

Washington State Ferries
2040 Long Range Plan

*Appendix G: Financial Overview
and Assumptions*

Biennial Financial Overview

This appendix presents a more detailed financial overview of the proposed Plan and the assumptions for its development. The approach to estimating and projecting revenues and expenditures is discussed immediately below followed by a biennial-based financial forecast for both system operations and capital investments.

Revenue Forecasts

Revenue projections were prepared for both the operating and capital programs. Although funding for the operating program subsidy and the capital program have come from a number of different transportation accounts in the past, only statutory and planned transfers are included in the Plan's financial forecast.

Operating Revenue

Operating revenue comes from fare revenue, federal formula funding, and other revenue such as vessel and terminal food and other concessions, advertising, sponsorships, and charters.

Fare Revenue

The fare revenue forecasts take into account both future changes in ridership and anticipated fare increases. The Transportation Revenue Forecast Council (TRFC) publishes the 10-year fare forecasts in two ways; the baseline that assumes Fiscal Year (FY) 2019 fare levels and the alternative that assumes annual fare increases of 2.5 percent. Fare revenue was forecast for the Plan in the following way:

- For the first 10 years of the planning horizon the TRFC baseline forecast, ridership growth only, was escalated for a fare increase equal to the published Implicit Price Deflator (IPD), a widely used measure of future inflation and the one used to escalate operating expenditures in the Plan.
- The TRFC does not project fare revenue beyond 2029. For the last 10 years the baseline revenue level was estimated by applying a projected ridership growth rate reflecting increased service levels derived from WSF's long range forecast model, and then escalated by the IPD as in previous years.

Other Operating Revenue

The TRFC other operating revenue forecast was used through 2029, the final year of the June 2018 Transportation Revenue Forecast. Other operating revenue beyond 2029 was estimated as a percent of fare revenue applying the FY 2029 percentage.

Federal, Local and Dedicated Revenue

Federal and Local Operations and Maintenance

The amounts forecasted by TRFC in the June 2018 publication were used through the 2027-29 biennium. The level of future federal revenues for the operating program will be directly related to eligible maintenance expenditures. It was not possible to project eligible maintenance expenditures within the scope of this planning effort. Federal revenue after FY 2029 was estimated by increasing the 2027-29 level at a rate equal to the average biennial increase from the previous five biennia.

Fuel Tax and License, Fees and Permits Distribution

The revenues forecast by TRFC in June 2018 were used through 2027-29. Biennial amounts after 2027-29 were estimated using the average biennial increase from the previous five biennia.

Treasury Deposit Earnings

Treasury earnings were taken from the 2018 Fund 109 business plan. The amount was the same for the five biennia and that same amount is forecast throughout the planning horizon.

Connecting Washington Account Transfers

Although Connecting Washington Account transfers have been made in the past to subsidize the cost of operations, such transfers are not mandated or statutorily allocated. They are determined by the legislature during the biennial budget process. No transfers from the Connecting Washington Account for operations are assumed in the Plan.

Capital Program Revenue

Federal and Local Revenue Sources

Federal

The amounts forecasted in the 2018 Puget Sound Capital Construction Account (Fund 99 financial plan) were used through 2027-29. Biennial amounts after 2027-29 were set at the 2027-29 level plus a growth factor equal to that experienced in the 2027-29 biennium.

Local

The amounts forecasted in the 2018 Puget Sound Capital Construction Account (Fund 99 financial plan) were used through 27-29. Biennial amounts after 2027- 29 were set at the 2027-29 level plus a growth factor equal to that experienced in the 2027-29 biennium.

Dedicated Tax Revenue Source

Fuel Tax Distribution

Fuel tax distributions forecast from the June 2018 TRFC publication were used through 2027-29. Biennial amounts after 2027-29 were estimated using the average biennial increase from the previous five biennia.

Capital Vessel Replacement Account

The Capital Vessel Replacement Account (CVRA) receives revenue through the vessel replacement surcharge of 25 cents on every one-way and round-trip fare sold. In recent years funds from this account have been transferred to the Connecting Washington Account (CWA) to repay appropriations made to the ferry capital program in the Connecting Washington funding package. Repayment will be completed in the 2027-2029 biennium. The LRP assumes that revenue from the CVRA in subsequent biennium is available to fund capital investments proposed in the LRP.

Treasury Deposit Earnings

Treasury earnings were taken from the 2018 Puget Sound Capital Construction Account (Fund 99) financial plan. The amount is the same for the five biennia and that same amount is forecast throughout the planning horizon.

Transportation Partnership

The amounts forecast in the 2018 Transportation Partnership Account (Fund 09H) were used through 2025-27 when the distributions to the WSF capital construction program are concluded.

Connecting Washington

Connecting Washington distributions to the WSF capital construction program were taken from the 2018 Puget Sound Capital Construction Account (Fund 99) financial plan through the 2027-29 biennium. The remainder of the designated Connecting Washington not reported in the capital construction business plan, or \$17 million, has been distributed evenly over the remaining five biennia.

Debt Service

Debt service payments projected in the 2018 Puget Sound Capital Construction Account (Fund 99) financial plan are reported through 2023-25. No further debt service obligation is forecast.

Expenditure Projections

Operating Program

Operating expenditures are grouped into three categories: labor, energy (fuel) and other. The approach to estimating and projecting expenditures is discussed below.

Expenditure Forecast Approach

The FY 2019 budget forms the baseline for all future Plan operating expenditures. Costs, or cost savings, associated with the proposed service scenarios and other changes to the method of operation are estimated using WSF models and studies and then added or subtracted from the FY 2019 baseline level of expenditure. For example, in FY 2020 two hours per day are added to the summer service schedule on the Port Townsend-Coupeville route for a total of 196 additional service hours. This additional service increases the expenditure level for deck crews, fuel and other miscellaneous direct operating expenses. The estimated cost of these additional 196 hours is added to the FY 2019 baseline to forecast FY 2020 operating expenses. In some cases service hours will remain the same but some aspect of operations will change. For example, in FY 2021 the M/V *Tacoma* is assumed to have been converted to electric propulsion resulting in a reduction in energy costs while operating at the same level of service. The cost savings associated with electric propulsion is estimated and FY 2019 baseline expenditures for energy/fuel are reduced accordingly.

Cost Escalation Price Adjustments

Labor

Labor expenditures are assumed to grow at the rate of change expressed by the IPD each year. Any labor expenditure increases associated with increased service hours or maintenance fleet growth are first estimated in FY 2019 dollars and then inflated to the year in which they are first incurred, forming the revised baseline for subsequent years.

Fuel/Energy

The Unadjusted B5 Price Forecast for bio diesel fuel is used to calculate annual diesel fuel expenditures each year in the planning horizon. WSF may switch to B10 diesel at some point during the planning horizon. The Plan's financial forecast assumes the per-gallon price of B10 is the same as B5. Energy costs for routes capable of supporting vessel operations in full electric propulsion mode are calculated using estimated energy saving ratios calculated in the Jumbo Mark II Class Hybrid System Integration Study. The ratios used in the study have been updated to reflect the June 2018 price forecast for diesel fuel. WSF has not conducted a study to estimate saving for vessels operating in hybrid rather than all-electric mode. Drawing on industry experience with hybrid operation energy consumption is projected at 75 percent of diesel fuel costs.

Other Operating Costs

All other operating costs are inflated annually using the IPD.

Capital Program

Capital program costs are categorized into six classifications: preservation and improvement, new construction, electrification, emergency repair, program support and administration, and information technology. The approach to projecting each of these expenditure types is discussed below.

Preservation and Improvement

Each biennium the legislature adopts a 16-year capital plan. Life Cycle Cost Models (LCCM) are the basis for developing both the terminal and vessel preservation and improvement project budgets that form the 16-year plan.

Preservation and improvement investments are inflated to the appropriate year of investment. Vessel investment inflation rates were calculated using the 20-year average price indices from the Bureau of Labor Statistic's Vessel Shipyard Building and Repair Index. WSDOT's June 2018 cost construction index was used to inflate terminal preservation and improvement investments.

- **Vessels:** The 16-year plan was used to identify proposed preservation and improvement investments through FY 2033 for existing vessels. WSF vessel engineering staff modified the 16-year plan to take into account vessel retirements and new vessels. Overall system vessel preservation and improvement needs subsequent to FY 2033 were estimated using a 14-year average (FY 2020 – FY 2033).
- **Terminals:** The 16-year plan was used to identify proposed terminal preservation and improvement investments through FY 2033. Terminal preservation needs beyond FY 2033 for all terminals were estimated by WSF terminal engineering staff. The cost of new improvements, identified as part of the Plan, were estimated by WSF terminal engineering staff using recently budgeted, awarded or completed projects with a similar scope of work.

New Construction

New vessel construction cost estimates were developed initially by the project team in FY 2019 level dollars and updated with input from WSF vessel engineering staff. The initial cost estimates were scaled from past actual WSF vessel construction costs using an industry accepted method of cubic numbers (product length, breadth and depth) and included estimated cost for hybridization and SOLAS modifications.

Planned investments were inflated to the appropriate year of investment using the 20-year average price indices from the Bureau of Labor Statistic's Vessel Shipyard Building and Repair Index. New terminal construction was classified as improvements.

Electrification

The estimated cost of electrification of new vessels was included in the new build estimate. The cost for electrification of existing vessels was estimated by the project team in FY 2019 dollars. WSF's terminal engineering group provided the cost estimates for electrification of terminals. Estimated electrification costs were escalated using either the 20-year average index from Bureau of Labor Statistic's Vessel Shipyard Building and Repair Index or the WSDOT cost construction index.

Emergency Repair

The 16-year plan allocated \$5 million per biennium for emergency repairs. This same base year level of expenditure was carried to the end of the planning horizon. The 20-year average index from Bureau of Labor Statistic's Vessel Shipyard Building and Repair Index was used to escalate costs.

Program Support and Administration

The 16-year plan was used to identify capital program support and administration expenditures through FY 2033. The 10-year average level of expenditure was used for the remaining years in the planning horizon. All program support and administration expenditures were inflated to the appropriate year using the IPD.

Information Technology

The project team worked with WSF IT staff to develop a 20-year IT investment plan with investments programmed by project and by year in FY 2019 dollars. The IPD was used to escalate expenditures to the appropriate year.

Financial Overview (dollars in millions)

Operating Program	2017-19	2019-21	2021-23	2023-25	2025-27	2027-29	2029-31	2031-33	2033-35	2035-37	2037-39	20-Year Total
Operating Revenue	395.1	418.1	445.2	470.2	494.9	518.3	541.4	565.3	589.9	615.4	641.7	5,300.6
<i>Percent change</i>		5.8%	6.5%	5.6%	5.3%	4.7%	4.5%	4.4%	4.4%	4.3%	4.3%	
Operating Expenditures	518.8	528.6	547.7	575.2	605.1	658.9	687.1	718.1	749.2	779.8	812.0	6,661.5
<i>Percent change</i>		1.9%	3.6%	5.0%	5.2%	8.9%	4.3%	4.5%	4.3%	4.1%	4.1%	
Operating Revenue Recovery	76.2%	79.1%	81.3%	81.8%	81.8%	78.7%	78.8%	78.7%	78.7%	78.9%	79.0%	79.6%
Subsidy Required	-124	-111	-102	-105	-110	-141	-146	-153	-159	-164	-170	-1,361
Presumed Level of Subsidy Available	128.2	91	88	90	91	93	94	95	97	98	100	937
Biennial Shortfall		-19	-14	-15	-19	-48	-52	-57	-62	-66	-71	
Cumulative Funding Shortfall		-19	-34	-49	-68	-116	-167	-225	-287	-354	-424	-424
Capital Program												
Revenue (Presumed Level)	438	196	174	113	109	116	127	155	159	163	171	1,483
<i>Expenditures</i>												
Total Capital Program Investment	451	340	715	645	1,147	837	1,062	1,087	903	759	478	7,972
Biennial Shortfall		-143	-542	-532	-1,038	-721	-936	-932	-744	-596	-307	
Cumulative Funding Shortfall ¹	-2	-145	-687	-1,219	-2,257	-2,978	-3,913	-4,846	-5,589	-6,185	-6,491	-6,491
Total Plan Funding Needed	-2	-165	-721	-1,268	-2,324	-3,093	-4,081	-5,071	-5,877	-6,538	-6,916	-6,916

Based on 2018 Supplemental Budget and June 2018 Transportation Revenue Forecast

¹ Includes projected 2017 - 19 biennium \$2 million capital program funding gap.