

LONG-RANGE PLAN IMPLEMENTATION

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 |
|--|------------------|----------------|
| <i>2009-11 Cash Carry-Forward</i> | (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 |
| <i>Farebox revenue as % of Total Operating costs</i> | 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) |
| <i>Average per biennium</i> | (\$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 |
|--|------------------|----------------|
| <i>2009-11 Cash Carry-Forward</i> | \$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) |
| <i>Average per biennium</i> | (\$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:

- Reducing the impacts of fuel price volatility by implementing a fuel surcharge.
- Adding a super summer surcharge on single fare purchases during the busiest traffic months.
- 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 Treaty 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.

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.

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.



- 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 perfect, utilizing existing 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 34 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

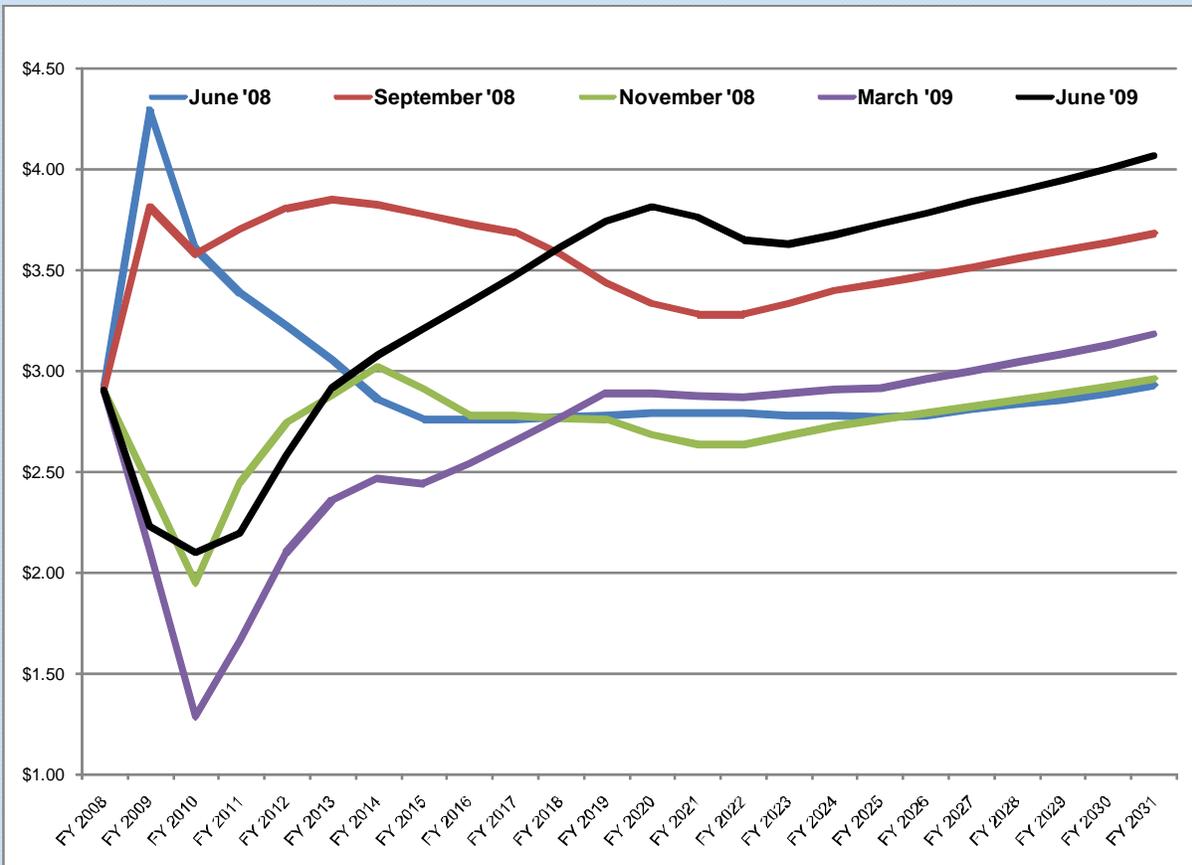
additional revenue needed to recover the cost of fuel beyond the “historical base cost of fuel.” Legislature agreed with the fuel surcharge concept, but provided no formal decision on implementing a fuel surcharge that would adjust fares up and down for fluctuations in fuel prices. If the fuel surcharge 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 previous 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 funding 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.

