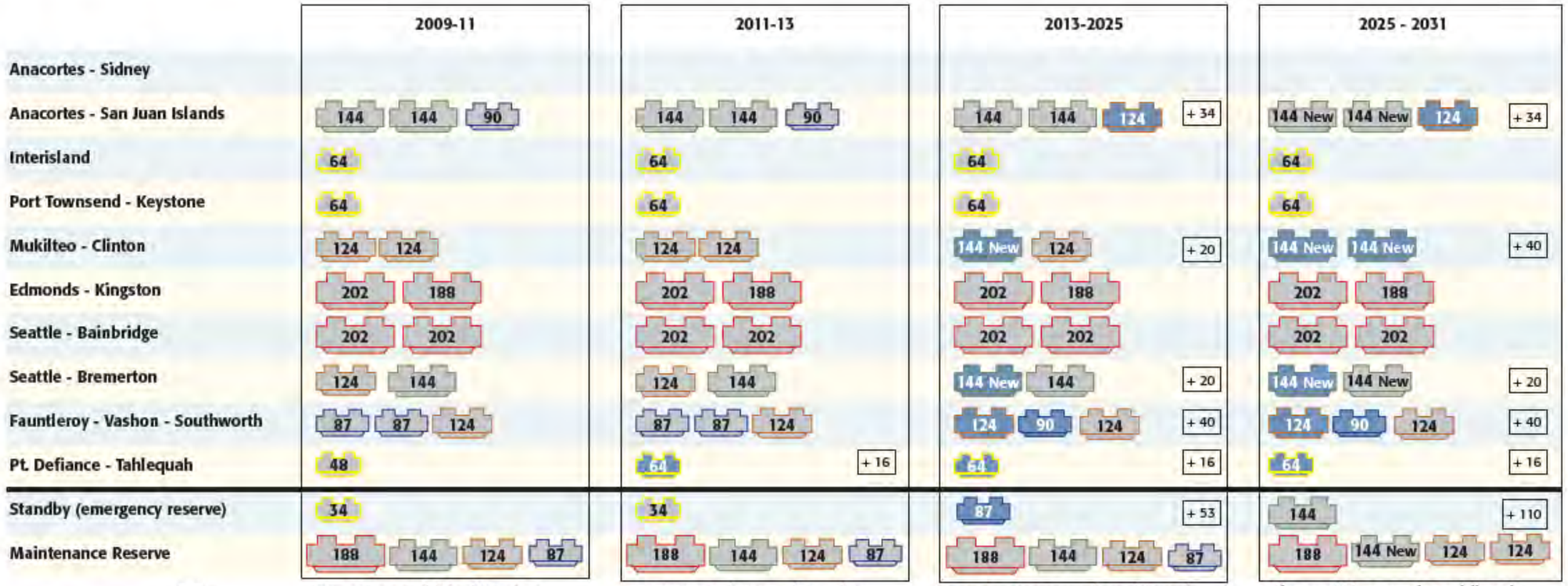

- **Two 64-car vessel (Island Home) are delivered**
- **Funding for one 64-car vessels (under construction)**
- Two new 64-car vessels are delivered; one in 2010 & one in 2011 (Port Townsend - Keystone)

- **64-car vessel program is complete; delivery of final 64-car vessel**
- **Start new 144-car vessel program**
- One new 64-car vessel is delivered (Pt. Defiance - Tahlequah) in 2012
- Rhododendron is retired

- **Two new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2014 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to Fauntleroy - Vashon - Southworth and increases route capacity
- One new 144-car vessel to San Juan Domestic in 2014. 144 from San Juan Domestic moves to Sidney and increases route capacity to both Sidney and San Juan Domestic routes
- 124 from Sidney moves to Fauntleroy - Vashon - Southworth and increases route capacity
- 87 bumped from Fauntleroy - Vashon - Southworth increases standby capacity
- Evergreen State and Hiyu are retired

- **Five new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2027 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to Fauntleroy - Vashon - Southworth and increases route capacity
- Two new 144-car vessels are delivered in 2028 and 2029 (San Juan Domestic)
- One new 144-car vessel to maintenance in 2028 moves Hyak to standby and retires Klahowya
- One new 144-car vessel is delivered in 2029 to Bremerton.
- 124 from Bremerton moves up to Sidney
- Tillikum and three 144-car vessels are retired (Elwha, Kaleetan, and Yakima)

# VESSEL ASSIGNMENTS & PROCUREMENT IMPACTS - FINAL LRP PLAN WINTER




- **Two 64-car vessel (Island Home) are delivered**
- **Funding for one 64-car vessels (under construction)**
- One new 64-car vessels is delivered in 2010 (Port Townsend - Keystone)
- One new 64-car vessel is delivered in 2011 (Interisland)

- **64-car vessel program is complete; delivery of final 64-car vessel**
- **Start new 144-car vessel program**
- One new 64-car vessel is delivered (Pt. Defiance - Tahlequah) in 2012
- Rhododendron is retired

- **Two new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2014 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to Fauntleroy - Vashon - Southworth and increases route capacity
- One new 144-car vessel is delivered in 2014 (Bremerton)
- 124 from Bremerton moves to San Juan Domestic increases route capacity
- 90-car Sealth moves to Fauntleroy - Vashon - Southworth increases route capacity
- 87 bumped from Fauntleroy - Vashon - Southworth increases standby capacity
- Evergreen State and Hiyu are retired

- **Five new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2027 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to maintenance reserve
- Two new 144-car vessels are delivered in 2028 and 2029 (San Juan Domestic)
- One new 144-car vessel to maintenance in 2028 moves Hyak to standby and retires Klahowya
- One new 144-car vessel is delivered in 2029 to Bremerton.
- Tillikum and three 144-car vessels are retired (Elwha, Kaleetan, and Yakima)

# VESSEL ASSIGNMENTS & PROCUREMENT IMPACTS - FINAL LRP PLAN FALL & SPRING

| | 2009-11 | 2011-13 | 2013-2025 | 2025 - 2031 |
|---|---|---|---|---|
| **Anacortes - Sidney** (Vessel makes two daily round-trips to Sidney & one to San Juans) | 124 | 124 | 124 | 124 |
| **Anacortes - San Juan Islands** | 144 144 | 144 144 | 144 144 | 144 New 144 New |
| **Interisland** | 87 | 87 | 90 + 3 | 90 + 3 |
| **Port Townsend - Keystone** | 64 64 + 64 | 64 64 + 64 | 64 64 + 64 | 64 64 + 64 |
| **Mukilteo - Clinton** | 124 124 | 124 124 | 144 New 124 + 20 | 144 New 144 New + 40 |
| **Edmonds - Kingston** | 202 188 | 202 188 | 202 188 | 202 188 |
| **Seattle - Bainbridge** | 202 202 | 202 202 | 202 202 | 202 202 |
| **Seattle - Bremerton** | 124 144 | 124 144 | 144 New 144 + 20 | 144 New 144 New + 20 |
| **Fauntleroy - Vashon - Southworth** | 87 87 124 | 87 87 124 | 124 87 124 + 37 | 124 124 124 + 74 |
| **Pt. Defiance - Tahlequah** | 48 | 64 + 16 | 64 + 16 | 64 + 16 |
| **Standby (emergency reserve)** | 34 | 34 | 87 + 53 | 144 + 110 |
| **Maintenance Reserve** | 188 144 90 | 188 144 90 | 188 144 124 | 188 144 New 124 |

KEY

- 202 188 — Jumbo Vessel
- 144 — Large Vessel
- 124 — Medium Vessel
- 90 87 — Mid-Size Vessel
- 64 34 — Small Vessel
- No Change
- Change in Capacity
- + 16 — Change in vehicle capacity

- **Two 64-car vessel (Island Home) are delivered**
- **Funding for one 64-car vessels (under construction)**
- One new 64-car vessels is delivered in 2010 (Port Townsend - Keystone)
- One new 64-car vessel is delivered in 2011 (Port Townsend - Keystone)
- One 64-car vessel on Port Townsend - Keystone only operates in Shoulder season (Mid-May to Mid-October)

- **64-car vessel program is complete; delivery of final 64-car vessel**
- **Start new 144-car vessel program**
- One new 64-car vessel is delivered in 2012 (Pt. Defiance - Tahlequah)
- Rhododendron is retired
- One 64-car vessel on Port Townsend - Keystone only operates in Shoulder season (Mid-May to Mid-October)

- **Two new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2014 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to Fauntleroy - Vashon - Southworth and increases route capacity
- One new 144-car vessel is delivered in 2014 (Bremerton)
- 87 bumped from Fauntleroy - Vashon - Southworth increases standby capacity
- Sealth begins Interisland service
- Evergreen State and Hiyu are retired
- One 64-car vessel on Port Townsend - Keystone only operates in Shoulder season (Mid-May to Mid-October)

- **Five new 144-car vessels are delivered**
- One new 144-car vessel is delivered in 2027 (Mukilteo - Clinton)
- 124 from Mukilteo - Clinton moves to Fauntleroy - Vashon - Southworth and increases route capacity
- Two new 144-car vessels are delivered in 2028 and 2029 (San Juan Domestic)
- One new 144-car vessel to maintenance in 2028 moves Hyak to standby and retires Klahowya
- One new 144-car vessel is delivered in 2029 to Bremerton.
- Tillikum and three 144-car vessels are retired (Elwha, Kaleetan, and Yakima)
- One 64-car vessel on Port Townsend - Keystone only operates in Shoulder season (Mid-May to Mid-October)

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX O
## SOURCES AND USES

# LONG-RANGE PLAN SOURCES & USES

## REVENUE & COST ESTIMATE METHODOLOGY

This appendix describes the methodology and assumptions used to develop the Final Long-Range Plan revenues (sources of funds) and costs (uses of funds).

### Summary of Key Operating Revenue Assumptions

Farebox Revenue. Revenue received from fares paid by passengers and vehicles.

- Farebox revenue and ridership is based on the Department of Transportation Revenue Forecast Council's (Forecast Council) June 2009 forecast for ridership and farebox recovery.
- Fare increases are based on the Forecast Council's Scenario #2 ("Baseline Fare Increases") – 2.5% fare increases each October, 2009 – 2031, rounded up to the nearest nickel.

Miscellaneous Revenues. Revenue received from vessel and terminal concessions, freight and vessel use fees, on-board Wi-Fi charges, advertising, and parking.

- Revenues are based on the Forecast Council's June 2009 forecast developed by WSF.

State Taxes, Capron Transfers, Fees, and Other Revenue. Authorized by RCW 47.60.530 (created in 1972), provides tax support for operations and maintenance of Washington State Ferries, which includes:

- Motor fuel tax (2.3283% of net gas tax collections or 0.54 cents of 23 cent dedicated gas tax)
- Motor vehicle registration fee ($2.02 per new registration, $0.93 per renewal)
- Combined licensing fees (1.411% of collections)
- Tax revenues are based on the Forecast Council's June 2009 forecast.

Other Taxes.

- The funding analysis assumes that WSF will receive the expected $46.4 million in support from other transportation funds over the next two biennia (per 2009 Legislative session). Following that period, no additional support is anticipated from the motor vehicle fund, except treasury deposit earnings and a small amount of MVET distributions related to the elimination of the handling loss deduction for the motor vehicle fuel tax set forth by SB 5027.

### Summary of Key Capital Revenue Assumptions

The funding that is already committed includes:

- Transfers from the Motor Vehicle and Multimodal Accounts in the 16-Year Plan which are assumed to stop at the end of the 16-year commitment.
- Dedicated funding (gas tax) is based on the June forecast.

- Bond proceeds as per the 2009 Legislative Financial Plan.
- An assumed average of about $15 million per year in Federal funding.

## Summary of Key Operation Expenditures & Escalation Indices

Vessels. Operating expenditures include variable and fixed costs. Deck labor (and supplies) and fuel are the major variable costs that are dependent on the vessel type and hours of service. Fixed costs include engine room staff, repairs, and maintenance.

- Deck Labor: Based on annual increases of 3.6% per year.
- Fuel: Based on the Forecast Council's June 2009 forecast for diesel fuel price per gallon. Fuel prices assume cost savings attributable to slowing vessels down on average 0.5 knot in the summer and 0.75 knot in the spring, fall, and winter.
- Non-Labor, Fixed Vessel, and Management & Support costs: Based on general implicit price deflator (IPD) for personal consumption (2.0% per year average).

Terminals. Operating expenditures include only fixed costs associated with labor and materials.

- Expenditures are escalated using a blended average of labor and non-labor escalation (assumed 3.0% per year average).

## Summary of Key Capital Expenditure Escalation Indices

Vessel Preservation. Vessel preservation needs are developed using the Life Cycle Cost Model (LCCM), which identifies when assets are expected to be replaced, based on current condition ratings and an expected useful life.

- Based on Bureau of Labor Statistics (BLS) ship repair non-military index (3.75% per year).

Vessel Improvements & Emergency Repairs. Expenditures include fuel conservation, regulatory-related and other targeted vessel improvements. Fuel conservation investments are designed to support the fuel conservation program in the 2009-11 bienniums. No further fuel conservation investments are assumed. In new vessels, fuel conservation measures will be incorporated into the design.

- Based on Bureau of Labor Statistics (BLS) ship repair non-military index (3.75% per year).

Vessel Procurement. The most significant capital funding need over the next 22 years is new vessel acquisitions to support the upcoming retirements of several aging vessels in the fleet.

- Based on Bureau of Labor Statistics (BLS) ship construction non-military (4.70% per year).

Terminal Preservation & Improvements. Terminal preservation needs are developed using the LCCM, which has been updated for current facility condition ratings and to reflect current costs of asset replacement. Improvements reflect some modest terminal improvements, where projects can be demonstrated to add significant value. The projects include a vehicle reservation system, major terminal projects at Seattle, Anacortes, Mukilteo, and Edmonds, and other small projects.

- Escalation is similar to the general implicit price deflator (IPD) for personal consumption (2.0% per year average).

***Long Range Plan: Operating and Capital Funding***

**Washington State Department of Transportation**

**Washington State Ferries Sources and Uses of Funds**

*millions of dollars*

| Operating Program | 2009-11 | 2011-13 | 2013-15 | 2015-17 | 2017-19 | 2019-21 | 2021-23 | 2023-25 | 2025-27 | 2027-29 | 2029-31 | Total 2009-2031 | 16-Yr Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cash Carry-Forward** | **(4.4)** | **(19.8)** | **(39.5)** | **(94.5)** | **(153.8)** | **(213.5)** | **(270.0)** | **(314.7)** | **(362.5)** | **(406.0)** | **(448.7)** | | |
| **Sources of Funds** | | | | | | | | | | | | | |
| Farebox Revenue * | 306.7 | 335.1 | 357.8 | 383.9 | 413.1 | 444.1 | 476.7 | 510.5 | 545.2 | 581.8 | 610.8 | 4,965.6 | 3,227.8 |
| Miscellaneous Revenue (Concessions, etc) | 7.4 | 7.9 | 8.2 | 8.7 | 9.3 | 10.0 | 10.6 | 11.3 | 12.1 | 12.9 | 13.7 | 112.1 | 73.5 |
| **Total Operating Revenues Generated** | **314.1** | **343.0** | **366.0** | **392.6** | **422.4** | **454.1** | **487.3** | **521.8** | **557.3** | **594.7** | **624.5** | **5,077.7** | **3,301.3** |
| **Uses of Funds** | | | | | | | | | | | | | |
| **Vessel Costs** | | | | | | | | | | | | | |
| Deck Labor Cost | 101.6 | 104.6 | 110.6 | 117.8 | 125.4 | 134.6 | 144.5 | 155.1 | 166.4 | 178.6 | 200.7 | 1,540.0 | 994.2 |
| Fuel Cost ** | 73.3 | 86.2 | 104.1 | 112.2 | 119.7 | 123.3 | 118.6 | 127.9 | 133.4 | 139.9 | 147.0 | 1,285.6 | 865.2 |
| Other non-labor Cost | 4.3 | 4.5 | 4.7 | 4.8 | 5.0 | 5.2 | 5.4 | 5.7 | 5.9 | 6.1 | 7.1 | 58.7 | 39.6 |
| Fixed Vessel Costs | 111.0 | 117.5 | 128.5 | 138.7 | 148.5 | 158.0 | 168.1 | 178.9 | 185.9 | 195.9 | 179.8 | 1,710.9 | 1,149.3 |
| Total Vessel Costs | 290.2 | 312.8 | 347.9 | 373.5 | 398.6 | 421.1 | 436.7 | 467.5 | 491.6 | 520.5 | 534.7 | 4,595.1 | 3,048.3 |
| Terminal Costs | 76.9 | 78.3 | 82.9 | 87.8 | 92.9 | 98.4 | 104.2 | 110.3 | 117.0 | 124.1 | 133.6 | 1,106.5 | 731.7 |
| Management & Support Costs | 53.7 | 56.6 | 59.0 | 61.4 | 63.9 | 66.5 | 69.3 | 72.1 | 74.9 | 77.9 | 81.0 | 736.2 | 502.4 |
| Other Misc Costs (State Employee Compensation Adj) | (3.2) | (3.2) | (3.4) | (3.5) | (3.5) | (3.5) | (3.6) | (3.7) | (3.8) | (3.9) | (3.9) | (39.2) | (27.6) |
| **Total Uses of Funds** | **417.6** | **444.5** | **486.4** | **519.2** | **551.9** | **582.5** | **606.5** | **646.2** | **679.8** | **718.7** | **745.3** | **6,398.6** | **4,254.8** |
| **Subsidy Required/Operating Surplus** | **(107.8)** | **(121.4)** | **(159.9)** | **(221.2)** | **(283.2)** | **(342.0)** | **(389.2)** | **(439.1)** | **(485.0)** | **(530.1)** | **(569.5)** | **(1,320.8)** | **(953.5)** |
| State Taxes (Gas Tax) + Capron Act | 45.5 | 46.8 | 47.8 | 49.3 | 51.0 | 52.7 | 54.7 | 56.3 | 58.0 | 59.9 | 61.7 | 583.8 | 404.1 |
| Licenses, Permit and Fees | 15.3 | 15.8 | 16.4 | 17.0 | 17.5 | 18.0 | 18.5 | 19.1 | 19.7 | 20.3 | 21.0 | 198.5 | 137.6 |
| Taxes and Fees (Transfers Assumed in 16-Yr Plan) | 27.2 | 19.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 57.3 | 53.7 |
| **Presumed Level of Subsidy Under Current Legal Arrangements for Ferry Operations** | **88.0** | **81.8** | **65.4** | **67.4** | **69.7** | **72.0** | **74.4** | **76.6** | **78.9** | **81.4** | **83.9** | **839.6** | **595.3** |
| **Annual operating surplus/(deficit)** | **(15.5)** | **(19.7)** | **(55.0)** | **(59.3)** | **(59.8)** | **(56.5)** | **(44.7)** | **(47.8)** | **(43.5)** | **(42.6)** | **(36.9)** | **(485.6)** | **(362.5)** |
| **Cumulative operating surplus/(deficit)** | **(19.8)** | **(39.5)** | **(94.5)** | **(153.8)** | **(213.5)** | **(270.0)** | **(314.7)** | **(362.5)** | **(406.0)** | **(448.7)** | **(485.6)** | **(485.6)** | **(362.5)** |
| **Farebox Recovery** (farebox revenues/total use of funds) | **73%** | **75%** | **74%** | **74%** | **75%** | **76%** | **79%** | **79%** | **80%** | **81%** | **82%** | **78%** | **78%** |
| **Fuel Surcharge** | | | | | | | | | | | | | |
| Fuel Surcharge Revenues *** | 20.2 | 19.5 | 36.0 | 44.8 | 50.5 | 52.1 | 39.7 | 40.4 | 42.9 | 45.6 | 44.2 | 435.8 | 303.1 |
| **Cumulative operating surplus/(deficit) with Fuel Surcharge** | **0.3** | **0.1** | **(18.9)** | **(33.4)** | **(42.7)** | **(47.0)** | **(52.0)** | **(59.4)** | **(60.1)** | **(57.1)** | **(49.8)** | **(49.8)** | **(59.4)** |

| Capital Program | 2009-11 | 2011-13 | 2013-15 | 2015-17 | 2017-19 | 2019-21 | 2021-23 | 2023-25 | 2025-27 | 2027-29 | 2029-31 | Total 2009-31 | 16-Yr Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cash Carry-Forward** | **1.6** | **5.6** | **(0.8)** | **(337.0)** | **(611.1)** | **(787.0)** | **(885.8)** | **(912.1)** | **(954.1)** | **(1,848.1)** | **(2,834.8)** | | |
| **Sources of Funds** | | | | | | | | | | | | | |
| State Distribution of Gas Tax | 35.9 | 36.8 | 37.5 | 38.4 | 39.5 | 40.6 | 42.1 | 43.3 | 44.3 | 45.4 | 46.5 | 450.2 | 314.0 |
| State Revenue from 2003 Transportation Account | 51.7 | 50.0 | 15.0 | 5.1 | 13.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 135.6 | 135.6 |
| State Revenue from 2005 Transportation Partnership Account | 67.2 | 23.2 | 10.8 | 0.0 | 0.0 | 24.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 125.6 | 125.6 |
| Admin Transfer from Multimodal Account | 0.2 | 45.4 | 15.7 | 27.2 | 20.0 | 100.0 | 122.0 | 120.0 | 0.0 | 0.0 | 0.0 | 450.5 | 450.5 |
| Total State Taxes and Fees for Ferry Capital | 155.0 | 155.4 | 79.0 | 70.7 | 73.3 | 164.9 | 164.1 | 163.3 | 44.3 | 45.4 | 46.5 | 1,161.9 | 1,025.8 |
| Bond Proceeds (R-49 & Multimodal GO) | 118.0 | 127.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 245.0 | 245.0 |
| Treasury Deposit Earnings | 2.5 | 2.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.4 | 6.4 |
| Local Funds | 8.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.5 | 8.5 |
| Federal Funds | 38.3 | 32.5 | 35.0 | 29.3 | 29.3 | 29.3 | 29.3 | 29.3 | 29.3 | 29.3 | 29.3 | 339.8 | 252.0 |
| **Total Sources of Funds** | **322.3** | **317.3** | **115.5** | **99.9** | **102.6** | **194.2** | **193.4** | **192.6** | **73.6** | **74.6** | **75.7** | **1,761.7** | **1,537.7** |
| **Uses of Funds** | | | | | | | | | | | | | |
| Emergency Repairs | 6.3 | 4.6 | 4.9 | 5.2 | 5.6 | 6.0 | 6.4 | 6.9 | 7.4 | 7.9 | 8.5 | 69.8 | 46.0 |
| Terminal Preservation | 50.7 | 69.3 | 55.9 | 173.2 | 95.9 | 129.2 | 49.3 | 49.2 | 129.7 | 79.3 | 103.4 | 985.1 | 672.7 |
| Terminal Improvements | 23.7 | 19.7 | 15.2 | 34.6 | 17.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 110.8 | 110.8 |
| Total New Vessel Construction | 117.3 | 139.4 | 249.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.6 | 655.7 | 718.7 | 0.0 | 1,893.6 | 519.2 |
| Vessel Preservation | 50.3 | 33.4 | 68.3 | 101.6 | 98.9 | 99.1 | 112.7 | 126.8 | 140.5 | 219.5 | 227.2 | 1,278.2 | 691.1 |
| Vessel Improvements | 12.5 | 4.7 | 5.4 | 6.0 | 6.6 | 7.3 | 7.8 | 7.5 | 8.0 | 8.6 | 9.2 | 83.5 | 57.7 |
| Admin, Support, & Indirect | 24.0 | 21.2 | 21.7 | 22.3 | 23.1 | 24.0 | 24.9 | 25.8 | 26.8 | 27.8 | 28.8 | 270.4 | 187.0 |
| Total Capital Projects | 284.8 | 292.3 | 420.4 | 342.9 | 247.8 | 265.6 | 201.1 | 229.8 | 968.0 | 1,061.8 | 377.1 | 4,691.5 | 2,284.6 |
| State Employee Compensation Adj | (0.4) | (0.4) | (0.4) | (0.4) | (0.4) | (0.4) | (0.4) | (0.4) | (0.4) | (0.4) | (0.5) | (4.5) | (3.2) |
| Existing Debt Service | 33.8 | 31.8 | 31.8 | 31.5 | 31.1 | 27.8 | 19.0 | 5.2 | 0.0 | 0.0 | 0.0 | 212.1 | 212.1 |
| **Total Uses of Funds** | **318.2** | **323.7** | **451.8** | **374.0** | **278.5** | **293.0** | **219.7** | **234.6** | **967.6** | **1,061.3** | **376.6** | **4,899.0** | **2,493.5** |
| **Annual capital surplus/(deficit)** | **4.0** | **(6.4)** | **(336.3)** | **(274.1)** | **(175.9)** | **(98.8)** | **(26.3)** | **(42.0)** | **(894.0)** | **(986.7)** | **(300.9)** | **(3,135.7)** | **(954.1)** |
| **Cumulative Capital Fund Balance (Capital Sources Minus Uses)** | **5.6** | **(0.8)** | **(337.0)** | **(611.1)** | **(787.0)** | **(885.8)** | **(912.1)** | **(954.1)** | **(1,848.1)** | **(2,834.8)** | **(3,135.7)** | **(3,135.7)** | **(954.1)** |
| **Net operating surplus/(deficit)** | **(19.8)** | **(39.5)** | **(94.5)** | **(153.8)** | **(213.5)** | **(270.0)** | **(314.7)** | **(362.5)** | **(406.0)** | **(448.7)** | **(485.6)** | **(485.6)** | **(362.5)** |
| Total Funding Needed for 2030 Ferry Plan | (14.2) | (40.3) | (431.5) | (764.9) | (1,000.5) | (1,155.8) | (1,226.9) | (1,316.7) | (2,254.2) | (3,283.5) | (3,621.3) | (3,621.3) | (1,316.7) |

** Based on the June Forecast for Ridership, Revenue, and Fuel Projections*
*** Based on Global Insights June Baseline Diesel forecast*
**** Fuel Surcharge would only be implemented if Legislature approves fuel surcharge plan*

Washington State Department of Transportation

# WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
# FERRIES DIVISION

## FINAL LONG-RANGE PLAN

## APPENDIX P
## ENVIRONMENTAL CONSIDERATIONS

# ENVIRONMENTAL EVALUATION OF FERRY SYSTEM PLAN

## INTRODUCTION

The purpose of the environmental evaluation is to analyze potential environmental impacts from, and the ability to meet environmental regulatory obligations through implementation of the Long-Range Plan. For the analysis, the study area was defined as the Washington State Ferries (WSF) system in Puget Sound which includes the 19 terminal locations and the maintenance facility, and serves the communities of Kitsap, King, Island, Pierce, Skagit and San Juan Counties. This environmental evaluation does not provide any National Environmental Policy Act (NEPA) or State Environmental Policy Act (SEPA) level analysis, but rather provides a qualitative assessment of the major environmental elements that could pose substantial issues on future development of any of the ferry terminals and implementation of operational solutions.

The environmental elements evaluated include land use, air quality, noise, water quality, ecosystems and protected species, earth, traffic, tribal resources and treaty rights, historical and cultural resources, park and recreational lands, and Department of Natural Resources Lands.

Linking transportation planning and NEPA is voluntary. The intent of the process is not to require NEPA studies in the transportation planning process. CFR 771.117 and TEA-21 exempt planning studies from NEPA review as reflected under 23 USC 134(o), 23 USC 135(i) and 49 USC 5305(h). WAC 468-12-800(3) also exempt transportation plans from SEPA. However, the Safe Accountable Flexible Efficient Transportation Equity Act (SAFETEA-LU) has development guidance for linking planning to NEPA. The degree to which studies analyses, or conclusions from the transportation planning process can be incorporated into the project development/NEPA-SEPA processes will depend upon how well they meet certain standards established by those regulations and guidance.

Future project level planning and environmental review for terminal projects identified to move forward in the Long Range Plan will provide more detailed project-level information on the specific projects, such as specific terminals, routes, transit enhancement locations, operational characteristics, and more detailed environmental impact assessment and mitigation plans. WSDOT's vessels are constructed in private shipyards and these shipyards are required to meet all state and federal environmental requirements.

WSF will work with local governments, resource agencies, tribes, federal agencies and the public to ensure that the plan implementation and project specific work is carried out in full compliance with environmental laws and WSDOT's policies. This section of the plan explains the areas of the environment WSF considered at the plan level.

### Why include planning-level environmental review for this ferry long-range plan?

- To implement current and emerging guidelines at Federal and State levels to engage environmental discussion in transportation planning
- To provide a comprehensive, coordinated and coherent system framework for individual service and capital improvement components of the transportation plan
- To reduce costs, time and uncertainties for individual capital projects when underlying system plan policies, technical analysis and stakeholder involvement have been broadly in place
- To align "big picture" issues and mitigation strategies and provide key inputs to projects that do trigger NEPA or SEPA. This helps the comprehensive planning process to inform any subsequent project level NEPA/SEPA process, and, on the other hand, environmental considerations are incorporated in comprehensive planning at the outset

### What is the role of planning-level environmental review in the decision-making process in developing the ferry plan?

- The decision process now heightens broad environmental review alongside planning decisions and stakeholder outreach
- Environmental impact considerations are integrated into ferry system structure, service program and capital project decisions
- The ferry plan draws extensively from recent terminal and vessel project-specific development and permitting processes.

## LAND USE

### What is the existing land use and zoning around the ferry terminals?

Land uses at the ferry terminal locations include recreational, residential and commercial. The communities in which the ferry terminals reside are linked in varying degrees to the economic conduit that the ferry system provides. In some cases this economic relationship has been an important factor in the land use development of the community.

Local comprehensive plans, zoning maps and shoreline master programs designate the ferry terminals as ferry terminal facility, commercial, industrial or urban waterfront that allow the location of the terminal facilities. The establishment of ferry terminal facilities predates the Growth Management Act and Shoreline Management Act.

### What are the potential land use changes associated with the plan?

Improvements and operation of the ferry system can affect land uses in several ways. When there is a change in the size of terminal facility or location there would be near-term changes to properties being used. There may also be medium term changes in the locality if the economy realizes benefit or detriment from the changes to the terminals. In addition,

changes in ferry service can also affect local land use to the extent that the ferry service provides access to properties and as a function of facilitating movement of money and goods in the local economy.

The ferry system plan takes account of the critical interaction between local land use and the provision of ferry services. This is accomplished by:

- Relying on adopted comprehensive plans as the land use basis for ferry planning;
- Using local and regional datasets and tools in technical analyses;
- Developing ferry strategies and programs to align with adopted State and local transportation and land use goals; and
- Involving local and regional entities in plan-making.

Strategies that have been developed in the long range plan are not expected to change the land uses of any of the ferry communities with exception of Mukilteo, where the terminal may be relocated. At Mukilteo, if feasible, the terminal will be relocated to an abandoned industrial property to allow active, urban water front commercial uses at the current terminal location.

## AIR QUALITY

### How is air quality regulated?

Air quality in the Puget Sound region is regulated by the U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology), and the Puget Sound Clean Air Agency (PSCAA). Under the Clean Air Act, EPA has established the National Ambient Air Quality Standards (NAAQS), which specify maximum concentrations for carbon monoxide, particulate matter (PM10 and PM2.5), ozone, sulfur dioxide, lead, and nitrogen dioxide. In, addition, the state has recently established statutory requirements regarding green house gas emission reductions for state agencies.

The Puget Sound Clean Air Agency's 2005 Air Quality Data Summary indicates that, with the exception of fine particulate matter (PM2.5) and ozone, criteria air pollutants concentrations are well below levels of concern for the region.

Particulate matter includes small particles of dust, soot, and organic matter suspended in the atmosphere. Particulates less than 100 micrometers in diameter are measured as total suspended particulates. Most diesel engine emissions are in the PM2.5 size range, while road and construction dust is often in the larger PM10 range. Most transportation related fine particulate emissions come from diesel engine emissions, which release fine particulates both directly, mostly as carbon compounds and indirectly in the form of sulfur dioxide, a gas that reacts in the atmosphere to form sulfate particulates.

**What are the pollutants of concern in the Puget Sound region?**

Criteria pollutants, as identified by the National Ambient Air Quality Standards (NAAQS) are particulate matter (PM10 and PM 2.5), carbon monoxide, ozone, sulfur dioxide, lead, and nitrogen dioxide.

- PM10 is particulate matter less than 10 micrometers in size
- PM2.5 is particulate matter less than 2.5 micrometers in size

Near the Puget Sound, PM2.5 and PM10 concentrations tend to be highest in Fall and Winter during periods of air stagnation and high use of wood for heat. Current monitored levels of $PM_{2.5}$ violated recently adopted (2006) federal standards in Pierce County. Other air pollutants of concern for transportation projects include mobile source air toxics and greenhouse gases.

Ozone is a highly toxic combination of oxygen atoms and is a major component of the complex chemical mixture that forms photochemical smog. Ozone is not produced directly, but is formed by a reaction between sunlight, nitrogen oxides (NOx), and volatile organic compounds (VOCs). Ozone primarily is a product of regional vehicular traffic, point source emissions, and fugitive emissions of the ozone precursors. Tropospheric (ground-level) ozone, which results from ground-level precursor emissions, is a health risk, while stratospheric (upper-atmosphere) ozone, which is produced through a different set of chemical reactions that only require oxygen and intense sunlight, protects people from harmful solar radiation.

In the Puget Sound area, the highest ozone concentrations occur from mid-May until mid-September, when urban emissions are trapped by temperature inversions followed by intense sunlight and high temperatures. Approximately thirty percent of nitrogen oxides and volatile organic compounds come from mobile sources. Maximum ozone levels generally occur between noon and early evening, after nitrogen oxides and volatile organic compounds have had time to mix and react under sunlight, and at locations several miles downwind from the sources. Light northeasterly winds produce these conditions contribute to high ozone concentrations near the Cascade foothills, to the south and southeast of the Seattle-Tacoma Metropolitan Area.

Automobiles, ferry vessels, and other vehicles using fossil fuel also emit greenhouse gases, primarily carbon dioxide. Greenhouse gases trap solar energy in the atmosphere, warming the earth's surface. While greenhouse gases occur naturally in the atmosphere (without them the average temperature of the earth would be below freezing), human activities over the last century have released additional greenhouse gases.

Currently, approximately 49% of all greenhouse gas emissions in Washington State are from transportation, including on-road and off road vehicles, ferry vessels, rail transport, and air travel. WSF vessels burn approximately 17 million gallon of diesel fuel annually. Based on the *2007 WSDOT Greenhouse Gas Emissions Inventory*, these 17 million gallons account for approximately 69 percent of WSDOT's green house gas emissions. In the 2009-11 biennium, this amount is expected to be reduced to about 15 million gallons as a result of fuel conservation efforts.

## What are the possible effects of the plan on air quality and greenhouse gas emissions?

The operation of the ferry system affects air quality and greenhouse gas emissions through both the emissions of passenger vehicles using the system and through the operation of the system itself.

### Potential Emissions Reductions from Passenger Vehicles

Air quality improvements are anticipated in the communities near terminals where the proposed reservation system will be implemented. Emissions from passenger vehicles using the ferry system will be reduced by shortening the cues of idling vehicles. Currently, vehicle cues frequently extend far beyond the toll booths at many terminals during peak travel periods. Vehicles beyond the toll booths are encouraged, but not required, to shut-off vehicle engines. It is unknown whether passengers will modify their sailing time to use the reservation system or will choose to drive around to travel at their preferred time. Air emissions will be affected if travelers elect to drive around southern Puget Sound to reach their destination.

In addition to the savings from passenger vehicles, implementation of the reservation system is expected to reduce the number of vessels needed to meet projected demand, and consequently avoid fleet emissions that would occur if vessels and vessels sailings were added to meet projected demand, as proposed under previous long range system planning efforts.

### Potential Emissions Reductions from the Ferry System

This plan delays the installation of transit-related improvements to the terminals until increased walk-on ridership is realized, and maintains the current cost pricing ratio between vehicles and passengers. The delay to terminal transit improvements, and not changing the pricing strategy, will likely delay the shift of ferry ridership from single occupancy vehicles to alternative modes of transit. This assumption is based on the ease of use, accessibility and cost factors that affect transportation choices. If this assumption is accurate, then it may be difficult for the for the ferry system to contribute to statutory per capita vehicle miles traveled and greenhouse gas reduction targets. Delaying a greater shift to transit will also delay the realization of potential reductions in criteria pollutants associated with transit use.

The proposed new vessels are designed to maximize fuel efficiency and will meet new EPA standards for emissions control. The replacement of the fleet's oldest vessels with vessels that meet current EPA standards is expected to reduce emissions of criteria pollutants from the fleet.

The new 64 auto class ferries will have greater engine cylinder displacement than the vessels they will replace. So, although many measures have been taken on these new vessels to optimize fuel efficiency, it is possible they will burn more fuel per trip than the vessels they replace.

The implementation of this plan would support the ongoing efforts to reduce fuel consumption and air emissions of the vessel fleet. The fuel conservation strategies currently being pursued (see sidebar) are expected to lower the overall fleet fuel use, and therefore

green house gas emissions. This fleet wide fuel use reduction is expected even though the 64 auto ferries may burn more fuel on a given route than the vessels they replace.

Although total greenhouse gas emissions are expected to decrease with this plan, given currently identified fuel use reduction strategies, it is uncertain and perhaps unlikely that WSDOT will be able to meet statutory greenhouse gas reduction targets without significant changes in fuel, propulsion technology and/or operations of the vessels. See sidebar for state agency statutory green house gas reduction requirements.

### State agency green house gas reduction requirements

- By July 1, 2020, to 15% below 2005 levels
- By 2035, to 37% below 2005 levels
- By 2050, to the greater of 57.5% below 2005 levels or 70% below the expected state government emissions that year.

### Measures WSF is taking to reduce fuel consumption and air emissions from its vessels

Minimize the energy requirements though the ship design process

- Properly sizing ships to meet WSF's current and future operational needs.
- Designing ship hulls design to reduce overall resistance and reduce fuel requirements
- Selecting EPA compliant clean burning, fuel efficient and optimally sized diesel engines
- Ensuring that new vessels have adequate carrying capacity to accommodate future emissions control alterations

Minimize energy requirements through operational policy

- Run propulsion and auxiliary engines only when necessary, e.g., use shore power at night.
- Operate ferries at their most fuel efficient power level while maintaining published sailing schedules.
- Modify vessels to allow one-engine operation at the terminals

Minimize emissions by selecting cleaner fuels

- By 2004, the entire WSF fleet had converted from high sulfur diesel fuel (3500 ppm sulfur) to low sulfur diesel fuel (350 ppm sulfur).
- Currently WSF is using ultra low sulfur fuel (15 ppm sulfur) and biodiesel, within budget constraints.

# NOISE

## How is noise regulated?

As more people choose to live along the banks of the Puget Sound, noise from the loading of ferries and their engines has become a greater concern for residents near ferry terminals.

The regulation of noise typically is the responsibility of state and local governments through noise limits established by local ordinances and state regulations. For example, many cities and counties have established ordinances that limit construction noise levels at night and on weekends. WSDOT also evaluates traffic and transit noise as part of the SEPA/NEPA process when new terminals are constructed or substantial improvements are made.

The Federal Highway and Federal Transit Administrations provide criteria for evaluating noise impacts from transportation sources. WSDOT uses these and other applicable criteria to evaluate proposed projects during project-level environmental reviews.

## How will the plan affect noise in the terminal communities?

Terminal preservation and improvements identified in the plan may have significant noise related impacts during construction. During project development and implementation, it is WSDOT's practice to work with the applicable cities and counties to minimize noise related construction impacts, as is practicable, and ensure compliance with local ordinances.

Implementation of the plan is unlikely to cause noticeable changes to the noise levels associated with system operations. WSDOT studies indicate that the loudest source of noise at the terminals during operations is from passenger vehicle loading and unloading.

Reducing vehicle noise may require noise barriers in front of homes (blocking scenic views) or converting the fleet to different vessel types, which is beyond the resources of the department. Noise compatible land use is another approach and involves cities and counties limiting new building permits and remodel approvals near ferry terminals, or requiring the incorporation of noise reduction standards in new or remodeled homes, thus transferring potential noise mitigation responsibility to owners and developers.

# WATER QUALITY

## What are typical water quality issues associated with transportation system projects and operations?

Stormwater runoff from highways and other paved surfaces (such as ferry terminals) has been shown to contain a range of pollutants including particulates and solids, nitrogen and phosphorus compounds, heavy metals, and oil and grease. These pollutants are directly related to vehicular use of the paved facilities and have the potential for adverse impacts on water resources that they drain into. Potential impacts resulting from these pollutants depend on a number of variables including: rainfall duration and intensity, the number of dry days preceding intense rainfall, surrounding land uses, air quality, vegetation types, spills on

roadways, improperly disposed waste and fluids, maintenance activities, and health of the surrounding ecosystem.

Most ferry terminals were built prior to stormwater regulations and have no runoff treatment or flow control facilities associated with them.

Threats to water quality from stormwater on the vehicle deck of a ferry vessel would likely be similar to that of a parking lot, as the area temporarily holds vehicles in a similar manner. These main vehicle decks of the ferry fleet are open to drain to surface waters through scuppers, which are required to maintain the stability and safety of the vessels

The importance of water quality relates directly to the health of the vegetative communities and the wildlife they support. Contaminants may accumulate in fish and other wildlife, endangering their health and potentially the health of humans that consume them.

## How is water quality regulated in Washington State?

Several policies and regulations directly affect water quality and focus on the impacts of growth and development. These include the Federal Clean Water Act, the state's Water Pollution Control act, the Growth Management Act and Shoreline Management Act. Washington State Department of Ecology (Ecology) has established detailed water quality criteria (Chapter 173-201A WAC) intended to protect a variety of designated uses of state waters. Stormwater is regulated by Ecology through stormwater management regulations for construction and operations of facilities, and Ecology is responsible for implementing the National Pollutant Discharge Elimination System (NPDES) for shoreside actions. In addition the Washington Department of Fish and Wildlife have regulatory authority over specific activities such as ferry terminal cleaning, painting, general maintenance and repair, piling removal or replacement and marine geotechnical sediment test boring, through Hydraulic Project Approvals (HPA).

Ecology has recently issued a new WSDOT Municipal Stormwater General Permit that covers stormwater discharges from ferry terminals, and is scheduled to issue a new Industrial Stormwater General Permit that will cover stormwater discharges from ferry maintenance facilities later this year. These permits have or will increase the performance requirements over the previous permits.

Discharges to surface waters from vessels are governed by international laws and regulations and U.S regulations, including the Code of Federal Regulations Parts 33 and 40. The State of Washington's requirements essentially mirror the federal requirements in this area.

The NPDES regulations, implemented under the Clean Water Act, historically did not regulate discharges from vessels. However, in February of 2009 a new Vessel General NPDES permit was issued by the EPA, which covers up to 27 potential discharges from permitted vessels.

## What are the potential water quality impacts from the plan implementation?

The proposed demand management strategies are expected to minimize the holding area needed at the terminals. Consequently, this is expected to avoid the need for addressing additional pollution loading surfaces in the system.

Because the mechanism for funding stormwater system upgrades is currently dependent on the development and implementation of terminal improvement projects and proposed terminal improvements have been delayed within the final plan, upgrades to the stormwater treatment at the terminals will also be delayed. The result is that stormwater runoff from many of the terminals will continue to be untreated. The plan does not address resources that will be required to comply with new stormwater permit requirements.

The plan may further reduce the already low risk of fueling spills reaching surface waters, as the new 64 auto ferry will have spill containment features built into the vessels deck. No other vessel water quality related changes are anticipated with plan implementation.

### How WSF avoids and minimizes impacts to surface waters

WSF best management practices at terminals to avoid and minimize impacts to surface waters include:

- Storing hazardous materials in secondary containment
- Selecting less toxic materials (such as cleaning materials) where discharges cannot be completely eliminated, and implementing management practices that minimize the discharge of potential contaminants (such as terminal cleanup practices to protect the quality of terminals runoff)

WSF best management practices on vessels that avoid and minimize impacts to surface waters include:

- Eliminating direct discharges into Puget Sound of materials such as oily wastewater or gray water, by holding them on board and then discharging them legally to appropriate to shore side facilities.
- Designing systems to minimize potential discharges, such as from shaft seals.
- Fueling in a manner that reduces risks of spills.
- Selecting less toxic materials (such as anti-fouling hull coating) where discharges cannot be completely eliminated, and implementing management practices that minimize the discharge of potential contaminants (such as deck cleanup practices to protect the quality of terminals runoff).

# ECOSYSTEMS AND PROTECTED SPECIES

## In what ecosystem and habitats does the ferry system operate?

Puget Sound contains a wide variety of deepwater and nearshore habitats. These include rocky shores, sandy beaches, coastal lagoons, kelp and seagrass beds, large estuaries and salt marsh wetlands. Where sunlight penetrates the nearshore environment eelgrass, seaweed and plankton grow. The eelgrass, seaweed and plankton provide important shelter and food for numerous invertebrates, herring, juvenile salmon and other fish, and diving birds.

The upland habitats adjacent to the terminals include urban city center, small towns, suburban and rural environments. A few of the more rural terminals still have remnant second or third generation stands of the Puget Trough coniferous forests that historically dominated the region.

## What species are under protection in the vicinity of ferry system operations?

Species listed as endangered or threatened under the Endangered Species Act (ESA) in Puget Sound, and that could occur at WSF ferry terminals or along routes include the Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*), bull trout (*Salvelinus confluentus*), Steller sea lion (*Eumetopias jubatus*), marbled murrelets (*Brachyramphus marmoratus marmoratus*), Southern Resident Puget and Sound killer whale *(Orcinus orca)*. The other listed whale and sea turtle species are typically found in off-shore coastal areas and are rare or absent in the ferry terminal areas. Listed candidate species can be found in sidebar.

ESA consultation is conducted on projects that are federally funded, permitted or on federal lands. Almost all WSF terminal construction projects entail either federal funding or federal permitting. Permitting by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act is required when projects involve some level of dredging or filling of navigable waters

### ESA-listed and Candidate Species/Critical Habitats

Listed Species/Habitats:

- Puget Sound Chinook salmon *(Oncorhynchus tshawytscha)*
- Puget Sound Chinook salmon critical habitat
- Hood Canal summer chum salmon *(O. keta)*
- Hood Canal summer chum salmon critical habitat
- Steelhead *(O. mykiss)*
- Humpback whale *(Megaptera novaeangliae)*
- Killer whale *(Orcinus orca)*
- Killer whale critical habitat
- Leatherback sea turtle *(Dermochelys coriacea)*
- Steller sea lion *(Eumetopias jubatus)*
- Bull trout *(Salvelinus confluentus)*
- Bull trout critical habitat
- Marbled murrelet *(Brachyramphus marmoratus)*
- Marbled murrelet critical habitat

Candidate Species

- Eulachon/Columbia River Smelt *(Thaleichthys pacificus)*
- Bocaccio Rockfish *(Sebastes paucispinis)*
- Canary Rockfish *(Sebastes pinniger)*
- Yelloweye Rockfish *(Sebastes ruberrimus)*

Bald eagles (*Haliaeetus leucocephalius*) are no longer ESA listed, however they are still protected under Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, the state's Bald Eagle Protection Law (RCW 77.12.655) and state's Bald Eagle Protection Rule (WAC 232-12-292). Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) maps indicate the presence of eagle nests in the vicinity of ferry terminals. Bald eagles build large stick nests in mature or old-growth trees, to which they return over successive years.

In addition, the Washington State Department of Fish and Wildlife maintains a priority habitats and species program, which identifies endangered, threatened, and sensitive wildlife species and their habitats (WAC 232-12-297). The Washington Natural Heritage Program (WNHP) is managed by the Washington State Department of Natural Resources, which maintains lists of rare plants and natural communities in the state (Ch. 79.70 RCW). There are no known rare plants identified near WSF terminals, and only one High Quality Ecosystem in the vicinity of a terminal, a wetland east of the terminal in Anacortes.

Many listed species are provided some level of protection by various federal, state and local regulations. Local critical areas ordinances provide protection to designated areas. State agencies also have developed management plans for some of the listed species and habitats. These management plans provide guidance on avoiding, minimizing, and mitigating impacts to the species and habitats.

## What are the potential ecosystem and protected species impacts of the plan?

Implementation of a reservation system will minimize the terminal area "foot-print" requirements, on land and over water, of the ferry system. This affects the quantity and scale of terminal improvements projected for the future. The result is a minimization of likely impacts to aquatic and terrestrial natural and cultural resources, and reduction in these impacts when compared with previous long range plans.

Typical impacts from improvements to terminals include shading from overwater structures, underwater noise impacts from steel pile driving, and changes to the harbor line. The Mukilteo Multi-Modal project, which would relocate the terminal to a different location, is expected to impact nearshore habitat at the location of the new terminal.

WSDOT follows a tiered approach for minimizing adverse impacts to protected wildlife, fish and their habitats. Through project design, construction scheduling and implementation planning, WSDOT first seeks to avoid potential adverse impacts to protected species and their habitat. If impacts are unavoidable, WSDOT works to minimize the magnitude and duration of the impacts to the extent feasible. Remaining impacts that are considered significant and adverse are mitigated to the extent feasible and in accordance with local, state and federal regulations.

WSDOT conducts in-water pile driving to maintain the safety of key facilities at ferry terminals. The department is performing independent research and working jointly with other states and resource agencies to identify how noise works underwater, how fish and diving birds are affected by the noise, and what mitigation, if any, may be warranted.

WSDOT also analyzes wake-wash and propeller scour of new vessels to identify and minimize impacts to the shore and near-shore habitat. Maximum vessels speeds are identified for transit near shorelines identified as sensitive to erosion.

Engine noise is minimized through vibration dampening engine mounts and tighter clearances in gearbox assemblies. In addition, propeller noise is minimized through cavitation minimizing propeller design.

Furthermore, to avoid adverse impacts to marine mammals, the vessels are operated in accordance with National Oceanic and Atmospheric Administration's "Be Whale Wise" guidelines.

# EARTH

## What are the geologic hazards in the shoreline environment?

The Puget Sound region is geologically active. Numerous small earthquakes occur in the region annually. Periodically, larger earthquakes occur which, like the Nisqually earthquake of 2001, have the potential to damage manmade structures. The region also has areas with naturally occurring steep slopes or saturated unconsolidated soils. The steep bluffs along Puget Sound are susceptible to erosion from gravity, storm surges, and stormwater runoff.

Liquefaction occurs when water-saturated sandy or silty soil loses strength during earthquake shaking (similar to quicksand). It can cause major structural failure if not properly accounted for. Liquefaction only occurs in water-saturated soil. It has an impact on bridges and other large structures, which may require expensive retrofitting or replacement to meet current seismic (earthquake) standards.

The Washington State Department of Natural Resources (DNR) has developed liquefaction susceptibility maps which outline areas where liquefaction is most likely to happen. State and local governments develop hazard mitigation plans and delineate geologically hazardous areas as required by the Growth Management Act.

How climate change may affect the likelihood or impact of erosion and liquefaction is not yet well understood. However, with an expected rise in sea-level and increase in frequency of severe storm events, as described in *The Washington Climate Change Impacts Assessment* (The Climate Impacts Group, University of Washington, 2009), erosion along the shoreline would be expected to increase.

## What geologic risks and mitigation measures are of concern for WSF facilities?

Terminals already identified as having erosion related problems include Fauntleroy (erosion) and Southworth (bluff erosion). Terminals that may be susceptible to seawall problems from storm surges include Mukilteo, Seattle and Fauntleroy.

The current DNR maps indicate that the several WSF terminals are within a moderate to high liquefaction susceptibility areas. And, based on the age of the facilities, some of the ferry terminal structures do not meet current design standards for earthquake or liquefaction.

The susceptibility of the area to erosion, storm surge damage, liquefaction and sub-standard design of existing structures will have to be taken into consideration during development of any terminal improvement project. Soils that are susceptible to liquefaction may require retrofit measures such as ground stabilization, selection of deeper foundations, different types of foundations, and/or selection of appropriate structural systems to accommodate anticipated displacements.

## TRAFFIC/CONGESTION

### What is the relationship of auto ferry operations on traffic?

Normal operation of auto ferries has an effect on congestion and circulation on local streets, and access to residents and businesses as a result of queuing on road shoulders, vehicle off-loading, parking, pedestrians and traffic safety measures in the communities where the terminals are located. Inadequate terminal sizing and configuration negatively affects traffic related impacts to the community.

### How will the plan affect traffic congestion?

The proposed reservation system is expected to reduce the traffic impacts on the local communities of vehicles queuing for the ferries.

Implementation of the plan will result in minor increases in system capacity and efficiency. This will be accomplished by replacing some of the retiring vessels with vessels that are slightly larger. This vessel substitution increases normal vehicle carrying capacity on the Anacortes/San Juan Islands route, Mukilteo/Clinton, Seattle/Bremerton, Fauntleroy/Vashon/Southworth, and Point Defiance/Tahlequah routes. The increase in vessel offload traffic of the replacement vessels is expected to be minimal on most routes. On routes with potentially significant increases in offload traffic, WSDOT will evaluate the potential traffic impacts to determine if mitigation measures are necessary.

To reduce the current traffic congestion and safety concerns caused by vehicles queuing on Fauntleroy Avenue near the Fauntleroy terminal, a reservation system is being considered for the route pending future legislative action.

In the project development process, WSDOT works with the communities where the terminals are located to identify potentially significant traffic related impacts. WSDOT minimizes traffic related impacts to the communities by adequate sizing of terminals and their holding areas, configuring terminals to maintain pedestrian and vehicle safety, and by coordinating signalization and operational measures.

## TRIBAL RESOURCES AND TREATY RIGHTS

### What is the relationship of tribal treaty right to WSF projects?

Almost all WSF terminal construction projects entail either federal funding or federal permitting. Permitting by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act is required when projects involve

some level of dredging or filling of navigable waters. All terminal projects are also located in or adjacent to the Usual and Accustomed (U&A) fishing grounds of one or more treaty tribes.

Tribal treaty fishing rights consist of several components, including a right to share in the allowable harvest of fish with non-tribal fishers *(USA v. Washington 1974)*, and rights to fish, gather and hunt in the traditional U&A areas of each tribe – a right to engage in specific activities in specific places.

The federal courts have decided that where the issuance of a 404 permit has more than a de-minimus or discountable effect on the exercise of the right to fish, gather or hunt in a U&A area, the affected tribe may object to the issuance of the permit on the grounds that the tribe has a superior right to fish or gather in the area and may not be displaced by the dredging or filling of that area without their consent *(Muckleshoot, Suquamish v. Hall 1988)*. A project may not have significant impact on the environment, no adverse effect, may be NEPA/SEPA exempt, and not covered by a nationwide permit or a programmatic permit, but it may still have more than de-minimus effect on the right to fish because a tribal fisher may have fished in the area one time in the past as asserted by the tribe.

As a federal agency, the Corps has a fiduciary obligation to Treaty Tribes. This relationship has resulted in the Corps requiring extensive analysis of adverse impact(s) to these Treaty rights. When the impact(s) cannot be successfully mitigated the Corps has required a mitigated settlement to be negotiated with the Treaty Tribe(s). The successful mitigated settlement agreement has taken the form of a Memorandum of Agreement (MOA).

If required, an MOA would be negotiated with the Treaty Tribe(s), and could include funding for fisheries enhancement, salt water environment enhancement, or a cash settlement. When the Corps is given evidence of such agreement it then will move forward with issuance of a permit. An increase in overwater coverage at any of the existing terminals could also result in the same requirements.

### What proposed improvements in the plan may affect Treaty Usual and Accustom fishing grounds?

The proposed terminal improvement at Mukilteo, which would involve a relocation of the terminal, may have the potential to impact Treaty U&A fishing grounds, and to relocate the Mukilteo terminal from its current location would require a United States Army Corps of Engineers (Corps) permit. Under these conditions the project team would need to determine if potential for impacts exists. If this is the case, then mitigation options would need to be assessed and it determined if a MOA is required.

## HISTORICAL AND CULTURAL RESOURCES

### How are historic, cultural, and archaeological resources regulated?

Historic, cultural and archaeological resources are regulated under federal, state and local laws. The National Historic Preservation Act regulates historic sites. Through Section 106 of the Act, any project that has a federal nexus (involves federal funding, federal permits or is on federal lands) is required to consider the effects of the project on historic or cultural

resources. Section 4(f) of the Department of Transportation Act also affords protection to historic sites.

In Washington State, WAC 25-12, RCW 27.34.200 and Governor Executive Order 05-05 provide protection to historic sites. SEPA and NEPA require that impact to historic and cultural resources be evaluated in the environmental review process.

In addition, local governments often maintain historical and cultural resource lists within their jurisdictions, and commonly have ordinances protecting these resources.

### What are the potential effects of the plan on historical and cultural resources?

WSDOT recently completed an inventory of all WSF terminal buildings, and found none eligible for inclusion on the National Register of Historic Places under Section 106 of the National Historic Preservation Act of 1966. Based on this inventory the proposed terminal projects are not anticipated to have any impact on historical resources.

Project level cultural resource surveys completed at some of the terminals show there might be the presence of archaeological resources. Consultations with the Washington Department of Archaeology and Historic Places and Puget Sound Tribes have occurred on potential known sites. Further surveys and consultation will be warranted for any proposed project at potential sites.

Implementation of a reservation system will minimize the terminal area "foot-print" requirement, on land and over water, of the ferry system. This affects the quantity and scale of terminal improvements projected for the system. The result is a minimization of likely impacts to cultural resources, and reduction in the potential for these impacts when compared with previous long range system plans.

## PARK AND RECREATION LANDS

### How are park and recreational lands regulated?

Park and recreation resources are valued and vital to the health and livability of communities. Section 4(f) of USDOT Act of 1966 requires that transportation projects avoid, minimize or mitigate impacts to public parks and recreation areas as well as historic sites. Compliance with Section 4(f) is ensured in the SEPA/NEPA process of projects.

### What are the potential effects of the plan on parks and recreational lands?

Some of the ferry terminals are located in or adjacent to parks and recreation lands, and therefore improvement projects at the terminals could have the potential to impact these areas. Actual impacts to and mitigation for parks recreational lands will be evaluated at the individual project level.

## DEPARTMENT OF NATURAL RESOURCES LANDS

### How do ferry terminal operations affect aquatic land management?

State aquatic lands are under the jurisdiction of the Department of Natural Resources. The aquatic lands that have been reserved for landings, wharves, streets, and other conveniences of navigation and commerce are demarcated by harbor lines. A change in shape or size of the aquatic land used for ferry terminals operations could require revisions to the harbor line. Article 15 of Washington State Constitution describes the requirements for harbor line revisions. It takes between 12 and 18 months and three public hearings to revise a harbor line.

### How might the plan affect harbor line demarcations?

Implementation of the plan may require harbor line revisions at terminals where preservation or capital improvements are programmed. Identification of needed harbor line revisions will occur at the individual project level.

## APPLICABLE PERMITS

### Capital projects are required to comply with the following Environmental Regulations:

- National Marine Fisheries Services- Endangered Species Act (ESA)
- U.S. Fish and Wildlife Service - ESA
- Washington State Department of Fish and Wildlife - Hydraulic Project Approval
- Department of Ecology - SEPA
- Governor's Executive Order 05-05 - Department of Archaeology and Historic Preservation, Governor's Office of Indian Affairs
- City of Anacortes – Shoreline Master Program
- US Army Corps of Engineers Section 404(b) (1) of Clean Water Act
- Section 10 of Rivers and Harbors Act
- Coastal Zone Management Act
- Critical Areas Ordinance under GMA
- Local Shorelines Master Program
- Washington State Aquatic Lands Act

## RESOURCE AGENCY AND TRIBAL COORDINATION

### What was the process with resource agencies and tribes in developing the plan?

In addition to the groups and processes used in the public outreach section of the plan, Federal and State resources agencies with jurisdictions and funding authorities were briefed on the plan in a letter and meeting to take their comments and input. The resources agencies agreed that WSF should include a planning level environmental analysis in the plan. The agencies that were represented at the meeting were the Federal Transit Administration, National Marine Fishery Services, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, Puget Sound Clean Air Agency, and Washington Department of Ecology.

Letters were also sent to Puget Sound tribes to brief them about the plan. In addition, meetings were held with the Swinomish and Suquamish tribes to get comments and input.

Each participating agency and tribe received a copy of the draft plan for review and comment.

## REFERENCE DOCUMENTS AND STUDIES

- WSDOT 2007 Greenhouse Gas Inventory
- The Washington Climate Change Impacts Assessment (The Climate Impacts Group, University of Washington, 2009)

### The Long-Range Plan must demonstrate consistency with or conformity to any of the following existing plans:

- Terminal master plan documents
- Referenced Biological Assessment
- Project Specific Biological Assessments for ferry terminals
- Clinton Eelgrass Mitigation and Monitoring
- Eelgrass Surveys at ferry terminals
- Tribal U&A in the Puget Sound
- Local or Regional land use or comprehensive plans
- Local Shoreline Master Programs
- Regional Transportation plans
- TIP/SIP
- WSDNR Harbor lines
- Edmonds Crossing EIS and ROD

- Mukilteo Multimodal Draft EIS
- New 144 Auto Ferry, SEPA Checklist
- Environmental Discipline Reports and Technical Memo for various ferry terminals projects.