

# **WSDOT Ferries Division**

## **Preliminary Draft ESHB 2358 Service and Investment Plan**

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# Introduction

## Where we are

Completed September/October public meetings to review:

- Baseline financial sustainability challenge
- Draft proposed operational and pricing strategies
- Potential service/capacity enhancements by route

Developed a preliminary Draft Long Range Plan that is responsive to the direction contained in ESHB 2358

## Purpose of this presentation

Review the proposed elements of the 2358 Plan Alternative

# Building the 2358 Plan

**The Proposed 2358 Draft Plan was designed to achieve the following key goals:**

- Maximize the use of existing capacity
- Apply adaptive management practices
- Deliver the highest quality service at the lowest possible cost

**These goals would implement the Legislative intent stated in ESHB 2358:**

*“Therefore, it is the intent of the legislature 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.*”

*Furthermore, it is the intent of the legislature that the department of transportation 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.”*

# Building the 2358 Plan

## Approach to Plan Development

- Incorporating feedback from public meetings, JTC Policy Group discussions and results of the WSTC survey, develop a recommended package of strategies that are designed to:
  - Enhance operating efficiencies
  - Level demand and minimize the need for new/larger facilities
  - Minimize the negative impacts on customers
  - Minimize the negative impacts in ferry communities
- Identify targeted service enhancements that will provide capacity to meet future growth in a cost effective manner
- Assess the cost and funding implications of the recommended package of services and strategies

# Proposed 2358 Plan is a Balance of Strategies, Services and Investments

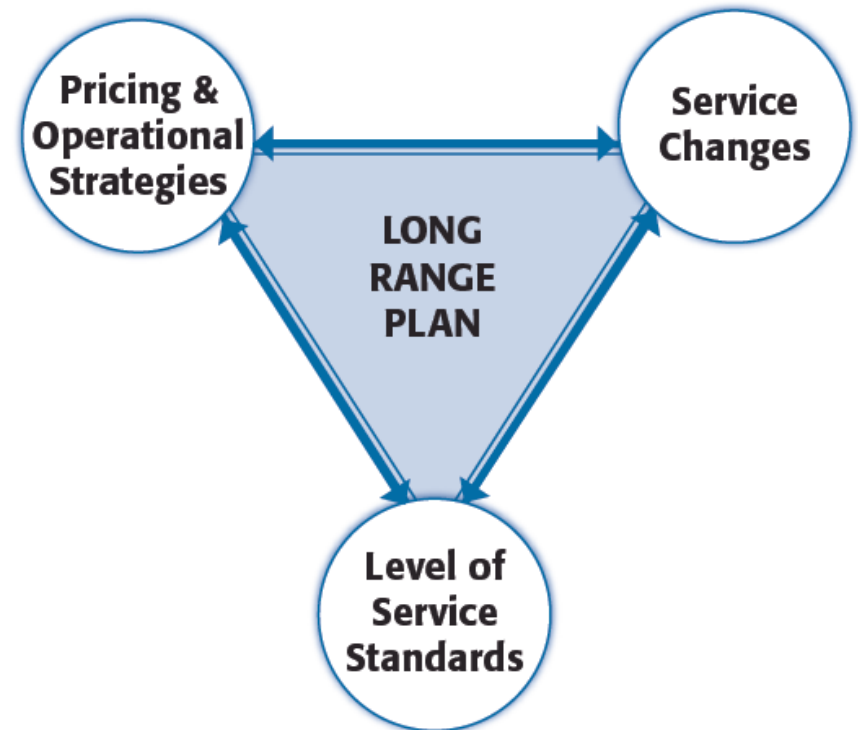
The 2006 Long-Range Plan was developed based on ridership growth and meeting adopted LOS standards.

The Proposed 2358 Draft Plan meets the needs of the system by balancing three key elements:

- Operational and pricing strategies
- Targeted service and capacity improvements
- Level-of-service standards

There are tradeoffs among these elements, changes in one impact the others.

The Proposed 2358 Draft Plan offers the best balance of these elements while minimizing overall funding needs



# **Key Strategies**

Proposed Operational & Pricing Strategies  
that are Fundamental to the 2358 Plan

# Operating and Pricing Strategies

ESHB 2358 requires that Ferries pursue operational and pricing strategies as a way to manage demand before adding capacity to meet future system needs.

- In June, Ferries shared over 90 individual operating and pricing strategy concepts with stakeholders and the public at FAC meetings.
- In September, after incorporating feedback and conducting further analysis, a shortlist of key potential strategies were presented:
  - Transit enhancements to improve walk-on utilization
  - Reservations for vehicles to level demand and reduce community impacts from queuing
  - Pricing strategies to manage demand

Though some of the strategies that were included in the shortlist are not recommended as part of the 2358 Draft Plan, they are all to be on the list of recommended strategies for possible future deployment should conditions warrant

# Transit Enhancements:

Transit enhancements are a key element of the 2358 Plan

The availability of transit is a key factor in why customers are not shifting from driving to walking on the ferry during commute periods

To maximize the use of the passenger cabin space during peak periods, Ferries should strategically invest in its own facilities and work with its transit partners to provide:

Transit Service	Facility Needs	Non-Motorized Facilities
<ul style="list-style-type: none"> <li>• Downtown Seattle shuttle</li> <li>• Better park &amp; ride connectors</li> <li>• More frequent service during peak</li> <li>• More night and midday service</li> <li>• New routes and better connections</li> <li>• Better timing with vessel arrivals and departures</li> <li>• Hold buses until boat arrives</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Overhead loading, new or improved</b></li> <li>• <b>Covered walkways</b></li> <li>• Sheltered bus stops</li> <li>• Improved pedestrian crossings</li> <li>• <b>Preferential access for buses</b></li> <li>• More park &amp; ride locations away from terminal</li> <li>• <b>Improved wayfinding through terminal</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Covered and secure bike storage at terminal</b></li> <li>• <b>Car sharing locations at ferry terminals</b></li> <li>• Trails and dedicated pedestrian and bike paths to connect with terminals</li> </ul>

Items in **red** represent items where Ferries would have lead responsibility

# Vehicle Reservation System:

## Reservations are necessary to meet future needs

A reservation system would allow Ferries to operate with the smallest possible terminal facilities and maintain a high level-of-service

The reservation system would be the primary tool to manage demand and would also minimize traffic and queuing impacts in ferry communities

- Majority of vehicle capacity is reserved during peak periods (up to 90%).
- Policies that recognize and balance the unique travel characteristics and ridership mix at the route-level – portions of each sailing can be targeted to particular customer types (i.e. commuters, recreational users, etc...).
- Limited number of standby spaces – once standby space is full, no more traffic accepted at the terminal.

With reservations, holding areas can be sized to a single boat load plus approximately 10% for standby space

Would effectively eliminate the need for several large terminal expansions and may allow for the reduction in the size of some existing facilities – the savings from reduced facility needs are 12-15 times the estimated cost of a reservation system (approximately \$15M versus \$230M savings)

# Vehicle Reservation System:

## Preliminary implementation schedule

Continue with current reservations at Port Townsend-Keystone and International Route with some minor adjustments

Propose key milestones in the development and deployment of a new reservations system:

- 2009-11: Design system and determine terminal modifications
- 2011-2013: Terminal modifications and weekend-only rollout at Clinton-Mukilteo and Edmonds-Kingston
- 2013-2015: Terminal modifications and weekend-only rollout in San Juan Islands, extend Clinton-Mukilteo and Edmonds-Kingston to full time
- 2015-2017: Terminal modifications and weekend-only rollout at Vashon, Southworth, Bainbridge and Bremerton, extend San Juan Islands to full time
- 2017-2019: Extend Vashon, Southworth, Bainbridge and Bremerton to full time

A key objective is to build customer satisfaction by rolling out the program gradually and ramp up to full deployment (90% reservations in peak)

# Fuel Conservation Strategies:

Managing fuel costs are key to maximizing efficiencies

While Ferries has already begun to implement fuel conservation measures, fuel price forecasts suggest an more aggressive approach

Fuel consumption is very sensitive to vessel speed – a small reduction in speed can result in significant improvements in fuel efficiency

The 2358 Draft Plan recommends reducing fuel consumption by slowing vessels as follows:

- During the Summer season, reduce cruising speeds by 0.5 knot on average
- During the Fall & Spring seasons, reduce cruising speeds by 0.5-1 knot on average
- During the Winter season, reduce cruising speeds by 1 knot

The slower sailings would be targeted to the times of day when demand is lower

The changes will result in fewer daily sailings, as total crossing times will increase marginally, though these would be in lower demand periods

Ferries is reviewing the costs and benefits of implementing additional measures such as in-dock vessel positive restraints. These are not captured in the 2358 Plan

# Pricing Strategies:

Which pricing strategies might be proposed?

The pricing strategies assumed for 2358 Plan include:

Travel demand management strategies:

- Grow passenger fares at half the rate of vehicle fares
- Offer a 20% discount for small vehicles (less than 12 feet)
- Introduce a three-season pricing structure (base, shoulder and summer) with higher cash fares in the summer

Strategy to manage fuel cost risk:

- Institute a fuel charge as an integral element of the base fare

Proposal would maintain current frequent user program and integrate with reservations system

Proposal does not include time-of-day pricing, to avoid additional fare complexity and preferring to focus on reservations to more efficiently spread demand throughout the day

# Pricing Strategies:

How would a three-season price structure look?

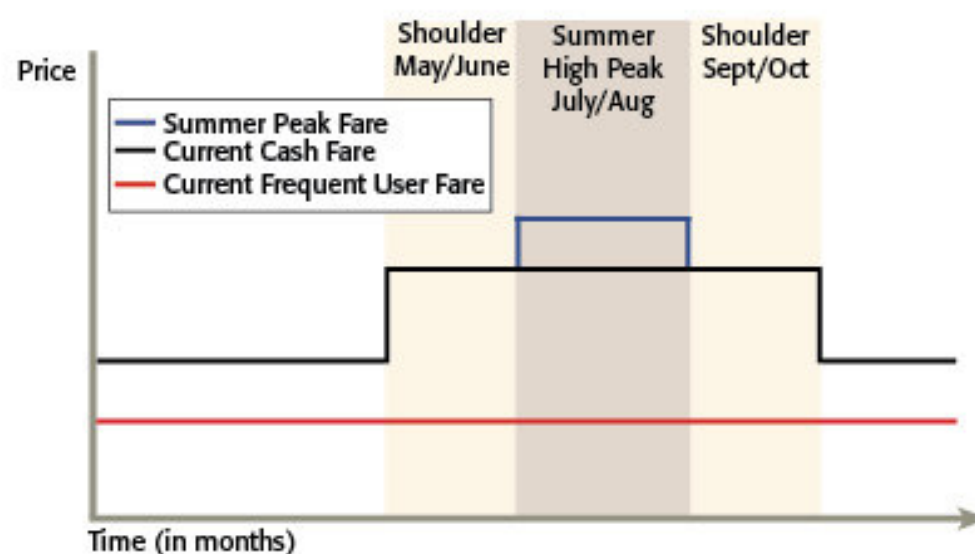
Currently Ferries employs a two-season price structure

- Base season cash fares – last 2 weeks of October through end of April
- Peak season cash fares – May 1<sup>st</sup> through second Sunday in October
- Frequent user fares do not change and are set in relation to the Base season fare

Three-season structure would increase the cash fare during the peak summer months of July and August

- These are the peak ridership months
- Targets less price sensitive visitors and recreational users
- Similar structure used at BC Ferries

**Conceptual Illustration of a Three-Season Fare Structure**

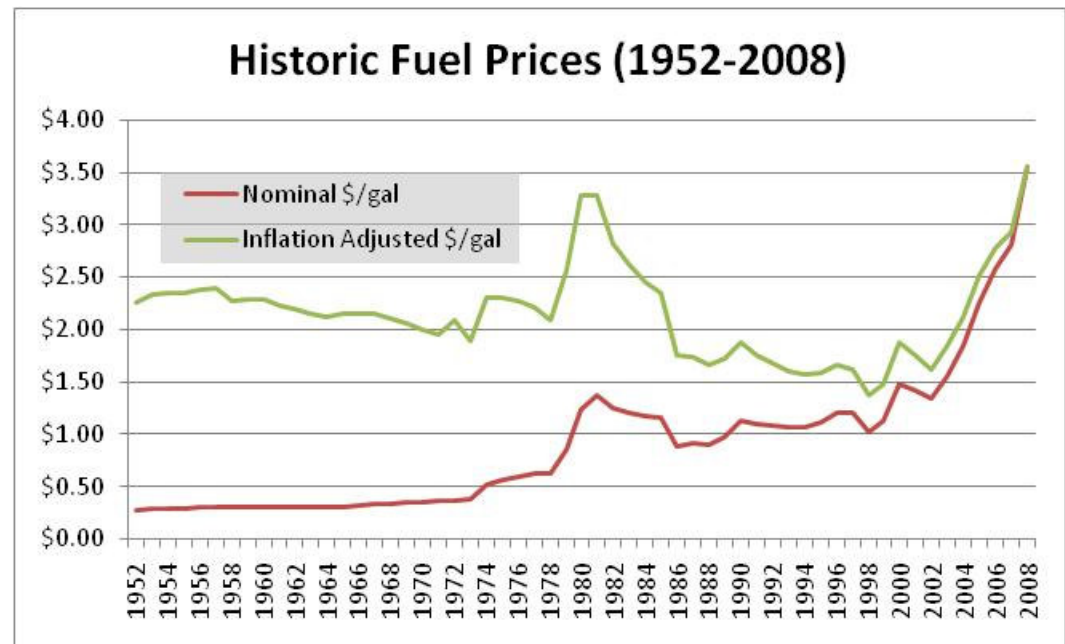


# Pricing Strategies:

Integrate a fuel charge component into fare structure

To manage the financial risk associated with fuel costs, split fares into a “base fare” and a fuel charge.

- The “base fare” would be set to cover the Legislative fare revenue target less fuel costs.
- The fuel charge would be set to generate 100% of the fuel budget and adjusted based on actual fuel prices (quarterly or semi-annually).
  - Set initial fuel charge based on 2008\$ historic fuel prices
  - 1952-2008 average: \$2.15
  - Pre-1979 average: \$2.20
  - 1986-2003 average: \$1.67
  - Key policy decision is how to set the “current” fuel charge (the portion of the current fare that reflects fare contribution to fuel costs)



# Addressing System Improvements & Growth

Proposed Service Enhancements and  
Level-of-Service Implications

# Ferry Service Changes:

## Where are the Key Operational Challenges?

The package of operating and pricing strategies will improve the overall effectiveness of ferry services and increase the utilization on many routes

In some parts of the system, it was determined that the strategies alone are unlikely to address the long-term growth needs

- The Fauntleroy-Vashon-Southworth triangle route
- The Kitsap County travel shed, particularly Seattle-Bainbridge and Edmonds-Kingston
- The San Juan Islands in the summer
- Port Townsend-Keystone in the summer

For these parts of the system, incremental service enhancements are proposed in addition to the operational and pricing strategies

The reservation system would significantly improve the utilization of incremental service hours

# Proposed Service Enhancements:

The best options to meet the highest priority needs

Route/Corridor	Proposed Change	Rationale
Fauntleroy-Vashon-Southworth	By 2017 break up triangle, direct services out of Fauntleroy: <ul style="list-style-type: none"><li>•2-boats Vashon-Fauntleroy</li><li>•1-boat Fauntleroy-Southworth</li><li>•Hiyu Vashon-Southworth</li></ul> Need reservations to make this work	Provides additional capacity for the most congested corridor, with relatively modest capital investments <ul style="list-style-type: none"><li>•\$10M for Southworth tie-up slip</li><li>•\$33M for Hiyu replacement in 2025</li></ul>
San Juan Domestic	By 2015 extend service hours in summer <ul style="list-style-type: none"><li>•Add'l mid-afternoon sailings</li><li>•Add'l late evening sailings</li></ul>	Adds capacity with no additional vessel needs plus approximately \$20M for improvements to Slips 3 & 4 Use reservation system to maximize utilization of new sailings

# Proposed Service Enhancements:

The best options to meet the highest priority needs

Route/Corridor	Proposed Change	Rationale
Kitsap County growth	By 2020, add hours on Seattle-Bremerton to fill in schedule <ul style="list-style-type: none"> <li>•Add'l mid-afternoon sailings</li> <li>•Add'l late evening sailings</li> </ul>	Adds capacity with no new capital investment. Cannot add at Bainbridge and adding capacity to Edmonds would require a minimum of \$80M in terminal investments and another vessel. Use reservation system initially and possible pricing later to shift traffic to Bremerton
Port Townsend-Keystone	Extend hours in summer <ul style="list-style-type: none"> <li>•Add'l early morning sailings</li> <li>•Add'l late afternoon/early evening sailings</li> </ul> Service change would begin in 2025	Adds capacity with no additional capital investment Use reservation system to maximize utilization of new sailings

# Vehicle Level-of-Service:

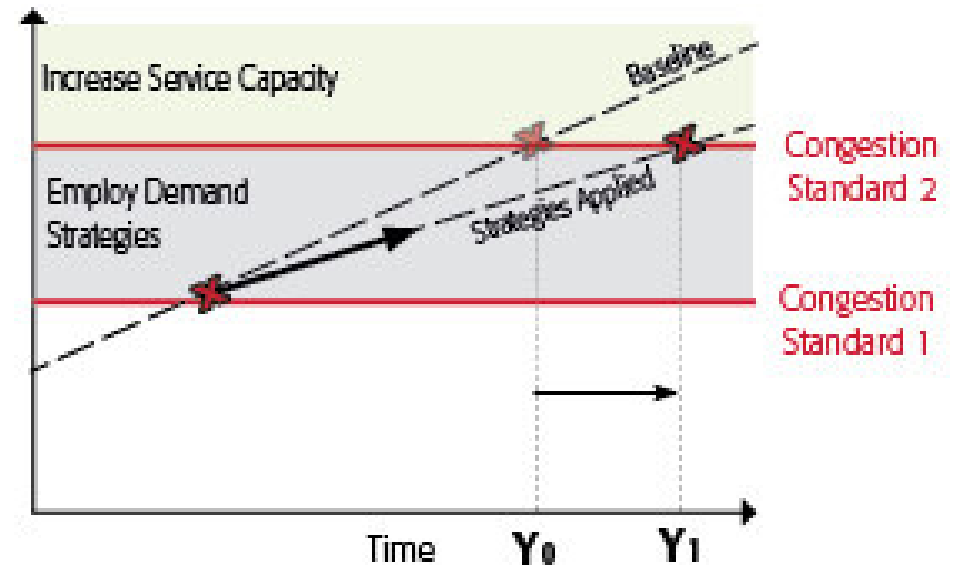
## Re-Establishing Level-of-Service Standards

The current level-of-service standards were established in the mid 1990's and reflected the policy and planning environment at that time.

The Proposed 2358 Plan recommends several changes to reflect the reality of the current funding environment and to support the operational strategies:

- Simplify the standards to focus on vehicle level-of-service, since this is where capacity is most limited
- Change vehicle standard from boat-waits to percent of daily sailings that are full (May and August)
- Use the standards to inform when to:
  - Employ strategies
  - Consider service changes

### Application of LOS Standards



# Cost and Funding Implications

# Operating Sources and Uses of Funds

**Providing the planned service level is estimated to increase operating needs over the 22-Year LRP planning horizon by \$1.2B.**

- Ridership growth and fare increases result in an average farebox recovery rate of 72%.
- Fare assumptions assume current Legislative 2.5% increases (effects of potential automatic fuel charge not included)
- The operating funding shortfall is estimated to be \$1.2B.
- The funding gap assumes that Ferries will continue to receive the \$88M in transfers over the next 3 biennia (per the 2008 Legislative 16-Year Plan).

## Long-term Operating Needs (planned services, in YOES\$ millions)

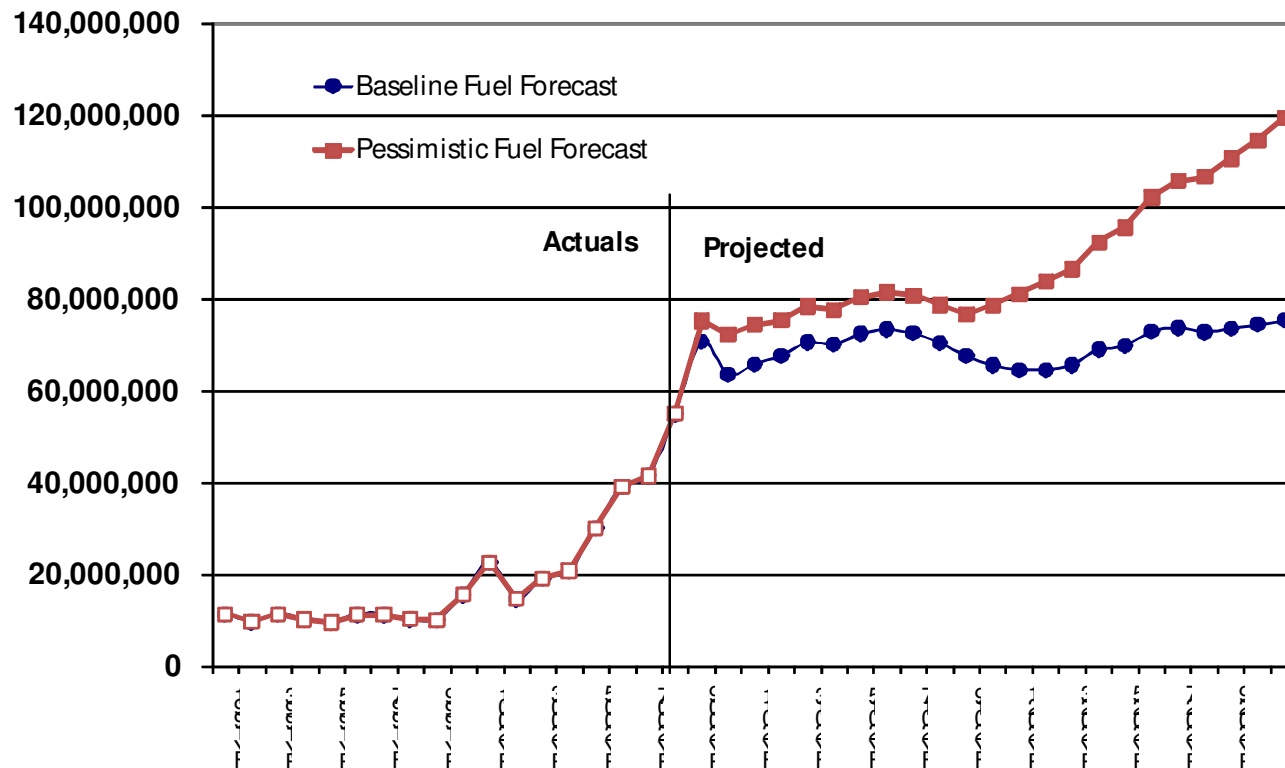
	LRP (22-Yr)	16-Year
<b>Operating Revenue:</b>		
Farebox Revenue	\$5,162	\$3,357
Miscellaneous Revenue (Concessions, etc)	\$141	\$90
<b>Total Revenue from Operations</b>	<b>\$5,302</b>	<b>\$3,447</b>
<b>Operating Program:</b>		
Total Vessel Costs	\$5,201	\$3,458
Terminal Costs	\$1,107	\$725
Management & Support Costs	\$1,066	\$704
<b>Total operating program</b>	<b>\$7,374</b>	<b>\$4,887</b>
<i>Operating revenue as % of Ferries Division costs</i>	<i>72%</i>	<i>71%</i>
<b>Net operating income/(subsidy required)</b>	<b>(\$2,072)</b>	<b>(\$781)</b>
<b>Dedicated Ferry Taxes (Operating Account)</b>	<b>\$827</b>	<b>\$571</b>
<b>Administrative Transfers (Operating Account)</b>	<b>\$88</b>	<b>\$88</b>
<b>Net after dedicated taxes/(additional subsidy required)</b>	<b>(\$1,157)</b>	<b>(\$123)</b>
<i>Average per biennium</i>	<i>(\$105)</i>	<i>(\$15)</i>

# Opportunities and Risks in Operating Program

## There is considerable risk in the assumed growth in fuel prices

- Global Insights pessimistic forecast is used for the Plan assumptions
- Using Pessimistic increases total fuel cost estimates by \$420M
- Analysis will be updated when November forecasts are released

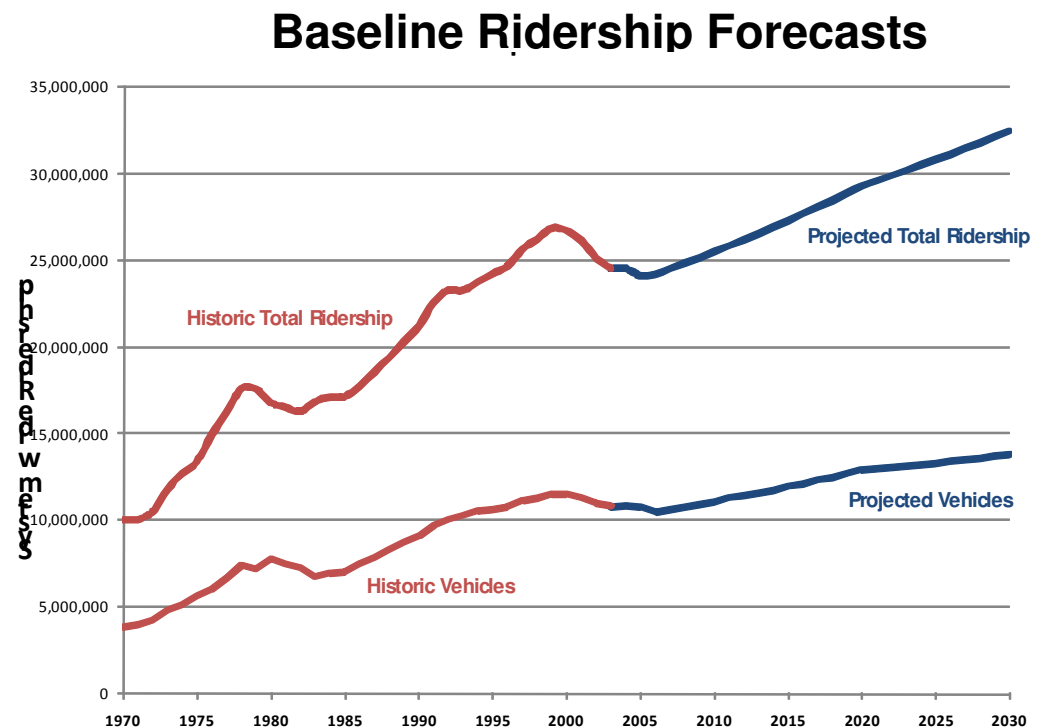
**Potential Variation in Fuel Costs  
Baseline vs. Pessimistic Forecasts**



# Opportunities and Risks in Operating Program

## There is also considerable risk in the assumed growth in ridership

- Base ridership forecast assumes approximately 37% increase in ridership over the next 22 years
- Economic conditions and the impact of higher fuel costs are affecting both the frequency of travel and the location decisions of businesses and households
- If baseline ridership is lower, then demand pressure to improve services levels will be reduced
- Also, lower ridership would mean lower fare revenues, which would increase the operating funding gap



# Capital Sources and Uses of Funds

The 2358 Draft Plan capital program is estimated to be \$6.4B over the full Long-Range Plan horizon

- Over the plan period, the Plan assumes acquisition of 12 vessels.
- In the past 20 years, Ferries has added 3 auto-passenger vessels.

To fund the 2358 Draft Plan capital needs will require \$2.3B more than current assumed funding

- Includes assumed transfers from the Motor Vehicle or Multimodal Accounts in 16-yr Plan (continued through 2031).
- Assumes Ferries will debt finance major capital items
  - \$1.7B in new ferry bonds
  - \$855M in total new debt service

## Sources and Uses of Funds (in YOES\$ millions)

	LRP (22-Yr)	16-Year
<b>USES OF FUNDS</b>		
Terminals Preservation	\$1,088	\$806
Vessel Preservation	\$1,531	\$1,075
New Vessel Construction	\$1,520	\$601
Terminal & Vessel Improvements	\$677	\$626
Existing Debt Service	\$212	\$212
New Debt Service	\$865	\$388
Miscellaneous Uses	\$544	\$366
<b>Total core capital program</b>	<b>\$6,438</b>	<b>\$4,075</b>
<b>SOURCES OF FUNDS</b>		
Dedicated tax distributions to Ferries	\$800	\$647
Administrative Transfers	\$1,149	\$759
Federal Funds	\$392	\$285
Bond Proceeds	\$1,756	\$837
<b>Total Sources</b>	<b>\$4,096</b>	<b>\$2,528</b>
<b>Capital Funding Gap</b>	<b>(\$2,341)</b>	<b>(\$1,547)</b>

Note: Cost of the 2 Island Home vessels and the 3-144's are based on Ferries cost estimates

Terminal and vessel cost estimates continue to be reviewed and refined. Estimates in this presentation are based on conservative assumptions about operating needs and may be revised before the Draft Plan is released

# Capital Program Elements: Vessels

**The 2358 Draft Plan capital program includes the following key vessel program assumptions**

## **Preservation:**

- Fully fund the preservation needs for all assets related to the structural integrity of the vessel (steel preservation, propulsion and communications systems)
- Fund preservation items that are not directly related to the structural integrity of the vessel (topside paint, passenger and crew spaces) based on actual condition ratings and strategically defer or re-scope to optimize funding needs
- To the extent possible, limit investments for vessels nearing retirement.

## **Vessel Procurement:**

- Near-term: 2 Island Homes and 3-144's
- 2020-2025: Replace 2 Evergreen State Class vessels with 2 Island Home Mark II vessels
- 2025-2030: Replace 4 Super Class vessels with 4-144's; replace the Hiyu in-kind
- Procurement program maintains a de-crewed standby vessel

# Capital Program Elements: Terminals

The 2358 Draft Plan capital program includes the following key terminal projects (beyond preservation needs)

Terminal	Improvements	Cost (2008\$)	Rationale
Fauntleroy	Expanded holding and add overhead loading, reservation system modifications	\$55M	Additional holding to support reservations (1-boat staging at the terminal), overhead loading to reduce dwell time and maintain schedule
Southworth	Second tie up slit and reservations modifications	\$14.5M	Need second tie-up slip for Hiyu – support service improvements to allow splitting triangle service
Vashon	Modifications for reservations and expanded trestle	\$24.9M	Expanded trestle needed to support staging of 1-boat in the terminal
Bremerton	Modifications for reservations only	\$6M	Support reservations
Bainbridge	Modifications for reservations plus transit enhancements	\$30.1M	Support reservations and improved transit connectivity on heaviest passenger volume route
Seattle (Colman)	Modifications for reservations plus reduced holding/terminal footprint	\$10.1M <u>(\$53M)</u> (\$42.9M)	Reservations would allow for a smaller facility – reduces preservation needs by \$53M for a net savings of \$42.9M

# Capital Program Elements: Terminals

The 2358 Draft Plan capital program includes the following key terminal projects (beyond preservation)

Terminal	Improvements	Cost (2008\$)	Rationale
Edmonds	Modifications for reservations only	\$6.5M	Can meet needs of current service with reservations at existing facility
Kingston	Reservations and transit enhancements	\$6.9M	Relocate toll booth to facilitate transit
Clinton	Improvements for reservations, expanded holding and overhead loading	\$39.2M	Growth in walk-ons requires improved walk-on facilities
Mukilteo	New Mukilteo terminal with overhead loading and reservations	\$115M	Less costly to support reservations, address traffic issues and overhead loading for walk-on growth at new site
Keystone	Reservations mod. & traffic signal	\$7.9M	Support deployment of reservations
Port Townsend	Expanded holding, reconfigure tollbooths and reservations mod.	\$13M	Support deployment of reservations, full boat load in terminal holding
Anacortes	New terminal building project, improvements to Slips 3 & 4, reservation modifications	\$55M	Improvements to slips 3 & 4 to support expanded hours in summer
San Juan Islands	Modifications for reservations	\$12.3M	Reservations at Friday Harbor, Orcas, Lopez – also reroute offloading at Orcas

# Funding Sustainability Challenge

There is an estimated funding gap of \$3.5B over the next 22 years for the 2358 Plan

- Capital needs \$2.34B
- Operating needs \$1.16B

**The funding gap can be limited to the \$2.3B capital needs, if fares are adjusted to meet the operating gap**

- 2010-2017: fares would need to be increased quickly while the operating transfers are phased out.

Vehicles: 9% per year,  
Passengers: 4.5% per year

- 2017-2031: modest increases

Vehicles: 1% per year  
Passengers: 0.5% per year

## Combined Operating and Capital Needs (in YOE\$ millions)

	LRP (22-Yr)	16-Year
<b>CAPITAL</b>		
Terminals	\$1,680	\$1,375
Vessels	\$3,136	\$1,733
Miscellaneous Uses	\$544	\$366
Existing Debt Service	\$212	\$212
New Debt Service	\$865	\$388
<b>Total capital needs</b>	<b>\$6,438</b>	<b>\$4,075</b>
Dedicated capital funds	\$800	\$647
Administrative Transfers	\$1,149	\$759
Federal Funds	\$392	\$285
Bond Proceeds	\$1,756	\$837
<b>Net capital surplus/(shortfall)</b>	<b>(\$2,341)</b>	<b>(\$1,547)</b>
<b>OPERATING</b>		
Operating revenues	\$5,302	\$3,447
Operating expenses	\$7,374	\$4,887
<b>Net operating income/(subsidy)</b>	<b>(\$2,072)</b>	<b>(\$781)</b>
<b>Average farebox recovery rate</b>	<b>72%</b>	<b>71%</b>
Dedicated operating taxes	\$827	\$571
Administrative Transfers	\$88	\$88
<b>Net operating surplus/(shortfall)</b>	<b>(\$1,157)</b>	<b>(\$123)</b>
<b>Total Funding Needs for 2358 Plan</b>	<b>(\$3,498)</b>	<b>(\$1,670)</b>

# Next Steps:

## Complete the Draft Long-Range Plan

- Given the deteriorating economic climate, it was necessary to delay the release of the Draft Plan to ensure all potential options were fully evaluated
- To provide a more complete range of potential futures for the Ferries Division, develop alternative Long Range Plan option that assumes no new revenue
- Release Draft Long-Range Plan in Mid-December
- Public hearings in early January
- Final Plan delivered to Legislature at the end of January

**Questions?**