
Transportation Specific Budget Submittal Requirements

Tab F	Transportation Specific Budget Submittal Requirements	Page Number
	Transportation Goals	F-5
	Grant Programs	F-9
	Aviation - Preservation	F-11
	Public Transportation - Rural Mobility	F-14
	Public Transportation - Special Needs	F-17
	Public Transportation - Vanpool Investment Programs	F-20
	Public Transportation - Regional Mobility Grant Programs	F-22
	Rail - Freight Rail Assistance Program	F-27
	Rail - Freight Rail Investment Bank Program	F-29
	Safe Routes to School and Pedestrian & Bicycle	F-30
	2017-19 Aviation Airport Aid Grant Project List	F-34
	Ferries (Programs X and W)	F-37
	Ferry Preservation	F-49
	Ferry Improvements	F-77
	TEIS Ferry Requirements	F-167
	Additional Ferry Requirements	F-171
	Personnel Information	F-175

Transportation Specific Budget Submittal Requirements

Transportation Goals

2017-19 Agency-Request Budget

Transportation Goals

The Office of Financial Management's 2017-19 biennium transportation addendum to the operating budget instructions direct transportation agencies to identify the initiatives and investments in the base budget or proposed requests that tie to one or more of the six goals adopted by the Legislature, that are codified in RCW 47.04.280, and to specify the targeted outcomes that are expected.

Six transportation goals:

- 1) Economic Vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.
- 2) Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.
- 3) Safety: To provide for and improve the safety and security of transportation customers and the transportation system.
- 4) Mobility (addressing congestion): To improve the predictable movement of goods and people throughout Washington state.
- 5) Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities and protect the environment.
- 6) Stewardship: To continuously improve the quality, effectiveness and efficiency of the transportation system.

The department request was developed to advance, within current-law resources, the Governor's performance management plan, Results Washington; the agency's strategic plan, Results WSDOT; and the statutory transportation goals.

Washington state's biennial Transportation Attainment report reports on the performance of the transportation system while assessing progress toward the six transportation policy goals. WSDOT's *Gray Notebook* reports quarterly on a variety of performance measures that are grouped by transportation policy goal.

Background and fiscal environment

The state's economy and traveling public benefit from the investments supported by the 2015 Connecting Washington revenue package, as well as investments made through the 2003 and 2005 transportation revenue packages. The capital project list and selected operating program spending levels in the department's budget request reflect the Legislature's direction for Connecting Washington enhancements, and projects funded through the earlier revenue packages coming to conclusion.

In addition to our focus on project delivery, as the steward of a multimodal transportation system, the department remains committed to operate, maintain and preserve our existing transportation infrastructure so that people and goods move safely and efficiently.

Washington's transportation system represents public assets that are worth more than \$100 billion. The department, within existing funding levels, works hard to limit the rate of decline in the system by making strategic investments. Looking ahead, the state will continue to face difficult decisions and competing priorities. Recognizing the financial constraints facing the state, the department considered,

but did not put forward, a request to address the backlog that exists for a number of key operations, maintenance and preservation activities. The department looks forward to continuing to work with the Governor, the Legislature, and other stakeholders to identify and discuss options to address these important needs in the future.

The following table illustrates the connection between the department’s policy level requests and the transportation goals.

Code	Title	Preservation	Safety	Mobility	Environment	Stewardship	Economic Vitality
G1	Eagle Harbor Apprentices	x					
G2	Standardize Vessel Maintenance Procedures	x		x		x	
G3	Surplus Property Disposal					x	
G4	SAO Audit Staff Increase			x			
G5	Vessel & PCI Network Support Upgrade	x				x	
G6	CSC System & Operator RFPs					x	
G7	Workforce & Leadership Development					x	
G8	Wave2Go & ORCA Ticketing & Reservations			x		x	
N2	Labor System Replacement					x	
N4	Design-Build Project Delivery	x	x	x	x	x	x
N6	WSF Dispatch System Replacement					x	
N8	Non-Routine Vessel Maintenance	x					
N9	B10 Ferries Fuel Test				x		

Grant Programs

WSDOT Airport Aid Program

Aviation Division - Program F

Program purpose and restrictions

Airports are vital to our state, fueling its economy and providing critical links to the state and national transportation system. The Aviation Division's mission is to foster the development of aeronautics and the state's aviation system to support sustainable communities and statewide economic vitality.

The Airport Aid Program provides crucial financial assistance to many of the state's airport sponsors who own or control airports available for the general use of the public. This assistance is provided through grants for the planning, acquisition, construction, improvement, preservation, and maintenance of airports.

Of Washington's 135 public-use airports, 64 are designated as significant to national air transportation and are included as part of the National Plan of Integrated Airport Systems (NPIAS). Designation in the NPIAS makes these airports eligible for grants under the Federal Aviation Administration (FAA) Airport Improvement Program (AIP). WSDOT Aviation uses state funds to leverage millions of dollars in federal funds. The remaining 71 non-NPIAS airports are primarily small-to-medium-sized airports that rely solely on local funding and state funding, which is limited by statute to \$250,000 per-grant.

Authorization

Financial assistance for the planning, acquisition, construction, improvement, preservation, and maintenance of airports is governed, in part, by RCW 47.68.090.

Entities eligible to receive grants are designated by RCW 47.68.090 and defined in RCW 47.68.020 (12) and (13). Eligible entities are cities, counties, towns, airport authorities, airport districts, political subdivisions, public corporations, federally recognized Indian tribes, any municipalities acting jointly, and any person or persons acting jointly.

The total amount available for grants in a biennium is appropriated by the Legislature in the state transportation budget.

Selection Criteria

WSDOT introduced its Statewide Capital Improvement Program (SCIP) to airport sponsors in 2012. The SCIP strategically targets state and federal resources by identifying and prioritizing airport projects. The SCIP prioritizes airport-submitted CIP projects using an objective set of FAA and state scoring criteria. Beginning in calendar year 2014, the Airport Aid Program integrated the SCIP by using the prioritized list to award airport aid grants requested by airports.

Using the prioritized list of projects, grant funds are then allocated in two stages, first by Airport Type, and then by Project Type. With regard to Airport Type, approximately 55 percent of grant funds are allocated to non-NPIAS (airports not eligible for FAA AIP funding) airports and those

airports that are eligible to receive federal funds but have fewer than 20 based aircraft. (“Based aircraft” are operational and air worthy aircraft that are based at the facility for the majority of the year.) The remaining 45 percent is distributed to airports eligible to receive federal funding and that have 20 or more based aircraft.

Grant funds are then further allocated by project type, with 75 percent allocated to pavement projects, 15 percent for safety projects, and ten percent for maintenance, security, or planning projects. WSDOT Aviation evaluates grant applications using separate criteria for each of these project types, as well as other considerations. The prioritization criteria are spelled out in the WSDOT Airport Aid Grant Procedures Manual.

Timeline for awards

Typically, the program awards approximately half of allocated grant funds at the beginning of the biennium (July of odd-numbered years). The program then awards the other half of the funds halfway through the biennium but slightly earlier in the construction season. (March or April of even-numbered years) so that airport sponsors can take advantage of the summer construction season.

WSDOT Aviation solicits grant applications from airport sponsors after the Legislature and the Governor complete their work on the state transportation budget. After applications are submitted, Aviation staff review for completeness and work with applicants to submit any missing information. Aviation staff conducts a threshold review and scoring of eligible applications, producing a ranked list, which is submitted to the WSDOT Aviation Director for final approval.

Program Issues

- A number of the airport aid grants go to small, rural jurisdictions, or private airport sponsors that do not have staff experienced in aviation matters, or in grant administration. It is a frequent challenge to try to keep construction projects on track (that is, on time and on budget) when WSDOT Aviation does not have direct control over the project resources.
- Somewhat related to the issue above, small rural jurisdictions, and private airport sponsors, often do not have a thorough understanding or experience with implementing all requirements under state law concerning public works construction (for example, consultant selection, environmental regulation, etc.). It is a frequent challenge to ensure that all projects meet all state legal requirements for public works construction.
- Grant awards are tied to the state’s biennial budget cycle. However, this cycle does not necessarily align with either the FAA’s federal fiscal year or the natural construction season.

Administration of the Grant Program

The administration of the grant program is included in the Airport Investment (F2) sub-program. Funding for airport aid grants in the base program budget totals \$2.6 million from the Aeronautics Account-state, which includes \$637,000 from additional revenue of aircraft excise taxes (ESSB 6057 Part IX Section 901) and carry-forward adjustment of -\$1.5 million. In addition, the department requests \$2.5 million of a federal reappropriation and \$250,000 of additional federal appropriation authority for the 2017-19 biennium.

Program Funding:

(Dollars in thousands)

	2015-17 Enacted	2017-19 Proposed
New Awards		
039-1 Aeronautics Account - State	\$4,137	\$2,637
039-2 Aeronautics Account - Federal	\$4,100	\$2,400
Total	\$8,237	\$5,037
Reappropriations		
039-1 Aeronautics Account - State	\$420	\$0
039-2 Aeronautics Account - Federal	\$0	\$2,500
Total	\$420	\$2,500
Total	\$8,657	\$7,537

Rural Mobility Competitive Grant Funds

Public Transportation - Program V

Purpose and Restrictions

Rural Mobility Competitive Grant funds improve transportation in rural areas where public transportation is limited or does not exist. Grants provide a lifeline for many rural citizens who rely on public transportation to get to jobs, medical appointments, social service programs, and maintain their independence. Competitive funds will be used for operating, capital, and program development projects, providing services to individuals in rural communities.

Authorization

2016 Supplemental Transportation Budget Section 220 (2): *“\$20,438,000 of the rural mobility grant account—state appropriation is provided solely for grants to aid small cities in rural areas as prescribed by RCW 47.66.100.” (By statute, half of the \$20,438,000 or \$10,219,000 of the appropriations is for competitive grants and half for formula grants)*

Selection Criteria

WSDOT distributes grant funds through a competitive application process that leverages state and federal funds. Projects are derived from locally developed Human Service Transportation Plans conducted by the Regional Transportation Planning Organizations (RTPO). Each RTPO submits a ranked project list that WSDOT combines with the statewide review process.

WSDOT establishes evaluation teams that review applications and make recommendations regarding project priorities. Teams include transportation planners, service providers, local governments, tribes, riders, transportation brokers, and social service agencies. These team members review applications for:

- 1) Project Component Questions: Does the project establish, preserve, or improve public transportation services in a community? Does the project address a recognized need in the community? Does the project reflect a community process of coordination and input?
- 2) Applicant Component Questions: Does the applicant report sufficient financial capability and resources to implement and successfully carry out the project? Does the applicant report a long-term commitment to the project to continue the effort beyond the availability of the requested grant resources?
- 3) Performance Component Questions: Does the project define performance measures to be used in determining the success of the project? Does the project describe an active effort aimed at improving efficiency and effectiveness?

A forced-pair method is used to compare project applications. Each project is compared to a sampling of every other project. A list of ranked projects is developed from the calculated evaluation team scores. WSDOT then adds in the RTPO ranking percentage points to create the recommended funded list.

Timeline for Awards

Funding will be awarded through the consolidated grants process. The consolidated grant applications are due in October 2016.

The applications will be evaluated using the components outlined earlier in the Selection Criteria section by the evaluation team in January 2017. The results of the evaluation team will be submitted as a recommendation to WSDOT. In March or April of 2017, WSDOT will add the RTP0 ranking percentage points and then review the recommendations. WSDOT will then make the final decision on the projects that are awarded. This process will take place in May or June of 2017

Successful applicants will start receiving award letters and grant agreements between May and July 2017. The agreements will start on July 1, 2017 and expire at the end of the biennium (June 30, 2019).

Program Issues

The main issue is budgetary. If the state rural mobility dollars are decreased, it will also decrease the department’s ability to leverage federal dollars to grantees. It will mean less mobility for people and cuts to programs that are already under strain at the local level.

Program Funding

(Dollars in thousands)

	15-17 Enacted	17-19 Proposed
New Awards		
153-State –Rural Mobility Grant Acct (RM)	\$10,219	\$11,900
Total	\$10,219	\$11,900

Rural Mobility Formula Grant Funds

Public Transportation - Program V

Program purpose and restrictions (if any)

Rural Mobility Formula Grants funds improve transportation in small cities and rural areas where sales tax revenue is less than the state average. The grants provide a lifeline for many rural citizens who rely on public transportation to get to jobs, medical appointments, social service programs, and maintain their independence. Formula funds will be used for operating, capital, and program development projects, providing services to individuals in rural communities. Recipients are restricted to transit organizations serving small urban and rural areas.

Authorization

2016 Supplemental Transportation Budget Section 220 (2): *“\$20,438,000 of the rural mobility grant account—state appropriation is provided solely for grants to aid small cities in rural areas as prescribed by RCW 47.66.100.” (By statute, half of the \$20,438,000 or \$10,219,000 of the appropriations is for formula grants and half for competitive grants).*

Selection Criteria

WSDOT distributes RMG funds to small cities and rural transit districts that collect less than the statewide average of local revenues collected. The Department of Revenue (DOR) notifies WSDOT of the exact amount to be distributed to each transit agency. The formula used by DOR is the same that was formerly used for the Sales Tax Equalization Program, and is applied each year based on the sales taxes collected in the prior year.

Timeline for Awards

The 2017-19 biennium formula funds are appropriated with the biennial budget. Funds are distributed at the beginning of each state fiscal year and will be distributed based on the method explained in the Selection Criteria section. Once the department receives notification from DOR, it notifies transit agencies of their award. In May/June 2017, WSDOT will request that transit agencies send the department notifications of their intent on use of funds. The department distributes the contracts for these projects in July 2017. This process repeats itself for the second years’ funding distributed in the second year of the biennium.

Program Issues

The main issue is budgetary. If the state rural mobility dollars are decreased, it will also decrease the department’s ability to leverage federal dollars to grantees. It will mean less mobility for people and cuts to programs that are already under strain at the local level.

Program Funding

(Dollars in thousands)

	15-17 Enacted	17-19 Proposed
New Awards		
153-State –Rural Mobility Grant Acct (RM)	\$10,219	\$11,900
Total	\$10,219	\$11,900

Special Needs Competitive Grant Funds

Public Transportation - Program V

Program purpose and restrictions

This program benefits people with special transportation needs due to age, disability, or income that cannot provide transportation for themselves. Paratransit Special Needs Grants provide a lifeline for people who rely on public transportation to get to jobs and maintain independence. The funding will be used for operating, capital, and program development projects. Recipients are limited to non-profit organizations.

Authorization

2016 Supplemental Transportation Budget Sec 220 (1) (a): *“\$8,750,000 of the Multimodal Transportation Account—State appropriation is provided solely for grants to nonprofit providers of special needs transportation. Grants for nonprofit providers must be based on need, including the availability of other providers of service in the area, efforts to coordinate trips among providers and riders, and the cost effectiveness of trips provided.”*

Selection Criteria

WSDOT distributes grant funds through a competitive application process that leverages state and federal funds. Projects are derived from locally developed Coordinated Public Transportation - Human Service Transportation Plans conducted by the Regional Transportation Planning Organizations (RTPO). Each RTPO submits a ranked project list that WSDOT combines with the statewide review process.

WSDOT establishes evaluation teams that review applications and make recommendations regarding project priorities. Review teams include transportation planners, service providers, local governments, tribes, riders, transportation brokers, social service agencies, and riders. Evaluation team members review the applications for the following three areas:

- 1) Project Component Question: Does the project establish, preserve, or improve public transportation services in a community? Does the project address a recognized need in the community? Does the project reflect a community process of coordination and input?
- 2) Applicant Component Question: Does the applicant report sufficient financial capability and resources to implement and successfully carry out the project? Does the applicant report a long-term commitment to the project to continue the effort beyond the availability of the requested grant resources?
- 3) Performance Component Question: Does the project define the performance measures to be used in determining the success of the project? Does the project describe an active effort aimed at improving efficiency and effectiveness?

A forced-pair method is used to compare project applications. Each project is compared to a sampling of every other project. A list of ranked projects is developed from the calculated evaluation team scores. WSDOT then adds in the RTPO ranking percentage points to create the recommended funded list.

Timeline for Awards

For the 2017-19 Biennium, the funding will be awarded through the consolidated grants process. The consolidated grant applications are due in October 2016.

The applications will be evaluated using the components outlined in the Selection Criteria section by the evaluation team in January 2017. The results of the evaluation team are submitted as a recommendation to WSDOT. In March or April of 2017, WSDOT will add the RTPPO ranking percentage points and then review the recommendations. WSDOT will then make the final decision on the projects that are awarded. This process will take place in May or June of 2017.

Successful applicants will receive award letters and grant agreements between May and July 2017. The agreements will start on July 1, 2017 and expire at the end of the biennium (June 30, 2019).

Program Issues

The main issue is budgetary. If the state rural mobility and paratransit special needs dollars are decreased, it will also decrease the department's ability to leverage federal dollars to grantees. It will mean less mobility for people with special needs and cuts to programs that are already under strain at the local level.

Program Funding

(Dollars in thousands)

	15-17 Enacted	17-19 Proposed
New Awards		
218-State – Multimodal Transportation Acct (MMA)	\$8,750	\$10,000
Total	\$8,750	\$10,000

Special Needs Formula Grant Funds

Public Transportation - Program V

Program purpose and restrictions

This program benefits people with special transportation needs due to age, disability, or income. Paratransit Special Needs Grants provide a lifeline for these people to get to jobs and maintain independence. The funding will be used for operating and capital projects. Recipients are limited to Transit organizations and no agency may receive more than thirty percent of total funding.

Authorization

2016 Supplemental Transportation Budget Section 220(1) (b): *“\$32,500,000 of the Multimodal Transportation Account--State appropriation is provided solely for grants to transit agencies to transport persons with special transportation needs. To receive a grant, the transit agency must, to the greatest extent practicable, have maintenance of effort for special needs transportation that is no less than the previous year's maintenance of effort for special needs transportation. Grants for transit agencies shall be prorated based on the amount expended for demand response service and route deviated service in calendar year 2013 as reported in the "Summary of Public Transportation - 2013" published by the department of transportation. No transit agency may receive more than thirty percent of these distributions.”*

Selection Criteria

WSDOT prorates special needs formula grant funds to transit districts based on the amount expended for paratransit and flex route services in a historical base year.

Timeline for Awards

The biennial formula funds will be appropriated when the Governor signs the budget. These funds will be allocated based on the level of dial-a-ride and/or fixed route services provided by the transit agency during a prior year. WSDOT notifies the recipients of the funds available in May or June of 2017. Recipients will be required to send in a project description and budget outlining what they will use the funds for in June 2017. Contracts will be sent out for those projects in July 2017. All funds will be distributed at the beginning of the biennium so this process will not repeat itself until the following biennium.

Program Issues

The main issue is budgetary. If the state rural mobility and paratransit special needs dollars are decreased, it will also decrease the department's ability to leverage federal dollars to grantees. It will mean less mobility for people with special needs and cuts to programs that are already under strain at the local level.

Program Funding

(Dollars in thousands)

	15-17 Enacted	17-19 Proposed
New Awards		
218-State – Multimodal Transportation Acct (MMA)	\$32,500	\$27,500
Total	\$32,500	\$27,500

Vanpool Investment Program

Public Transportation – Program V

Program purpose and restrictions

The Vanpool Investment Program (VIP) was authorized by the Legislature to achieve the goal of doubling operating vanpools in the state by 2013. From FY 2003 through FY 2013, the number of public vanpools in operation in the state grew by 87 percent. The program provides capital funding to transit agencies to purchase vans and is authorized to provide incentives for employers to increase employee vanpool use.

Authorization

The program has been authorized as a budget proviso to Program V in the 2003-05, 2005-07, 2007-09, 2009-11, 2011-13, 2013-15, and 2015-17 biennia.

Grant Fund Awards

Capital grant fund awards are based on transit agency van requests and available VIP funds. Prior to the 2009-11 Biennium, WSDOT VIP capital funds were only available to transit agencies for expansion vans. Legislative language was added in 2009 allowing VIP grant funds to be used for the purchase of replacement vans.

2015-2017 Grant Awards

In August of 2015, the Public Transportation Division (PTD) issued an initial VIP grant award to ten transit agencies totaling \$5,714,250 for the purchase of 216 vanpool vehicles to meet demand and expand the agency's in service vanpool fleet. In November, 2015 an additional VIP grant award was made following the legislature's passage of the new transportation funding package that included \$969,000 in additional funds for the VIP. New law grant funds totaling \$822,250 were provided to six transit agencies for the purchase of 46 replacement vans. It is anticipated that there will be one final VIP grant solicitation this biennium in the last quarter of 2016 to award the remaining \$432,500 in VIP grant funds. In total, the PTD received requests from sixteen transit agencies for 834 vanpool vehicles (216 expansions and 607 replacements). VIP grant funds required to fulfill this request would have totaled \$16,583,875 (\$9,500,000+ more than the \$6,969,000 – existing and new law funds authorized in the 2015-17 budget).

Long-Term Program Requirements

WSDOT staff in collaboration with transit agency general managers and vanpool managers plan to develop a new 2020 vanpool program plan. A key component of the plan will be to identify and define funding needs beyond the current biennium.

Program Funding

(Dollars in thousands)

	15-17 Enacted	17-19 Proposed
New Awards	\$969	
218-State – Multimodal Transportation Acct (MMA)	\$6,000	\$6,000
Total	\$6,969	\$6,000

Call for Vanpool Investment Program – Capital Grants for Vanpool Purchase

The budget bill identifies funding availability and establishes the requirements of eligibility for transit agencies. In the 2015-17 Transportation Budget, the Public Transportation Division was provided a total of \$6,969,000 to support:

“...a vanpool grant program for: (a) Public transit agencies to add vanpools or replace vans; and (b) incentives for employers to increase employee vanpool use. The grant program for public transit agencies will cover capital costs only; operating costs for public transit agencies are not eligible for funding under this grant program. Additional employees may not be hired from the funds provided in this section for the vanpool grant program, and supplanting of transit funds currently funding vanpools is not allowed. The department shall encourage grant applicants and recipients to leverage funds other than state funds.”

“...(b) At least \$1,600,000 of this amount must be used for vanpool grants in congested corridors.

(c) \$400,000 of the amount provided in this subsection is provided solely for the purchase of additional vans for use by vanpools serving or traveling through the Joint Base Lewis-McChord I-5 corridor between mile post 116 and 127.”

Regional Mobility Grant (RMG) Program

Public Transportation – Program V

Program purpose and restrictions

The primary goals for the program are to 1) facilitate connection and coordination of transit services and planning and 2) maximize opportunities to use public transportation to improve efficiency of regional corridors. Local governments (defined as cities, counties, ports, and public transportation benefit areas) are eligible to apply for grant funding of public transportation projects that improve connections between cities and counties, rush hour transit on congested roadways, park and ride lots and projects that reduce delay for people and goods. The program was funded with \$33.4 million in 2007-09, \$60.9 million in 2009-11, \$48.9 million in 2011-13, \$51.1 million in 2013-15, and \$75 million in 2015-17.

Authorization - RCW 47.66.030

The department shall:

1. Establish a Regional Mobility Grant (RMG) Program. The purpose of the grant program is to aid local governments in funding projects such as intercounty connectivity service, park and ride lots, rush hour transit service, and capital projects that improve the connectivity and efficiency of our transportation system. The department shall identify cost-effective projects that reduce delay for people and goods and improve connectivity between counties and regional population centers, and submit a prioritized list of projects requesting funding to the Legislature by December 1 of each year.
2. Establish an advisory committee to carry out the mandates of this chapter.
3. Report annually to the transportation committees of the legislature on the status of any grants projects funded by the program created under this section.

Selection criteria

Grant projects reviewed in the 2015-17 biennium were ranked on the following criteria:

- Demonstrated cost efficiency of the grant funds requested relative to quantitative measures of effectiveness (reduction in vehicle miles traveled, reduction of vehicle trips, and as applicable, reduction in person hours of delay);
- Readiness to proceed with the project;
- Improving transportation efficiency at the location of an identified bottleneck/chokepoint or on a congested corridor or roadway location;
- Significantly improving regional transportation congestion issues with cost efficient solutions;
- Improving system integration to multiple modes and improve system coordination/connection through regional connections or cross-jurisdictional transit services;
- Improving regional connections, system coordination, and system integration of multiple modes;
- Effectively solving a transportation problem identified in the project proposal;

- Sustaining benefits beyond the initial grant period and be considered a long-term solution to an identified transportation problem;
- Providing a financial plan, secured funding, a commitment to continue the project beyond initial grant;
- Demonstrating a local funding commitment and effective partnership(s);
- Proceeding expeditiously and/or can be accomplished expeditiously; and
- How the project and agency plan to reduce greenhouse gas emissions.

Timeline for awards

Schedule: The 2017-19 biennium call for projects begin in August 2016 with applications due on October 6, 2016, followed by review and analysis. The Public Transportation Division is scheduled to send the ranked list of projects to the Legislature by December 1, 2016.

Selection process: An independent scoring committee reviews and scores each submittal, with the project scoring the most points being ranked the highest and so forth. The prioritized list may be submitted for comment to the Public Transportation Advisory Committee. This Committee, which consists of executives from transit agencies, regional planning organizations, local jurisdictions, and the Commute Trip Reduction Board, accepts the list and recommends it to the WSDOT Director of Public Transportation. The Director then accepts or revises the list and recommends it to the Transportation Secretary. After consultation with the Governor's Office, the Secretary submits a proposed list to the Legislature, who may then accept or revise the list. The list is then included in the transportation budget.

Program Issues

The department is working to address the conflict between the perceived expectation that all Regional Mobility Grant projects must be completed within a single biennium and the timelines for capital construction projects, which typically take more than a single construction season. Capital construction projects are a significant majority of the projects that receive RMG funds. The most frequent reason that grant recipients ask for reappropriation is the need for additional time to complete a capital construction project.

These projects typically require more than two years to complete design, environmental documentation and permitting, real estate acquisition, and construction. Capital construction projects also generally face significant schedule and cost risks, for example, rising labor and supply costs, weather, real estate acquisition challenges, contractor bidding environment, unexpected site conditions, etc. In addition, construction is often limited to months with relatively warm, dry weather – the construction season. Grant-funded construction projects that require more than one construction season are immediately in jeopardy because the state biennium begins on July 1, midway through the first construction season in the biennium. As a result, this first season is often lost because construction cannot begin immediately on July 1; WSDOT, grant recipients, and contractors must first complete grant agreements; hire contractors; complete required environmental, historic, and archaeological documentation; acquire real estate; plan the construction work and mobilize crews.

Program Funding

(Dollars in thousands)

	15-17 Enacted	17-19 Proposed
New Awards		
11B-State – Regional Mobility Grant Program Acct (RMG)	\$56,250	\$62,500
Reappropriations		
11B-State – Regional Mobility Grant Program Acct (RMG)	\$18,726	
Total	\$74,976	\$62,500

Public Transportation - Regional Mobility Grants 2017-2019 Reappropriation

<u>Project Title</u>	<u>Total Project Cost</u>	<u>Grant Request</u>	<u>Biennium Award</u>	<u>Re-appropriation</u>
Ben Franklin Transit, Park and Ride Richland	593,000	491,000	491,000	-
City of Fife - Bus Shelter Installation	75,000	75,000	75,000	-
City of Kent, Kent Transit Center 1st Ave N Parking	272,000	272,000	272,000	-
City of Tacoma - Tacoma Link Expansion Phase 1	5,000,000	2,500,000	2,500,000	-
City of Tukwila, Urban Pedestrian Bridge	6,870,000	6,808,000	6,808,000	-
Community Transit, Double Decker Buses	3,978,000	3,978,000	3,978,000	-
Community Transit, Mukilteo Park and Ride Plus	3,680,000	3,656,000	3,656,000	-
Community Transit-Seaway Transit Center-Swift II BRT	6,800,000	3,000,000	3,000,000	-
C-TRAN - Fisher's Landing Transit Center South Parking Expansion	2,849,000	2,849,000	2,849,000	-
C-TRAN, Fourth Plain Bus Rapid Transit	3,000,000	2,259,000	2,259,000	-
Grant Transit - GTA Multimodal Transit Center	1,598,000	1,598,000	1,598,000	-
Grays Harbor Transportation Authority - Run Cutting Software Purchase	56,000	56,000	56,000	-
Intercity Transit, Olympia-Seattle Express Bus Service	1,121,000	640,000	640,000	-
Intercity Transit, Tumwater/Dupont/Lakewood Express Bus Service	4,086,000	1,859,000	1,859,000	-
Jefferson Transit Authority - SR 20/Four Corners Road Park and Ride Facility	1,040,000	1,040,000	1,040,000	-
King County Metro - I-90 Manage Demand	2,880,000	1,621,757	2,880,000	1,258,243
King County Metro - Park and Ride Efficiency and Access Project	2,595,000	600,000	1,040,000	440,000
King County Metro - Route 245 Corridor Speed and Reliability Improvement	2,192,000	1,592,000	2,192,000	600,000
King County Metro, I-405 Corridor Managing Demand	2,398,000	1,456,000	1,456,000	-
King County Metro, Rapid Ride F Line Service Extension	5,154,000	2,131,000	2,131,000	-
King County Metro, SR 522 and I-5 Operating	3,669,000	1,510,903	1,737,000	226,097
Kitsap Transit, Poulsbo SR 305/3 Park and Ride	1,857,000	1,092,000	1,092,000	-
Kitsap Transit, SR 305 Interchange Improvements at Suquamish Way Park and Ride	2,326,000	2,317,000	2,317,000	-
Kittitas County - I-90 Exit 78 park and ride	223,000	223,000	223,000	-
Link Transit - Wenatchee Riverfront Shuttle	2,520,000	1,260,000	1,260,000	-
Mason Transit - Park and Ride Development	2,250,000	2,250,000	2,250,000	-
Mason Transit - Regional Express Commuter Bus Service	1,769,000	1,317,000	1,317,000	-
Pierce Transit - Route 1 Connections/Route 4 112th Street Peak Hour Service	4,642,000	1,160,500	2,321,000	1,160,500
Pierce Transit, SR 7/Pacific Ave Peak Hour Service Expansion	2,223,000	1,264,000	1,264,000	-
Pullman Transit - Two, 40-foot Electric Hybrid Buses to Increase Capacity	1,056,000	1,056,000	1,056,000	-
Seattle DOT Broadway Streetcar Extension	4,000,000	-	4,000,000	4,000,000
Seattle DOT, 23rd Ave Transit Improvements	4,000,000	2,931,000	3,031,000	100,000
Sound Transit Sumner Station Access Improvements	5,000,000	3,000,000	3,000,000	-
Sound Transit/Community Transit, High Capacity Double Decker	4,000,000	4,000,000	4,000,000	-
Spokane Transit Authority - West Plains Transit Center	8,700,000	608,989	1,740,000	1,131,011
Spokane Transit, Central City Line	2,200,000	32,792	2,200,000	2,167,208
Town of Concrete Solo Park and Superior Avenue Park and Ride Improvement	477,000	477,000	477,000	-
WSDOT - SR 525 - Pedestrian Improvements	2,637,000	527,000	527,000	-
109,786,000 63,508,941 74,592,000 11,083,059				

**Public Transportation - Transit Projects
2017-2019 Reappropriation**

<u>Project Title</u>	<u>Project Cost</u>	<u>Grant Request</u>	<u>Biennium Award</u>	<u>Re-appropriation</u>
Bike Share Expansion - Kirkland, Bellevue, Redmond, Issaquah	5,500,000	500,000	175,000	325,000
C-TRAN, Vancouver Mall Transit Center Relocation and Upgrade	3,200,000	-	-	-
King County Metro, 67th to Fremont Transit Corridor	3,000,000	-	-	-
King County Metro, Route 48 North University Link Station to Loyal Heights	3,000,000	-	-	-
Kitsap Transit, East Bremerton Transfer Center	3,000,000	-	-	-
Kitsap Transit, Silverdale Transfer Center	2,300,000	-	-	-
Mason Transit, Park and Ride Development	7,085,000	-	-	-
MLK Way/Rainier Ave S I/C Improvements	900,000	-	-	-
North Broadway Bus Stop Safety Improvements	3,000,000	1,000,000	1,000,000	-
Northgate Transit Center Pedestrian Bridge	10,000,000	-	-	-
Orcas Village Park and Ride	760,000	737,000	737,000	-
RapidRide Expansion, Burien-Delridge	8,000,000	1,500,000	500,000	1,000,000
Route 40 Northgate to Downtown	3,000,000	-	-	-
Route 43 and Route 44- Ballard to University District	3,000,000	-	-	-
Spokane Central City Line	15,000,000	3,000,000	3,000,000	-
SR 7 Express Service Tacoma to Parkland/Spanaway	15,000,000	-	-	-
SWIFT II Bus Rapid Transit	10,000,000	-	-	-
System Enhancements, Expansion and Safety Improvements	831,000	831,000	831,000	-
Tri-County Connector	2,300,000	2,300,000	2,300,000	-
Trolley Expansion/Electrification	8,000,000	2,022,000	2,022,000	-
Yakima Transit - Additional Buses	2,000,000	2,000,000	2,000,000	-
Transit Tier Projects Contingency/Reserve	2,250,000			

111,126,000	13,890,000	12,565,000	1,325,000
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Freight Rail Assistance Program

Rail Capital – Program Y

Program purpose and restrictions (if any)

The Washington State Legislature authorized the department to provide grants to:

- Support branch lines and light density rail lines.
- Provide or improve rail access to ports.
- Maintain adequate mainline capacity.
- Preserve or restore rail corridors and infrastructure.

Authorization

The program is authorized by RCW 47.76.250 (8), with amounts designated by proviso in the transportation budget.

Selection Criteria

Points are awarded using the following point system:

- Economic development benefits (including cost/benefit analysis) - 25 points
- Viability of proposal: project sustainability – 15 points
- Financial and or in kind participation by other funding source – 10 points
- Safety improvements and /or urgent needs – 10 points
- Preservation of rail corridor – 10 points
- Geographic balance – 10 points
- Reduction of delays on statewide rail system – 5 points
- Reduction in Greenhouse gasses (RCW 70.235.070) – 5 points
- Reduced impacts on roads – 5 points
- Environmental benefits – 5 points

Timeline for awards

The most recent call for projects was issued on June 6, 2016. Submissions were due on July 15, 2016. WSDOT will review submissions based on stated criteria above and ensure projects meet environmental and project delivery requirements. The recommendations are a joint product from WSDOT, Washington Department of Commerce, Freight Mobility Strategic Investment Board, Washington Public Ports Association, and BNSF. The recommendations are approved by WSDOT's senior executives and submitted to OFM by November 15, 2016. The final list is approved by OFM.

Program Issues

N/A

Program Funding

(Dollars in thousands)

	2015-17	2017-19
	Enacted	Proposed
New Awards		
02M-1 Essential Rail Assistance Account - State	\$270	\$24
094-1 Transportation Infrastructure Account - State	\$455	\$367
218-1 Multimodal Transportation Account - State	\$5,484	\$8,116
Total	\$6,209	\$8,507
Reappropriations		
02M-1 Essential Rail Assistance Account - State	\$75	\$0
218-1 Multimodal Transportation Account - State	-\$75	\$55
094-1 Transportation Infrastructure Account - State	\$51	\$0
Total	\$51	\$55
Total	\$6,260	\$8,562

Freight Rail Investment Bank

Rail Capital – Program Y

Program purpose and restrictions

The Freight Rail Investment Bank provides loans for smaller rail capital projects. Loans are available in amounts up to \$250,000; applications are open to loans of any size within the maximum amount available. Projects must have a matching source of at least 20 percent. The program is restricted to publicly-owned rail infrastructure projects due to a constitutional restriction on loaning funds to private entities.

Authorization

The program is not specifically authorized in statute but appropriations for the Freight Rail Investment Bank are designated biennially, by proviso, in the transportation budget – most recently in ESHB 2524 Section 310 (2), Chapter 14, Laws of 2016.

Selection Criteria

The following criteria are used to evaluate and prioritize proposals:

1. Value to community, which includes all of the state or a region of the state, and/or local community in the freight system, in dollar terms. Up to 40 points
2. Strategic benefit – for example, the degree to which a project is integral to future development of the rail line, the area, the specific business, etc. Up to 35 points
3. Matching funds scaled according to the contribution. Up to 25 points

Timeline for awards

The most recent call for projects was issued on June 6, 2016. Submissions were due on July 15, 2016. WSDOT will review submissions based on stated criteria above and ensure projects meet environmental and project delivery requirements. The recommendations are a joint product from WSDOT, Washington Department of Commerce, Freight Mobility Strategic Investment Board, Washington Public Ports Association, and BNSF. The recommendations are approved by WSDOT's senior executives and submitted to OFM by November 15, 2016. The final list is approved by OFM.

Program Issues

N/A

Program Funding

(Dollars in thousands)

	2015-17	2017-19
	Enacted	Proposed
New Awards		
094-1 Transportation Infrastructure Account - State	\$5,000	\$5,000
Total	\$5,000	\$5,000
Reappropriations		
094-1 Transportation Infrastructure Account - State	\$1,580	\$0
Total	\$1,580	\$0
Total	\$6,580	\$5,000

Safe Routes to School Program

Local Programs (Program Z)
2017-19 Budget Submittal

Program purpose and restrictions:

The grant program helps fund cost-effective projects within two miles of primary, middle and high schools (K-12) to provide children a safe and healthy alternative to riding the bus or being driven to school. The purpose of the program is to improve safety and mobility for children by enabling and encouraging them to walk and bicycle to school. Successfully implemented projects which provide improved walk routes that increase the number of children walking and bicycling to school.

Authorization:

State and federal funds have been identified for the program beginning with the 2005 revenue package and have been authorized in each succeeding transportation budget since that time by providing appropriation authority from the Motor Vehicle Account-Federal and the Multi-Modal Account. Also in 2012 the legislature appropriated funds from the Highway Safety Account. The Connecting WA package also provided additional revenue in the Multi-Modal Account. In the 2015-17 biennia the program was separated from the Pedestrian & Bicycle Safety program.

Selection Criteria:

All complete proposals are reviewed and evaluated by an advisory group utilizing criteria to identify projects that will increase the number of children walking and biking to school safely. Proposals are evaluated for projects that will help stimulate economic revitalization and healthy communities' initiatives by improving safety and reducing modal conflicts near schools.

Timeline for awards:

The call for projects was issued in January 2016 with proposals due before the end of May 2016. Proposals are reviewed and prioritized from June-November 2016. A priority listing of projects is submitted to the Governor's office and legislature by December 15, 2016.

Performance measures, outcomes and goals:

The number of children walking and biking to school is measured before and after the safety and mobility improvements. This program also provides an opportunity to increase investments in multimodal transportation and reduce modal conflicts.

Administration of the Grant Program:

Administration is not specific to the grant program but is covered through the administration funding appropriated to Local Programs.

Program Funding: (This is the amount available or planned to award to new grants by fund source and expected reappropriations by fund source. The total of the columns should add to your approved (2015-17) or planned (2017-19) budget amounts without consideration of cash flow adjustments.)

\$ in millions	09-11	11-13	13-15	15-17	17-19	19-21
New Awards						
TPA-S						
MVA-F		4.952	4.611	6.303	11.4	11.4
MMA-S				0.925	7.75	7.75
HSF-S		0.092	2.218	4.69	6.75	6.75
TOTAL		\$5.044	\$6.829	\$11.918	\$25.9	\$25.9
Reappropriations						
TPA-S						
MVA-F		4.822	5.101	7.507	6.372	
MMA-S			1.009	0.26	0.923	
HSF-S			1.800	4.569	2.388	
TOTAL		\$4.822	\$7.910	\$12.1028	\$9.683	

Expected cash flow by fund source: (Please estimate the amount of actual expenditures per biennium by fund source. Generally, this should be lower than the awarded amount of the grants.)

\$ in millions	09-11	11-13	13-15	15-17	17-19	19-21
TPA-S						
MVA-F		9.774	9.712	13.810	14.5	
MMA-S			1.009	1.185	6.0	
HSF-S		0.092	4.018	9.259	5.5	
Total		\$9.866	\$14.739	\$24.254	\$26.0	\$14.8

Number of Completed Projects:

	09-11	11-13	13-15	15-17	17-19	19-21
Actual	9	21	36	22		
Planned				20		

Pedestrian & Bicycle Safety Program

Local Programs (Program Z)

2017-19 Budget Submittal

Program purpose and restrictions:

The grant program supports pedestrian and bicycle safety mobility projects such as pedestrian and bicycle paths, sidewalks and crossing improvement in downtown areas for people who choose to walk or bike. The program funding helps stimulate economic revitalization and healthy community initiatives by improving safety and reducing modal conflicts in community centers.

Authorization:

State funds have been identified for the program beginning with the 2005 revenue package and have been authorized in each succeeding transportation budget since that time by providing appropriation authority from the Multi-Modal Account and from the Transportation Partnership Account. The Connecting WA package also provided additional revenue in the Multi-Modal Account. In the 2015-17 biennia the program was separated from the Safe Routes to School program.

Selection Criteria:

All complete proposals are reviewed and evaluated by an advisory group utilizing criteria to identify projects that will help promote healthy communities, stimulate economic revitalization, improve safety and reduce modal conflicts in community centers. Site visits are conducted by Local Programs staff to ensure the proposed projects address the issues outlined in the proposals. Projects that focus on long term solutions and can be delivered will have a higher rating.

Timeline for awards:

The call for projects was issued in January 2016 with proposals due before the end of May 2016. Proposals are reviewed and prioritized from June-November 2016. A priority listing of projects is submitted to the Governor's office and legislature by December 15, 2016.

Performance measures, outcomes and goals:

The program provides an opportunity to increase investments in multimodal transportation and reduce modal conflicts (pedestrians, transit, motor vehicles, freight, bicyclists, etc.). It provides resources to make strategic investments, advance modal integration and the opportunity for enhanced community engagement through stakeholder collaboration.

Administration of the Grant Program:

Administration is not specific to the grant program but is covered through the administration funding appropriated to Local Programs.

Program Funding: (This is the amount available or planned to award to new grants by fund source and expected reappropriations by fund source. The total of the columns should add to your approved (2015-17) or planned (2017-19) budget amounts without consideration of cash flow adjustments.)

\$ in millions	09-11	11-13	13-15	15-17	17-19	19-21
New Awards						
TPA-S		1.088	3.46			
MVA-F						
MMA-S		7.603	3.174	6.274	18.38	18.38
HSF-S						
TOTAL		\$8.691	\$6.634	\$6.274	\$18.38	\$18.38
Reappropriations						
TPA-S		2.188	1.868	2.436	1.143	
MVA-F		6.83				
MMA-S		13.499	1.997	7.947	6.432	
HSF-S						
TOTAL		\$22.517	\$3.865	\$10.383	\$7.575	

Expected cash flow by fund source: (Please estimate the amount of actual expenditures per biennium by fund source. Generally, this should be lower than the awarded amount of the grants.)

\$ in millions	09-11	11-13	13-15	15-17	17-19	19-21
TPA-S		3.276	6.634	2.436	1.1	
MVA-F		6.83				
MMA-S		21.102	5.171	14.221	19.8	
HSF-S						
Total		\$31.208	\$10.499	\$16.657	\$20.9	

Number of Completed Projects:

	09-11	11-13	13-15	15-17	17-19	19-21
Actual	22	28	20	8		
Planned				12		

WSDOT Airport Aid Program
WSDOT Aviation/Program F
August 29, 2016 (Anticipated WSDOT Aviation 2017-19 Project List)

New 2017-19 Grant Projects

Priority ¹	City	Project Title	Project Description	Total Project	Anticipated Grant Request	Cumulative Total
	Arlington	Runway 11/29 Rehabilitation	Asphalt overlay of Runway 11/29	1,100,000	250,000	250,000
	Arlington	Airfield Pavement Maintenance	Crack sealing areas of airfield pavement	50,000	25,000	275,000
	Arlington	Runway 16/34 Pavement Maintenance	Crack seal, fog seal, and striping of Runway 16/34	200,000	25,000	300,000
	Brewster	Runway Lighting Replacement	Replacement of existing low voltage runway lighting system with a new lighting package including Medium Intensity Runway Lighting (MIRL), Precision Approach Path Indicators (PAPI) and Runway End Identification Lights (REIL)	666,666	33,333	333,333
	Brewster	Airports Geographic Information System (AGIS) Survey	Perform AGIS survey	166,666	8,333	341,666
	Chelan	Runway Safety Improvements - Phase 1	Design and construction of road improvements for runway and taxiway shift including extension of Apple Acres Road intersection, highway approaches, and Howard Flats Road relocation	1,550,000	77,500	419,166
	Chelan	Runway Safety Improvements - Phase 2 and AGIS Survey	Demolition of existing road, buildings and trees / Perform AGIS survey to evaluate obstructions	166,667	8,333	427,499
	Chelan	Airfield Pavement Maintenance	Crack seal, seal coat, and striping of runway, parallel taxiways and run-up aprons	285,300	14,265	441,764
	Cle Elum	Airfield Pavement Maintenance	Crack seal, fog seal, and striping of Runway 7/25, turnarounds, and mid-field exit taxiway	230,512	11,526	453,290
	Concrete	Runway Rehabilitation	Runway pavement repairs, milling existing surface, and asphalt overlay	210,000	200,000	653,290
	Deer Park	Aircraft Parking and Taxilanes	Design and construct aircraft parking including additional taxilanes	500,000	25,000	678,290
	Eastsound	Aircraft Apron Pavement Maintenance	Crack seal, fog Seal, and striping of aircraft apron pavement in vicinity of terminal and fuel island	165,000	7,500	700,790
	Friday Harbor	Runway 16/34 Repair / Connector Taxiways Rehabilitation / Airfield Pavement Maintenance	Repair of "dip" in runway / Rehabilitation of connector taxiways / Runway and other airfield pavements crack sealing	900,000	45,000	745,790
	Electric City	Airfield Pavement Maintenance	Crack seal, seal coat, and striping of airfield pavements	260,000	13,000	783,790
	Hoquiam	Perimeter Fence and Gate - Design	Design and permitting for the installation of security fencing and automated gate	56,000	2,800	786,590
	Ione	Runway 33 Safety Area Grading	Design and bidding for placement of fill at the south end and along the east side of the runway to comply with runway safety area (RSA) standards	114,750	5,738	792,327
	Kelso	Obstruction Removal	Remove obstructions in Part 77 approach surfaces	250,000	12,500	804,827
	Kelso	Wildlife Hazard Management Plan Update	Update the 2009 Wildlife Hazard Management Plan	83,000	4,150	808,977

New 2017-19 Grant Projects

Priority ¹	City	Project Title	Project Description	Total Project	Anticipated Grant Request	Cumulative Total
	Lind	Runway 5 Threshold Displacement and RSA/OFA Improvements - Design	Design services to displace Runway 5 threshold including lowering fence west of the runway and re-striping / fill, grade, and compact all RSA and object free areas (OFA)	6,000	5,700	814,677
	Lind	Airfield Pavement Maintenance	Crack seal, slurry seal, and striping of airfield pavements	130,000	123,500	938,177
	Lopez Island	Runway 16 Safety Area Improvements	Fill, grade, and compact North end RSA	175,000	8,750	946,927
	Moses Lake	Airfield Pavement Maintenance - Design	Design for pavement maintenance including crack seal, slurry seal, and striping	40,000	38,000	984,927
	Moses Lake	Taxiway G Pavement Maintenance	Taxiway G pavement maintenance	165,000	7,500	992,427
	Odessa	Runway Rehabilitation and Shift - Phase 3 (Construction)	Runway rehabilitation and shift to correct the safety area deficiency on Runway 2 end including associated airfield lighting, signage, and striping	1,333,333	66,666	1,059,093
	Okanogan	Runway 4/22 Rehabilitation	Asphalt overlay of Runway 4/22	240,000	228,000	1,287,093
	Olympia	Taxiway G Rehabilitation - Design & Environmental	Taxiway G rehabilitation design services and environmental consultation	275,000	12,500	1,299,593
	Omak	Runway Width Reduction and AGIS Survey	AGIS survey and runway width reduction from 150' to 75' including; PAPIs, REILs, MIRLs, and crack seal, seal coat, and striping of pavement to establish new runway edges	1,700,000	85,000	1,384,593
	Oroville	Runway 15/33 Shift and Obstruction Removal	Removal of obstructions in preparation for shifting Runway 15/33	153,333	7,666	1,392,259
	Port Angeles	Obstruction Removal	Purchase of avigation & clearing easements and removal of trees	2,500,000	12,500	1,404,759
	Port Townsend	Runway and Taxiway Rehabilitation - Phase 1 (Design)	Design services for Runway 9/27 rehabilitation	135,000	5,000	1,409,759
	Puyallup	Pre-Design and Environmental Assessment (EA) for Obstruction Removal, Taxiway Lighting, and Runway Widening	Preliminary design and environmental review for Part 77 airspace hazards obstruction removal, taxiway lighting, and runway widening	330,000	15,000	1,424,759
	Raymond	Airfield Pavement Maintenance	Runway, taxiway, and apron seal coat and striping	67,100	63,750	1,488,509
	Republic	Runway Lighting System Replacement	Planning, survey, design and construction services for the replacement of runway and threshold lights, new PAPIs, REILs, and all runway lighting cable	45,000	42,750	1,531,259
	Ritzville	Taxiway Pavement Maintenance - Phase 1 (Design)	Design services for taxiway pavement maintenance	50,000	47,500	1,578,759
	Ritzville	Taxiway Pavement Maintenance - Phase 2 (Construction)	Crack seal, slurry seal, and striping of parallel taxiway	180,000	171,000	1,749,759
	Rosalia	Taxilane Construction	Construct taxilanes to provide access to parallel taxiway and existing ramp area	150,000	7,500	1,757,259
	Snohomish	Airport Way Relocation and New Runway 15/33	Relocate Airport Way and construct new Runway 15/33	5,500,000	250,000	2,007,259

New 2017-19 Grant Projects

Priority¹	City	Project Title	Project Description	Total Project	Anticipated Grant Request	Cumulative Total
	Tacoma	Pre-Design and EA for Various Airport Improvements	Preliminary design and environmental review for upcoming airport improvements including; Part 77 airspace hazards obstruction removal, storm water pond relocation, Taxiway A shift, Taxiway B4 re-alignment, and taxiway expansion between Taxiway B3 and B4	550,000	25,000	770,790
	Tekoa	Runway Rehabilitation	Asphalt overlay of runway	157,895	150,000	2,157,259
	Twisp	North Taxiway Design	Design engineering for North taxiway	60,000	57,000	2,214,259
	Warden	Runway 17/35 Rehabilitation - Phase 1	Runway 17/35 rehabilitation including removal of existing asphalt, new pavement, and runway extension	250,000	237,500	2,451,759
	Wenatchee	Taxiway A Rehabilitation - Design	Taxiway A pavement rehabilitation design services	300,000	15,000	693,290
	Winthrop	Runway 13/31 Rehabilitation	Runway, taxiway connector, and apron rehabilitation; Runway 31 holding bay apron expansion; aircraft parking ramp expansion	3,000,000	150,000	2,601,759

Total New Grants Possible for 2017-19

¹ This is a non-prioritized list of anticipated aviation projects subject to submission of grant applications by Airport Sponsors.

Ferries (Programs X and W)

Washington State Ferries

June 2016 Revenue and Ridership Forecasts — Fiscal Years 2016-2027

JUNE 2016 FORECAST NOTES

The fare revenue and ridership forecasts for Washington State Ferries (WSF) are completed in four stages. First, monthly ridership projections by seven fare categories are prepared for each route using time series analysis methods, with a forecast horizon from the present through fiscal year (FY) 2027.

The seven fare categories include: (1) passenger full fares, (2) passenger commuter discount fares, (3) passenger other discount fares, (4) auto full fares, (5) auto commuter discount fares, (6) other discount vehicles, and (7) oversize vehicle fares.

Stage two of the process generates system-wide ridership projections. Econometric models combine ferry fare scenarios with demographic and economic projections to produce system-wide unconstrained ridership forecasts by seven fare categories through FY 2027. Within each fare category, the individual route forecasts are then calibrated to match the system-wide forecast totals from the econometric models.

The third stage of the process consists of adjusting the calibrated passenger and vehicle ridership by route to reflect seasonal vehicle capacity constraints, changes in service hours, and/or the net impacts from adding or eliminating service.

Last, the appropriate fares and average fare realizations are applied to the calibrated, capacity-constrained ridership forecasts for each route by fare category. This yields monthly and annual revenue forecasts by route for seven fare categories.

In August 2015, the Washington State Transportation Commission adopted two separate fare increases to take place in FY 2016, effectively revising the Baseline and Alternative 1 Forecast Scenarios. The June Forecast scenarios are as follows:

- **Baseline Forecast** – Includes two nickel-rounded fare increases in FY 2016 of 1.0% for passengers and 2.5% for vehicles on October 1, 2015 and May 1, 2016, plus removal of the overheight fare surcharge on vehicles up to 22 feet in length. With no further fare increases, real fares will decline from FY 2017 forward.
- **Alternative 1 Forecast** – Builds on the Baseline Forecast by adding consecutive 2.5% increases each October, from 2017 through 2026 (FY 2018-27), resulting in slightly increasing real fares under current inflation projections.

The FY 2016 projections have been updated to include actual revenue and ridership through May 2016.

Ridership Impacts

- The June 2016 ridership forecasts reflect the latest updated demographic and economic variable forecasts provided by the State and commercial sources.
- The forecasts for trade/transportation/utilities, retail, and overall non-agricultural employment display a mix of small upward and downward revisions over the forecast horizon, collectively having no material impacts on projected ridership.
- The real personal income forecast has been revised downward over the forecast horizon, initially 1.3% lower in FY 2017 and rising to 3.1% lower in FY 2027, which dampens demand for passenger and vehicle/driver commuter ridership.
- A small upward revision to inflation contributes to slightly lower real fares over the forecast horizon, which tend to lift the ridership forecasts.
- Projections for real gasoline prices reflect a notable increase for the remainder of FY 2016, a slight decline in FY 2017, and then increasingly steeper declines thereafter relative to the February forecast. By FY 2027, real gas prices are forecasted to be 28% lower, sending the vehicle/driver ridership forecasts upward.
- Overall, the June Baseline Forecast for ridership in FY 2016 is 0.5% higher than projected in February, showing 1.6% annual growth over FY 2015.
- Actual ridership for the four months from February through May 2015 came in 1.6% higher overall, with April particularly strong. However, the increase was driven by passengers (3.9% higher) rather than vehicles (1.1% lower), with the total revenue increase for FY 2016 only 1.0% even with the two fare increases.
- Ridership for FY 2017 is projected to be 0.7% higher than previously forecasted, and thereafter ranging to as much as 1.1% higher for the Baseline Forecast and 1.2% higher for the Alternative 1 Forecast.

Revenue Impacts

- For the 2015/17 biennium, forecasted revenues of \$368.8 M are \$1.8 M (0.5%) higher than in February for both the Baseline and Alternative 1 Forecasts.
- The 2015/17 biennium forecast is distributed as \$360.8 M in base fares to the operating account and \$8.0 M in fare surcharge revenue to the capital account.
- For the 2017/19 biennium, forecasted revenues of \$380.9 M under the Baseline Forecast are 0.9% higher than projected in February. For the Alternative 1 Forecast, the 2017/19 biennium projection is \$389.5 M or 0.5% higher.
- Thereafter, projected biennial revenues range from 1.2% to 1.6% higher than their February values, depending on the forecast scenario and biennium.

Washington State Ferries

RIDERSHIP PROJECTIONS ~ BASELINE FORECAST

Adopted Fares through May 1, 2016 | No Changes in Fares after May 2016¹

June 2016 Forecast – Fiscal Years 2016-2027

Fiscal Year	June 2016 Unconstrained Demand Forecast*	June 2016 Capacity Constrained Projections			Annual Rate of Growth	February 2016 Projections	
		Passenger Ridership	Vehicle/Driver Ridership	Total Ridership		Total Ridership	Jun. % Chg from Feb.
2008		12,926,006	10,441,798	23,367,804	(2.8%)		
2009		12,580,511	9,917,249	22,497,760	(3.7%)		
2010		12,453,226	10,134,311	22,587,537	0.4%		
2011		12,242,320	9,968,973	22,211,293	(1.7%)		
2012		12,236,081	9,983,059	22,219,140	0.0%		
2013		12,350,126	10,045,043	22,395,169	0.8%		
2014		12,696,936	10,154,905	22,851,841	2.0%		
2015		13,270,874	10,387,368	23,658,242	3.5%		
2016 ²	24,030,000	13,464,000	10,566,000	24,030,000	1.6%	23,922,000	0.5%
2017	24,178,000	13,431,000	10,747,000	24,178,000	0.6%	24,004,000	0.7%
2018	24,391,000	13,504,000	10,887,000	24,391,000	0.9%	24,230,000	0.7%
2019	24,711,000	13,701,000	10,999,000	24,700,000	1.3%	24,508,000	0.8%
2020	25,061,000	13,926,000	11,106,000	25,032,000	1.3%	24,802,000	0.9%
2021	25,367,000	14,161,000	11,156,000	25,317,000	1.1%	25,055,000	1.0%
2022	25,684,000	14,399,000	11,211,000	25,610,000	1.2%	25,335,000	1.1%
2023	26,012,000	14,638,000	11,271,000	25,909,000	1.2%	25,619,000	1.1%
2024	26,339,000	14,886,000	11,315,000	26,201,000	1.1%	25,925,000	1.1%
2025	26,694,000	15,139,000	11,372,000	26,511,000	1.2%	26,274,000	0.9%
2026	27,085,000	15,403,000	11,435,000	26,838,000	1.2%	26,633,000	0.8%
2027	27,502,000	15,677,000	11,509,000	27,186,000	1.3%	27,002,000	0.7%

¹ The Baseline Forecast includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, plus the 25¢ surcharge per fare sold for funding capital expenditures. However, the Baseline Forecast excludes any further changes to the nominal fares after May 2016, resulting in declining real fares over the forecast horizon.

The Baseline Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2016 includes actual revenue data through May 2016. * Excludes demand adjustments for potential vessel capacity constraints and impacts due to the 25¢ per fare capital surcharge.

Washington State Ferries

RIDERSHIP PROJECTIONS ~ ALTERNATIVE 1 FORECAST

Adopted Fares through May 1, 2016 | 2.5% Annual Fare Increases FY 2018-27¹

June 2016 Forecast – Fiscal Years 2016-2027

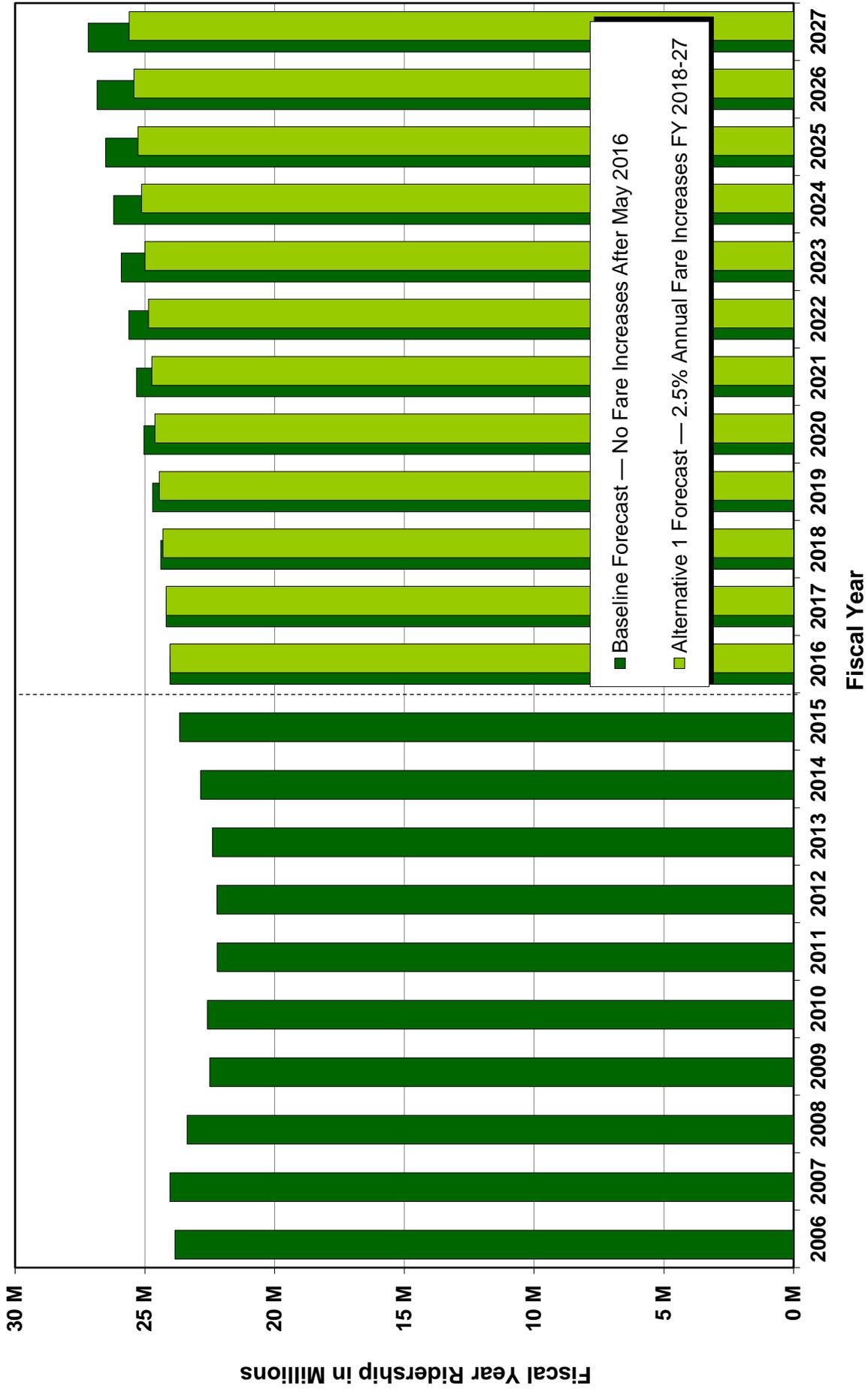
Fiscal Year	June 2016 Unconstrained Demand Forecast*	June 2016 Capacity Constrained Projections			Annual Rate of Growth	February 2016 Projections	
		Passenger Ridership	Vehicle/Driver Ridership	Total Ridership		Total Ridership	Jun. % Chg from Feb.
2008		12,926,006	10,441,798	23,367,804	(2.8%)		
2009		12,580,511	9,917,249	22,497,760	(3.7%)		
2010		12,453,226	10,134,311	22,587,537	0.4%		
2011		12,242,320	9,968,973	22,211,293	(1.7%)		
2012		12,236,081	9,983,059	22,219,140	0.0%		
2013		12,350,126	10,045,043	22,395,169	0.8%		
2014		12,696,936	10,154,905	22,851,841	2.0%		
2015		13,270,874	10,387,368	23,658,242	3.5%		
2016 ²	24,030,000	13,464,000	10,566,000	24,030,000	1.6%	23,922,000	0.5%
2017	24,178,000	13,431,000	10,747,000	24,178,000	0.6%	24,004,000	0.7%
2018	24,307,000	13,448,000	10,859,000	24,307,000	0.5%	24,146,000	0.7%
2019	24,449,000	13,534,000	10,908,000	24,442,000	0.6%	24,248,000	0.8%
2020	24,626,000	13,651,000	10,956,000	24,607,000	0.7%	24,375,000	1.0%
2021	24,760,000	13,780,000	10,953,000	24,733,000	0.5%	24,461,000	1.1%
2022	24,901,000	13,907,000	10,952,000	24,859,000	0.5%	24,576,000	1.2%
2023	25,056,000	14,036,000	10,962,000	24,998,000	0.6%	24,699,000	1.2%
2024	25,203,000	14,164,000	10,964,000	25,128,000	0.5%	24,835,000	1.2%
2025	25,360,000	14,284,000	10,979,000	25,263,000	0.5%	24,991,000	1.1%
2026	25,547,000	14,413,000	11,007,000	25,420,000	0.6%	25,162,000	1.0%
2027	25,761,000	14,552,000	11,049,000	25,601,000	0.7%	25,353,000	1.0%

¹ The Alternative 1 Forecast includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, followed by annual 2.5% fare increases starting October 2017 (FY 2018), plus the 25¢ surcharge per fare sold for funding capital expenditures. Projected annual inflation is less than the 2.5%, leading to slightly increasing real fares over the forecast horizon. The Alternative 1 Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2016 includes actual revenue data through May 2016. * Excludes demand adjustments for potential vessel capacity constraints and impacts due to the 25¢ per fare capital surcharge.

Washington State Ferries — Ridership History and Forecast Trends

June 2016 Forecast — Fiscal Years 2006-2027



WSDOT Ferries Division 2017-19 Capital Budget Request

Level of Service Standards

In 1994, the Washington State Transportation Commission adopted level-of-service (LOS) standards for Washington State Ferries (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. WSF's LOS standards were defined in terms of a measure called boat-wait, which focused on congestion during a four-hour peak period. The understanding was that plans for future growth would be tied to maintaining LOS standards. Exceeding LOS standards indicated the need to add capacity, which would entail capital investment and additional operating costs.

In 2007, the Legislature enacted ESHB 2358 (Chapter 512, Laws of 2007), which directed WSF to re-establish its LOS measure and standards. Previous LOS standards were used to help identify when service needed to be added. The Legislature wanted to incorporate the concepts of demand management through operational and pricing strategies into the level-of-service discussion. It directed that the LOS measure and standards be designed to inform about two concerns: 1) when additional operational and pricing strategies might be needed to improve the customer experience or efficient utilization of existing assets; and 2) when additional service might be needed, but only if existing assets are being used efficiently.

Due to resource constraints, vessel maintenance and preservation activities may be limited so that vessel out-of-service time does not affect level of service. Additional costs may be incurred when vessels are redeployed to maintain level of service when regularly-assigned vessels are taken out of service for maintenance activity. Unplanned events that lead to vessels being out-of-service also result in additional operating costs and may affect planned maintenance and preservation work on other vessels.

WSF's current LOS standards are defined in terms of the daily percent of sailings at vehicle capacity at the route level for the months of August, May, and January. The table below displays two levels of LOS standards. The Level 1 LOS standards are used to assess whether adaptive management strategies, such as operational and pricing strategies, might be needed to spread demand and improve customer experience. Level 2 standards are used as an indicator that existing assets are being used efficiently and it may be time to consider additional service, which entails capital investment and increased operating costs.

As the table on the following page indicates, Level 1 and Level 2 LOS standards are tailored to the 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. Other specific considerations have also been incorporated:

Level 1 Standards (used to indicate whether there is a need for targeted strategies to spread demand and improve customer experience):

- The 25 percent 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 percent in May and to 35 percent in August to reflect greater seasonality in recreational ridership.

- All other routes have a 30 percent standard in August to reflect some increased seasonal ridership.
- Anacortes-Sidney currently has only two departures per day, suggesting a 50 percent Level 1 standard.

Level 2 Standards (used to indicate whether assets are being used efficiently and whether additional capital investment and operating expenditures may be needed):

- Routes with very pronounced peak trends have standards at 50 percent 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 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 percent in August to reflect additional seasonal ridership.
- Routes that have a mix of peak and commuter traffic have standards at 65 percent in January and May (75 percent 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 percent (85 percent in August) to maximize utilization across 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 (e.g., a 50 percent standard could indicate that sailings to Orcas are 100 percent full, while sailings to Friday Harbor have additional capacity).

Level-of-Service Standards

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%

**Washington State Ferries Fuel Cost Estimates
Estimates Based on June 2016 Motor Fuel Price Forecast
(as of June 16, 2016)**

TOTAL FUEL COST ESTIMATE

	FY 2018	FY 2019	2017-2019 Biennium (Projected)
2015-17 Fuel Approp in Section 221(4), Laws of 2016	41,658,000	36,648,000	\$78,306,000
Consumption Assumed in 2015-17 Budget	18,233,702	18,233,702	36,467,404
3rd Olympic Class Gallons - In Revenue Service (See DP ML-5W)	407,760	394,200	801,960
4rd Olympic Class gallons - In Revenue Service (See DP ML-5W)	-	(77,000)	(77,000)
4th Olympic Class gallons - One Time Only for SeaTrials/Training (See DP ML-XF)	-	134,400	134,400
Additional Gallons reduced/required over Budgeted Gallons	407,760	451,600	859,360
Total Gallons Required in 2017-19 Budget	18,641,462	18,685,302	37,326,764
<i>hedged</i>			
Total Gallons Hedged	9,072,000	6,048,000	15,120,000
Average price per gallon diesel hedged, inc-tax	\$1.73	\$1.82	\$1.77
Cost of hedged fuel (diesel), inc-tax	\$15,708,885	\$10,985,496	\$26,694,381
<i>Non-Hedged</i>			
Total Gallons Not Hedged	9,569,462	12,637,302	22,206,764
Average price per gallon, not hedged inc-tax	\$2.16	\$2.29	\$2.23
Cost of Non-Hedged Fuel , Including Fees	20,670,038	\$28,939,422	\$49,609,460
Incremental cost of B10 Pilot Test (See DP PL-N9)	508,878	\$0	\$508,878
1,685,584 Gallons assumed above at \$0.3019 per gallon of B10 over B5 price			
TOTAL Fuel Costs Including Fees	36,888,000	\$39,925,000	\$76,813,000
Fuel Hedging Consultant Cost	\$50,000	\$50,000	\$100,000
Total Cost of Fuel and Hedging Consultant	\$36,938,000	\$39,975,000	\$76,913,000
Average Cost per Gallon Including Fees and Hedging Consultant	\$1.98	\$2.14	\$2.06
Variance between Updated Cost Estimate and Appropriation	(\$4,720,000)	\$3,327,000	(\$1,393,000)

Note: Chapter 16, Laws of 2011 (2ESSB 5742) exempts WSF from having to pay sales tax on fuel purchased for ferries beginning in 2013-15.

(PPG from Figure 11 Near-term Adjusted Annual Fuel Price - Page 11 of June 2016 Transportation Revenue Forecast Summary (Volume I))

Washington State Ferries Fuel Cost Estimates
Estimates Based on June 2016 Motor Fuel Price Forecast
 (as of June 16, 2016)

ML-5W Ferry Fuel Costs

	FY 2018	FY 2019	2017-2019 Biennium (Projected)
2015-17 Fuel Approp in Section 221(4), Laws of 2016	41,658,000	36,648,000	\$78,306,000
Consumption Assumed in 2015-17 Budget	18,233,702	18,233,702	36,467,404
3rd Olympic Class Gallons - In Revenue Service	407,760	394,200	801,960
4rd Olympic Class gallons - In Revenue Service	-	(77,000)	(77,000)
Additional Gallons reduced/required over Budgeted Gallons	407,760	317,200	724,960
Total Gallons Required in 2017-19 Budget	18,641,462	18,550,902	37,192,364
<i>hedged</i>			
Total Gallons Hedged	9,072,000	6,048,000	15,120,000
Average price per-gallon diesel hedged, inc-tax	\$1.73	\$1.82	\$1.77
Cost of hedged fuel (diesel), including tax	\$15,708,885	\$10,985,496	\$26,694,381
<i>Non-Hedged</i>			
Total Gallons Not Hedged	9,569,462	12,502,902	22,072,364
Average price per-gallon, not hedged including tax	\$2.16	\$2.29	\$2.23
Cost of Non-Hedged Fuel , Including Fees	20,670,038	\$28,631,646	\$49,301,684
TOTAL Fuel Costs Including Fees	36,379,000	\$39,617,000	\$75,996,000
<i>Average Cost per-Gallon, Including Fees</i>	\$1.95	\$2.14	\$2.04
Average Incremental Cost per-Gallon, Including Fees	\$50,000	\$50,000	\$100,000
Total Cost of Fuel and Hedging Consultant	\$36,429,000	\$39,667,000	\$76,096,000
Average Cost per-Gallon Including Fees and Hedging Consultant	\$1.95	\$2.14	\$2.05
Variance between Updated Cost Estimate and Appropriation	(\$5,229,000)	\$3,019,000	(\$2,210,000)

Note: Chapter 16, Laws of 2011 (2ESSB 5742) exempts WSF from having to pay sales tax on fuel purchased for ferries beginning in 2013-15.
 (PPG from Figure 11 Near-term Adjusted Annual Fuel Price - Page 11 of June 2016 Transportation Revenue Forecast Summary (Volume I))

Washington State Ferries Fuel Cost Estimates
Estimates Based on June 2016 Motor Fuel Price Forecast
 (as of June 16, 2016)

ML-XF 4th 144-Car Vessel Ops
 ONE-TIME COSTS

	FY 2018	FY 2019	2017-2019 Biennium (Projected)
4th Olympic Class gallons-One Time Only for Sea Trials/Training	-	134,400	134,400
<i>Non-Hedged</i>			
Total Gallons Not Hedged	0	134,400	134,400
Average price per-gallon, not hedged including tax		\$2.29	\$2.29
Cost of Non-Hedged Fuel , Including Fees	0	\$307,776	\$307,776
TOTAL Fuel Costs Including Fees	0	\$308,000	\$308,000
<i>Average Cost per Gallon, Including Fees</i>		\$2.29	\$2.29
Average Incremental Cost per Gallon, Including Fees			

(PPG from Figure 11 Near-term Adjusted Annual Fuel Price - Page 11 of June 2016 Transportation Revenue Forecast Summary (Volume I))

Washington State Ferries Fuel Cost Estimates
Estimates Based on June 2016 Motor Fuel Price Forecast
 (as of June 16, 2016)

PL-N9 B10 Ferries Fuel Test
 ONE-TIME COSTS

	FY 2018	FY 2019	2017-2019 Biennium (Projected)
Incremental cost of B10 Pilot Test (See DP PL-N9) 1,685,584 Gallons assumed at \$0.3019 per-gallon of B10 over B5 price	508,878	\$0	\$508,878
TOTAL Fuel Costs Including Fees <i>Average Incremental Cost per Gallon, Including Fees</i>	509,000 \$0.30	\$0	\$509,000 \$0.30

Note: Chapter 16, Laws of 2011 (2ESSB 5742) exempts WSF from having to pay sales tax on fuel purchased for ferries beginning in 2013-15.

Ferry Preservation

Washington State Department of Transportation

Ferry Preservation

Life Cycle Cost Model

The life cycle cost model (LCCM) is the basis for estimating future terminal and vessel needs and developing the budget request for terminal and vessel preservation funding under RCW 47.60.345. These models are used to aid the department in assessing need and prioritizing requests, which are ultimately constrained by available resources.

The department is approaching the 2017-19 biennium with a backlog of preservation needs, in addition to new preservation needs coming due during the biennium. These preservation needs are greater than available funding and resources. To deal with this situation, the Legislature has directed the department to develop asset management tools for prioritizing and selecting which needs will be addressed by available funding.

The department has developed a risk assessment tool for vessel preservation that uses the likelihood of a vessel system failing and the likely consequences of system failure on ferry operations as the basis for prioritizing preservation of vessel systems.

The department is also applying the asset management approach for prioritizing terminal preservation spending. The life-cycle interval is based on the economic life of the asset. Terminals' LCCM is a risk-based economic model that identifies the optimal service life for aging assets based on balancing the trade-off between risk and preservation spending. The model quantifies risk from the perspective of riders and other stakeholders. For example, the cost of a failure that delays or cancels sailings includes riders' perceived costs, estimated based on standard WSDOT numbers. The model allows the program to prioritize preservation spending.

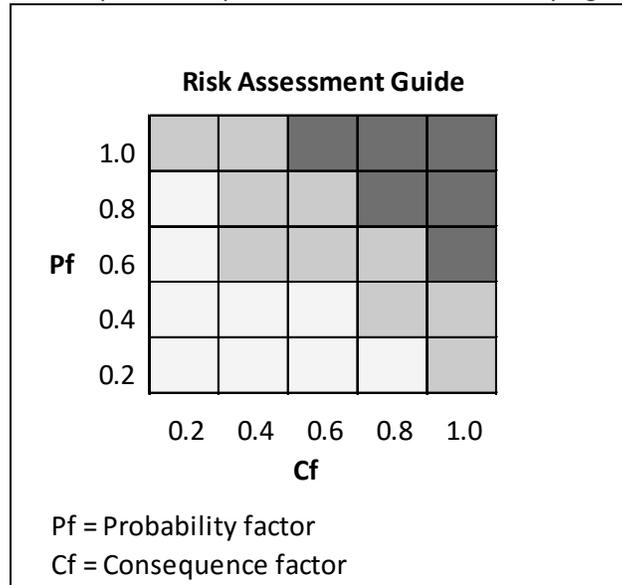
Vessels

The LCCM for vessels contains approximately 2,000 items spread among 22 vessels.

The Vessel LCCM is updated as preservation items are renewed and inspections are performed. Condition ratings for the equipment were refined in 2011 and the revised condition ratings were implemented fleet-wide in 2011-2012. The vessel condition ratings are based not just on the estimated remaining useful life, coupled with frequent inspections of each item or system, but also consider the consequence to the vessel's ability to provide service should the item or system fail. If a piece of equipment fails and the ferry has to be taken out of service, this would impact customers much more than if a piece of equipment fails but the ferry can continue to operate.

A condition rating matrix was developed using remaining useful life (the probability factor) and the consequence factor described above to determine an item or system's overall condition rating. Many ferry systems have very long lead times when it comes to replacement. For example, the propulsion control system for a ferry may require a four- to five-year period to design, order, build, and install the replacement system. If such an item or system were to fail earlier than expected, it could take a ferry out of service for an extended period of time and significantly disrupt service. For this reason, the consequence of failure has to be considered in any decision to replace items or systems on Washington

State Ferries' (WSF) vessels. The condition matrix is used to develop the budget for vessel preservation. Assets in the upper right (dark) portion of the matrix have a higher priority than those in the middle or lower left portions. This matrix is particularly useful in a situation of very tight budget constraints.



The matrix was constructed based on the following categories:

Impact on Vessel Availability Due to Machine/System Death - End of Useful Life

- 1.0 Catastrophic Unscheduled long term layup or commercial yard availability
- 0.8 Critical Significant operations schedule disruption
- 0.6 Moderate Moderate operations schedule disruption (1 day or more)
- 0.4 Marginal Minor operations schedule disruption (less than 24 hours)
- 0.2 Minimal Does not affect sailing

Probability of Machine/System Death - End of Useful Life in Three Years

- 1.0 Near certainty Beyond Life Cycle Interval *
- 0.8 Likely Apparent Remaining Useful Life >0% -9% of Life Cycle Interval *
- 0.6 Possible Apparent Remaining Useful Life = 10%-24% of Life Cycle Interval *
- 0.4 Unlikely Apparent Remaining Useful Life = 25%-49% of Life Cycle Interval *
- 0.2 Very unlikely Apparent Remaining Useful Life = >50% of Life Cycle Interval *

* Apparent Remaining Useful Life = Year next due for replacement minus the current year
Includes the current condition assessment

Terminals

The Terminal Engineering asset management model contains over 700 assets spread over the 20 terminals. Assets include buildings, over-water structures, pavement, mechanical systems, and electrical systems.

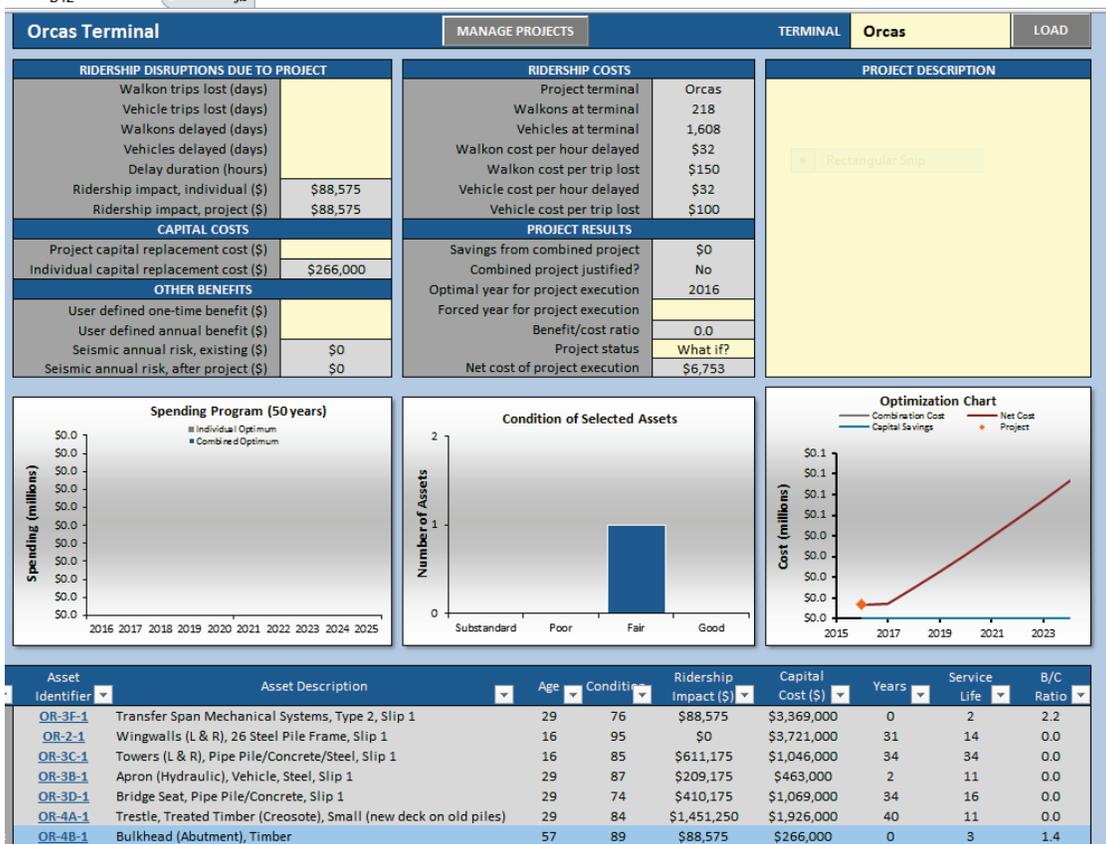
The WSF Terminal Engineering Asset Management Model is a tool to aid Terminal Engineering in prioritizing projects for preservation. This tool also provides a method to evaluate different methods of preservation, such as refurbishment, partial refurbishment, or replacement.

Inputs into the model include:

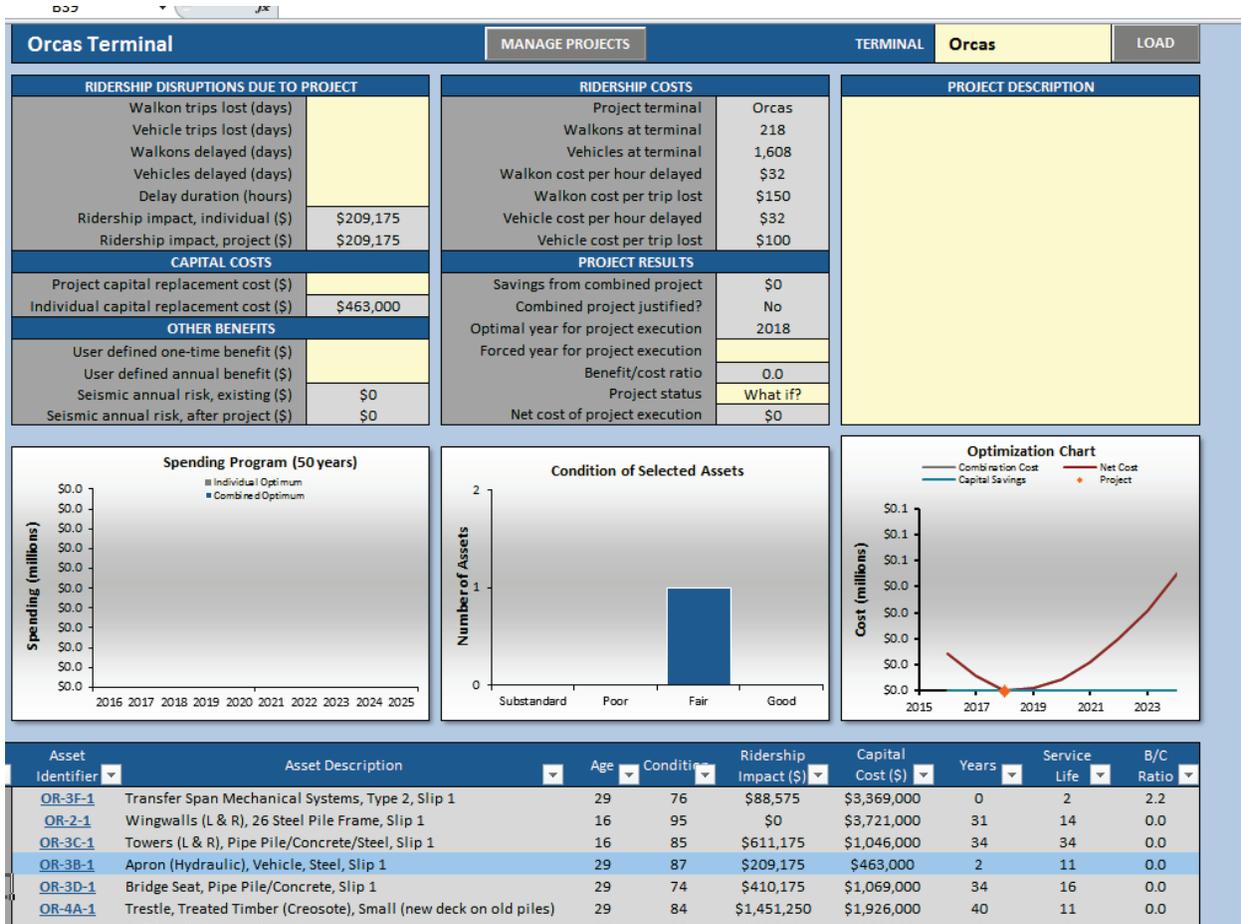
- Condition of an asset, based on inspection reports.
- Use of an asset. Some terminals have more traffic than other terminals; some assets within a terminal see more traffic than other assets within a terminal.
- The likelihood of failure of an asset. Risks due to such factors as storms or wind, likelihood of mechanical or electrical failure, vessel impact, scour, or seismic risk.
- Consequence of failure of an asset. This includes the impact to the traveling public of an asset/terminal being out of service, including the length of time an asset is out of service.
- Maintenance costs.
- Capital costs for replacement or refurbishment of an asset.

The output result from the model is the optimal replacement timing in each year for each asset, along with a benefit/cost calculation for assets that are at the end of useful life. The model is updated as assets are improved and condition ratings change.

Below is the evaluation of the Orcas timber bulkhead. The model indicates that this asset is 57 years old; its inspection condition rating is 89; failure consequences are \$88,575; the capital cost to replace is \$266,000; the year to replace this asset is now (2016); the LCCM year to replace is 2019; and the benefit/cost (B/C) ratio is 1.4.



As an additional example, the evaluation of the Orcas apron is shown below. The model indicates that this asset is 29 years old; its inspection condition rating is 87; failure consequences are \$209,175; the capital cost to replace is \$463,000; the year to replace this asset is now (2018); the LCCM year to replace is 2029. B/C ratio was not calculated since this asset is not at the end of its useful life.



Preservation Condition Assessment

WSDOT places high priority on maintaining the condition of its ferry terminals and vessels in order to provide safe, reliable and efficient ferry service. It describes the condition of its ferry terminals and vessels through the use of condition assessments. At the time of the last assessments, WSDOT reviewed the condition of 22 vessels, 19 ferry terminals and a maintenance facility.

- 89 percent of vessels systems are not past due for replacement; 11 percent are past due for replacement.
- 87 percent of terminal systems are in good or fair condition; 13 percent are in poor or very poor condition.

Vessels

At the time of the last assessment in June 2016, the vessels preservation inventory comprised 1,966 systems on 22 vessels.

In 2012, the department implemented a new approach for assessing the condition of vessels. Ferry condition ratings are based on the risk categorization described above that considers both the

probability and consequence of failure for each individual system. The results of the risk matrix assessment are translated to condition ratings, with each vessel system receiving one of three condition ratings. Items with a condition rating of **1** do not currently need replacement. Items with a condition rating of **2** are approaching the point at which preservation should occur in the current or ensuing biennium. Items with a condition rating of **3** are overdue for replacement. Condition ratings are generated by a model and either verified or modified by periodic physical inspections. This approach has helped prioritize spending in the face of a tight budgetary environment and an aging fleet.

There are eight vessel system categories:

- 1) communication, navigation, and lifesaving equipment;
- 2) piping replacement;
- 3) structural preservation (painting);
- 4) passenger and crew spaces;
- 5) security;
- 6) steel replacement;
- 7) major mechanical and electrical systems; and
- 8) propulsion.

The vessel condition assessment tables show the status of systems by condition category and type of system. As of June 2016, 89 percent of all vessel systems are in condition category 1 or 2 and not overdue for replacement. The remaining 11 percent of systems are in condition category 3 and are overdue for replacement. The number of systems in category 3 condition has increased from seven percent (2013) to nine percent (2014) to now 11 percent in 2016.

The department has established a target of not more than 10 percent of assets in the substandard condition rating (condition 3). As of June 2016, four vessel system categories have reached or exceeded this minimum threshold: 23 percent of piping systems; 18 percent of propulsion systems; 14 percent of the communication, navigation, and lifesaving equipment; and 10 percent of major mechanical and electrical systems are in category 3. All remaining vessel system categories are below the 10 percent threshold.

**Washington State Ferries
Condition Category Assessment of Ferry Vessel Systems**

Ferry Vessel System	# of Systems	Percent by Condition Category		
		1	2	3
Comm/Nav/Lifesaving Equipment	613	65%	21%	14%
Piping Replacement	150	37%	40%	23%
Structural Preservation (paint)	217	70%	28%	2%
Passenger and Crew Spaces	66	50%	48%	2%
Security	104	58%	42%	0%
Steel Replacement	173	64%	28%	8%
Major Mechanical/Electrical Systems	346	52%	38%	10%
Propulsion System	297	11%	71%	18%
Totals June 2016	1,966	52%	37%	11%

The department also assesses the condition of its assets by vessel. Of the 22 vessels expected to be active in the 2017-19 biennium, 15 have greater than 10 percent of systems in condition category 3. The remaining seven vessels have less than 10 percent of their systems in condition category 3. Please see the *Condition Category Assessment by Ferry Vessel Table*, on the following page, for vessel detail. In comparison, two years ago only eight vessels exceeded the 10 percent threshold.

The trend reflects consistent levels of spending that are lower than needed for the preservation program for the past ten years, which has implications for vessel reliability and the underscores the risk that one or more vessels will not reach the targeted 60-year service life. One challenge regarding vessel preservation is limited availability of dry-dock space in the Puget Sound region.

**Washington State Ferries
Condition Category Assessment by Ferry Vessel**

Ferry Vessel	# of Systems	Year Build/Rebuilt	Percent by Condition Category		
			1	2	3
Tacoma	99	1997	55%	34%	11%
Wenatchee	99	1998	47%	45%	7%
Puyallup	99	1999	54%	42%	4%
Spokane	92	1972	52%	38%	10%
Walla Walla	92	1973	41%	48%	11%
Hyak	92	1967	27%	43%	29%
Kaleetan	92	1967	42%	45%	13%
Yakima	91	1967	40%	47%	13%
Elwha (SOLAS)*	94	1967	31%	40%	29%
Tokitae	87	2014	84%	16%	0%
Samish	87	2015	85%	15%	0%
Issaquah	85	1979	45%	42%	13%
Kitsap	86	1980	52%	35%	13%
Kittitas	87	1980	41%	47%	11%
Cathlamet	87	1981	53%	33%	14%
Chelan (SOLAS)*	92	1981	53%	36%	11%
Sealth	86	1982	35%	48%	17%
Klahowya	83	1958	33%	49%	18%
Tillikum	83	1959	36%	42%	22%
Chetzemoka	83	2010	81%	17%	2%
Salish	85	2011	81%	19%	0%
Kennewick	85	2012	82%	15%	2%
Fleet Total	1,966	31-Year Avg	52%	37%	11%

*SOLAS: safety of life at sea.

Terminals

Terminal assets currently consist of 760 separate components, called assets. These assets are grouped into the following types: buildings, landing aids (wingwalls and dolphins), overhead loading systems, passenger-only ferry facilities, pavements, trestles and bulkheads, and vehicle transfer span systems.

The department is required by law to inspect and evaluate its assets for condition at least once every three years. The table below shows the current condition ratings as of February 2016, which includes 2015 inspection results. Eighty-seven percent of ferry terminal assets are currently rated in good or fair condition. Thirteen percent of ferry terminal assets are currently rated in poor or substandard condition. There are only a few assets awaiting inspection and rating. The ratings do not indicate that systems are safe or unsafe, but rather how closely their condition should be monitored prior to preservation.

WSF ferry terminal condition definitions:

- Good (90-100): The structure is performing as designed with all elements functioning as intended.
- Fair (70-89): All primary elements making up the structure are sound but there are some deficiencies in various elements.
- Poor (50-69): There is moderate deterioration of certain elements as defined under the fair condition.
- Very Poor (0-49): There is advanced deterioration throughout the structure that will require the use of the structure to be restricted.

The condition of terminal assets has decreased over the previous assessment. In the latest assessment, 12.8 percent of terminal systems are rated in poor or very poor condition, whereas 11.6 percent of systems were in these condition categories in the previous assessment.

**Washington State Ferries
Condition Assessment of Ferry Terminal Systems**

Type of Facility or System	# of Assets	Good or Fair (70-100)	Poor or Very poor (0-69)	Not Rated
Buildings	139	97.1%	1.5%	1.4%
Landing Aids	177	80.2%	19.8%	0%
Overhead Loading Systems	66	80.3%	19.7%	0%
Passenger Only Facilities	14	78.6%	21.4%	0%
Pavement	83	85.5%	14.5%	0%
Trestle & Bulkheads	71	85.9%	14.1%	0%
Vehicle Transfer Spans	210	89.5%	10.5%	0%
Totals/average 2015	760	87%	12.8%	0.2%

The department also assesses the condition of its assets by terminal. Eight terminals have a percentage of their systems rated as poor or very poor that is above the system-wide average of 12 percent. One other terminal, Point Defiance, while below the system-wide average, has more than ten percent of its systems in poor or very poor condition. Please see the table on the following page for terminal detail.

**Washington State Ferries
Condition Assessment by Ferry Terminal**

Ferry Terminal	# of Assets	Good or Fair (70-100)	Poor or Very poor (0-69)	Not Rated
Anacortes	82	81.7%	18.3%	0%
Bainbridge	52	96.2%	3.8%	0%
Bremerton	45	93.3%	6.7%	0%
Clinton	42	100%	0%	0%
Edmonds	36	97.2	2.8%	0%
Eagle Harbor	78	70.5%	28.2%	1.3%
Fauntleroy	24	87.5%	12.5%	0%
Friday Harbor	36	91.7%	8.3%	0%
Coupeville/Keystone	18	83.3%	16.7%	0%
Kingston	56	94.6%	5.4%	0%
Lopez	19	84.2%	15.8%	0%
Mukilteo	24	79.2%	20.8%	0%
Orcas	20	100%	0%	0%
Point Defiance	19	84.2%	15.8%	0%
Port Townsend	27	88.9%	11.1%	0%
Seattle	83	79.5%	19.3%	0%
Shaw	17	94.1%	5.9%	0%
Southworth	25	100%	0%	0%
Tahlequah	18	94.4%	5.6%	0%
Vashon	39	74.4%	25.6%	0%
Totals/average 2015	760	87.0%	12.8%	0.2%

Preservation Needs Assessment

As noted above, RCW 47.60.345 provides the statutory framework for estimating future terminal and vessel preservation needs. In addition to the requirement that the department maintain an LCCM, the statute requires assets in the model to be inspected and updated for asset condition at least once every three years. The standard estimated life is adjusted for asset condition when inspections are made.

Each terminal or vessel asset in the model has the following:

- A date that it was acquired or last preserved.
- A life cycle interval, adjusted for condition determined by inspection of the system at least once every three years.
- Estimated replacement cost in current dollars.

A key statistic used to describe the backlog of deferred preservation need is the preservation needs percentage (PNP) score. The statistic is defined as the percentage of the weighted value of terminal and vessel systems that are beyond their life cycles. The weighted value of each system is the constant dollar cost to preserve the system found in the LCCM. This measure is used to describe preservation need.

This section provides an estimate of future preservation needs in accordance with the statutory framework. Once the set of needs is identified, asset management tools are used to determine the subset of needs that will be addressed through the preservation backlog reduction plan, subject to funding constraints.

Vessels

There are ten vessels that have more than 40 percent of the value of their systems past their life cycle at the end of the 2017-19 biennium. They are in the Jumbo Mark II, Jumbo, Super and Issaquah vessel classes.

The department has 22 active vessels, with two additional vessels under construction as of September 2016. The table below provides preservation needs information for these vessels. Vessels are ranked in accordance with preservation needs through the 2017-19 biennium. Jumbo Mark II, Super, and Jumbo Class vessels lead the way in preservation needs.

With respect to the 2017-19 biennium:

- The top seven vessels in order of needs are the Puyallup, Hyak, Wenatchee, Elwha, Kaleetan, and Yakima.
- These seven vessels account for 58 percent of vessel needs at the end of the 2017-19 biennium.

With respect to the end of the 2017-27 ten-year period:

- The top seven vessels in order of needs are the Elwha, Hyak, Wenatchee, Puyallup, Tacoma, Kaleetan, and Yakima.
- These seven vessels account for 50 percent of vessel needs at the end of the 2025-27 biennium.

Individual vessel preservation needs, in 2016 dollars, are shown in the table below:

Preservation Needs By Vessel
Based on the Ferries Life Cycle Cost Model, Sorted by Needs through 2017-2019
In 2016 Constant Millions of Dollars

Vessels	Backlog						Cum Thru	Cum Thru	% Thru	% Thru
	Pre-17	17-19	19-21	21-23	23-25	25-27	17-19	25-27	17-19	25-27
Puyallup	10.3	28.6	1.1	0.7	0.0	6.6	38.9	47.4	10%	7%
Hyak	37.2	0.0	1.3	3.7	3.6	3.5	37.3	49.4	10%	8%
Wenatchee	24.1	12.4	1.0	4.3	0.8	6.6	36.5	49.2	10%	8%
Elwha	31.3	0.9	14.0	0.1	1.5	7.0	32.2	54.8	8%	9%
Kaleetan	20.6	6.2	2.1	3.0	4.8	2.5	26.8	39.2	7%	6%
Walla Walla	15.1	9.6	0.4	0.9	8.2	2.7	24.8	37.0	7%	6%
Yakima	20.5	2.5	8.0	1.1	5.1	0.8	23.1	37.9	6%	6%
Kittitas	16.5	2.9	3.1	3.5	2.2	2.1	19.4	30.2	5%	5%
Sealth	8.8	8.6	1.0	6.0	3.9	3.9	17.4	32.3	5%	5%
Tacoma	2.5	13.8	7.6	12.4	1.3	5.9	16.3	43.4	4%	7%
Chelan	6.5	9.6	6.1	2.0	2.9	1.8	16.1	28.9	4%	5%
Spokane	12.7	2.7	1.2	4.6	11.2	1.0	15.4	33.3	4%	5%
Klahowya	15.2	0.0	0.0	0.0	0.0	0.0	15.2	15.2	4%	2%
Kitsap	13.1	0.6	4.5	6.1	0.7	1.8	13.6	26.8	4%	4%
Tillikum	10.5	3.0	0.0	0.0	0.0	0.0	13.5	13.5	4%	2%
Issaquah	11.4	1.4	0.4	11.4	1.7	4.0	12.8	30.3	3%	5%
Cathlamet	10.2	1.7	4.0	6.9	2.3	2.4	11.9	27.4	3%	4%
Salish	1.4	2.4	4.4	0.2	1.4	1.0	3.7	10.9	1%	2%
Chetzemoka	0.1	2.5	4.4	0.2	1.1	0.0	2.6	8.4	1%	1%
Kennewick	1.4	0.1	2.3	4.4	1.6	1.0	1.4	10.8	0%	2%
Tokitae	0.0	0.3	0.1	3.6	2.2	0.2	0.3	6.4	0%	1%
Samish	0.0	0.0	0.3	3.7	2.2	0.2	0.0	6.4	0%	1%
All Vessels	269.3	109.8	67.3	79.0	58.8	54.9	379.1	639.1	100%	100%

The projected vessel PNP scores for individual vessels range from 69 percent to 0 percent at the end of the 2017-19 biennium, with higher scores representing greater preservation needs. The table below provides PNP score information.

With respect to the 2017-19 biennium:

- Ten vessels, including the Hyak, Puyallup, Elwha, Wenatchee, Kittitas, Kaleetan, Sealth, Walla Walla, Yakima, and Chelan have projected 2017-19 PNP scores greater than 40 percent.

As preservation needs accumulate each biennium, PNP scores rise. They range from 85 percent to 18 percent at the end of the 2025-27 biennium.

- Fifteen vessels have projected 2025-27 PNP scores greater than 40 percent. They include the Elwha, Hyak, Sealth, Kittitas, Issaquah, Chelan, Cathlamet, Kitsap, Kaleetan, Yakima, Walla Walla, Tacoma, Wenatchee, Puyallup and Spokane.

Vessel Preservation Needs Percentages (PNPs) Percent of the Value of Ferry Systems Beyond their Life Cycles By Vessel, Based on the Ferries LCCM Sorted by PNP at the End of the 2017-19 Biennium						
Vessel	End of 2015-17	End of 2017-19	End of 2019-21	End of 2021-23	End of 2023-25	End of 2025-27
Hyak	69%	69%	71%	78%	84%	85%
Puyallup	16%	59%	61%	62%	62%	62%
Elwha	56%	58%	83%	83%	86%	94%
Wenatchee	37%	55%	57%	63%	64%	65%
Kittitas	44%	52%	60%	70%	76%	79%
Kaleetan	39%	51%	55%	61%	70%	70%
Sealth	24%	47%	50%	66%	77%	82%
Walla Walla	27%	44%	45%	47%	61%	66%
Yakima	39%	44%	59%	61%	70%	70%
Chelan	17%	41%	57%	62%	70%	74%
Kitsap	35%	37%	49%	65%	67%	72%
Issaquah	31%	35%	36%	66%	71%	76%
Cathlamet	28%	32%	43%	62%	68%	73%
Tillikum	22%	28%				
Spokane	23%	28%	30%	38%	58%	60%
Tacoma	4%	25%	36%	55%	57%	66%
Salish	4%	11%	23%	24%	24%	27%
Chetzemoka	0%	8%	21%	21%	24%	24%
Kennewick	4%	4%	11%	23%	24%	27%
Tokitae	0%	1%	1%	12%	18%	18%
Samish	0%	0%	1%	12%	18%	18%
Klahowya	32%					
Vessels	26%	37%	45%	54%	60%	63%

Terminals

Terminals has been working to add functionality to the LCCM, in conformance with MAP-21, to quantify risk and use it to optimize the service life of its assets. The transition to this approach is currently underway; the outputs of this analysis are the basis for the preservation projects identified by the program. The new approach has resulted in a deferral of many of the assets coming due, since their probability of failure and consequences of failure do not warrant full replacement. Buildings are no longer included in the preservation model, as buildings themselves do not fail and, therefore, do not warrant preservation spending for replacement. Consequently, the previous backlog has been reduced, and the current project list is focused strategically on the assets posing the highest risk to the system.

In accordance with the Governor's statewide performance management program, Results Washington, the Terminals Action Plan is to control the percent of ferry terminal systems that are past due for replacement from increasing over six percent by 2020.

Six percent of the value of Terminals system assets will be beyond their optimal life cycle by the end of the biennium. According to the proposed plan, this percentage will rise to a peak of 8.6 percent in 2022, just before the Colman Dock project is completed in 2023. After 2023, the percentage drops below five percent and continues to fall through the duration of the planning horizon. (Note that these percentages do not include the results of the seismic risk assessment, which is ongoing. Ferries anticipates that the backlog will increase once this work is completed.)

The Seattle Terminal has 16 percent of its operational assets at or near end of life, based on the risk assessment. A large preservation project is planned to address these assets.

The department operates 20 ferry terminals and the Eagle Harbor maintenance facility. The table below provides details about the preservation needs of individual terminals (excluding Sidney, B.C.) and the Eagle Harbor maintenance facility. Terminals are ranked in accordance with preservation needs through the 2017-19 biennium.

With respect to the 2017-2019 biennium:

- Terminal backlog at the beginning the biennium is six percent.
- Terminal preservation needs are greatest at the Seattle Terminal, which accounts for \$35.4 million, or 85 percent, of terminal preservation needs accumulating by the end of the 2017-19 biennium.
- The Anacortes and Bainbridge terminals each have preservation needs between \$11 million and \$10 million, and account for another \$21 million, or 25 percent, of preservation needs accumulating by the end of the 2015-17 biennium.

**Washington State Ferries Program
Preservation Needs by Terminal
Based on the Risk-Based LCCM
Constant Dollars 2015, in Millions, Construction Only**

	Total operational assets*	At EOL pre- 2017-19	At EOL 2017-19	At EOL 2019-21	At EOL 2021-23	At EOL 2023-25	At EOL 2025-27	Cum. through 25-27
Seattle	270.8	33.4	2.0	6.4	3.1	0.0	0.0	44.8
Anacortes	89.9	7.8	0.0	0.0	0.1	0.0	3.5	11.5
Bainbridge	90.4	6.4	1.1	3.4	0.0	0.0	0.0	10.8
Orcas	25.1	4.7	0.5	0.0	0.0	0.0	0.0	5.2
Bremerton	57.8	3.9	0.0	0.0	2.1	0.5	3.4	9.9
Mukilteo	24.9	3.9	0.0	2.1	1.1	0.0	0.0	7.1
Coupeville	19.1	1.8	0.0	0.0	0.0	0.0	0.0	2.8
Kingston	93.7	1.3	0.0	0.0	5.3	0.0	0.5	7.1
Edmonds	58.8	1.1	0.0	1.0	3.4	0.0	1.2	6.7
Port Townsend	57.7	1.1	1.0	0.5	0.0	0.0	0.0	2.5
Lopez	22.9	1.1	0.5	0.0	0.0	0.0	3.4	4.9
Vashon	71.9	0.3	0.0	0.0	0.0	0.0	2.1	2.4
Fauntleroy	45.0	0.3	1.1	0.0	0.0	0.0	0.0	1.4
Clinton	97.1	0.0	0.0	0.0	1.1	0.0	1.1	2.1
Eagle Harbor	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Friday Harbor	36.8	0.0	0.7	0.0	0.0	0.0	0.0	0.7
Point Defiance	17.7	0.0	1.8	0.0	0.0	1.1	0.0	2.9
Shaw	20.9	0.0	0.0	0.0	0.7	0.0	0.0	0.7
Southworth	35.5	0.0	0.0	0.0	1.1	0.0	0.0	1.1
Tahlequah	24.9	0.0	0.0	0.0	0.0	1.1	4.4	5.4
All terminals	1,167.5	67.0	8.6	13.4	17.9	2.6	19.6	129.1

* Operational assets do not include buildings.

With respect to the end of the 2017-27 ten-year period:

- The terminal backlog increases to 11 percent through the ten-year period.
- Terminal preservation needs are greatest at the Seattle Terminal, which accounts for 53 percent of system-wide terminal preservation needs accumulating by the end of the ten-year period.
- The four terminals at Anacortes, Bainbridge, Bremerton, and Kingston account for 44 percent of the system-wide preservation needs accumulating by the end of the ten-year period.
- 29 percent of the Mukilteo Terminal requires preservation within the 10-year period.

**Washington State Ferries Program
Preservation Needs by Terminal
Based on the Risk based LCCM
Preservations Needs Percentage**

	Back-log	At EOL 2017- 19	10-year EOL*
Orcas	19%	21%	21%
Mukilteo	16%	16%	29%
Seattle	12%	13%	17%
Keystone	9%	10%	9%
Anacortes	9%	9%	13%
Bainbridge	7%	8%	12%
Bremerton	7%	7%	18%
Lopez	5%	7%	21%
Port Townsend	2%	4%	4%
Edmonds	2%	2%	11%
Kingston	1%	1%	8%
Fauntleroy	1%	3%	3%
Vashon	0%	0%	3%
Clinton	0%	0%	2%
Eagle Harbor	0%	0%	0%
Friday Harbor	0%	2%	2%
Point Defiance	0%	10%	16%
Shaw	0%	0%	4%
Southworth	0%	0%	3%
Tahlequah	0%	0%	22%
Terminals	6.0%	6.5%	11%

Backlog Reduction Plan

The PNP score, described above, is used for backlog reduction analysis. Ferry assets start the 2017-19 biennium with a PNP score, indicating the percentage value of systems that are beyond their life cycles. The preservation need increases as additional systems reach the end of their life cycles during the biennium. If the preservation investment plan reduces the preservation need by more than the biennial increase in need, there is a reduction in the backlog of preservation need existing at the beginning of the biennium.

Vessels

Vessel preservation need, expressed in PNP terms, will reach 26 percent by the end of the 2015-17 biennium (beginning of the 2017-19 biennium). The preservation work plan investment in 2017-19 is less than the new requirements for the same period, resulting in a net increase of four percent in preservation need during the biennium. In other words, the level of preservation investment is insufficient to keep pace with the accrued preservation backlog, resulting an increased backlog at the end of the biennium.

The results of the planned work, expressed as PNP, are shown below:

Impact of Planned 2017-19 Work on Preservation Needs Percentages (PNPs) Percent of Value of Ferry Systems Beyond Life Cycle Results of Workplan by Vessel Based on Ferries LCCM Sorted by PNP at the End of the 2017-19 Biennium		
Vessel	End of 2015-17	End of 2017-19 with Planned Work
Hyak	69%	57%
Puyallup	16%	53%
Wenatchee	36%	50%
Sealth	24%	46%
Walla Walla	27%	44%
Kittitas	44%	41%
Elwha	56%	37%
Kaleetan	39%	35%
Yakima	39%	35%
Total	26%	30%
Chelan	17%	28%
Tillikum	22%	28%
Issaquah	31%	26%
Cathlamet	28%	25%
Kitsap	35%	25%
Spokane	23%	16%
Tacoma	4%	12%
Chetzemoka	0%	6%
Salish	4%	5%
Kennewick	4%	4%
Tokitae	0%	1%
Samish	0%	0%
Klahowya	32%	
Vessels	26%	30%

Terminals

Terminal preservation need, expressed in PNP terms, will reach six percent by the end of the 2015-17 biennium. (Please note: The PNP does not include building assets. Nor does it include the effects of the ongoing seismic risk assessment, which will increase the PNP. The asset management model focuses on operational assets whose failure affects ridership.) Planned terminal preservation investments are projected to reduce the 2017-19 end-of biennium terminal preservation need to a PNP score of 5.6 percent. Due to the planned projects, and the phasing of the Seattle Ferry Terminal Project, the resulting PNP at the end of 2017-19 is within the target.

Impact of Planned 2017-19 Work on Preservation Needs Percentages (PNPs) Percent of Value of Ferry Terminals Beyond Life Cycle Results of Workplan by Terminal Sorted by PNP at the End of the 2017-19 Biennium		
Terminal	End of 2015-17	End of 2017-19 with Planned Work
Orcas	19%	21%
Mukilteo	16%	16%
Seattle	12%	9%
Keystone	9%	9%
Anacortes	9%	9%
Bainbridge	7%	8%
Bremerton	7%	7%
Lopez	5%	7%
Port Townsend	2%	4%
Edmonds	2%	2%
Kingston	1%	1%
Fauntleroy	1%	3%
Vashon	0%	0%
Clinton	0%	0%
Eagle Harbor	0%	0%
Friday Harbor	0%	2%
Point Defiance	0%	10%
Shaw	0%	0%
Southworth	0%	0%
Tahlequah	0%	0%
Terminals	6.0%	5.6%

Major Vessel Preservation – Rebuilding the Boat

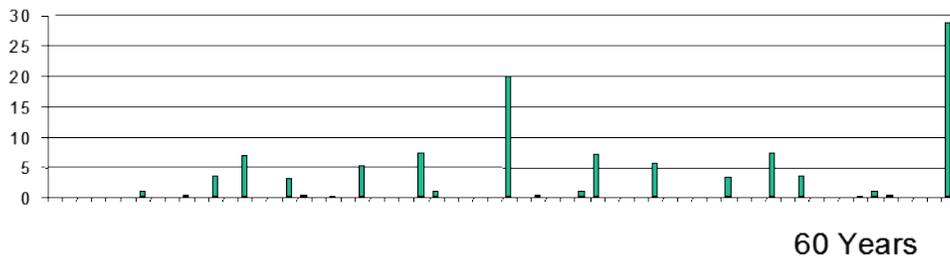
For planning purposes, WSF auto-passenger ferries are assumed to require a major rebuild 30 years after construction, and retirement and replacement 60 years after construction.

The actual decision to rebuild or retire and replace a ferry is based on economic analysis using life cycle cost methodology, availability of funding, and other factors such as the service plan.

Rebuild or Retirement and Replacement Planning Assumptions

The rebuild or retirement and replacement dates of a WSF auto-passenger ferry are based on 30-year increments. Vessel preservation requirements are highest at the 30- and 60-year points in the vessel’s life. Replacement of a large number of systems is required every 30 years due to the convergence of preservation needs of systems with five, 10, 12, 15, 20 and 30-year life cycles. The figure below illustrates the cost of life cycle preservation requirements in constant dollars projected for the MV Wenatchee over a 60-year period. The highest preservation requirements will occur 30 and 60 years after construction.

M.V. Wenatchee Life Cycle Preservation Costs
 FYs 1999-2059, Millions of Dollars of 1997 Purchasing Power



Historic and Current Rebuild Practice

Ferries’ historic practice has been to rebuild a vessel after 30 years, subject to availability of funding. However, in recent years, the mid-life rebuild has been replaced by a more continuous preservation approach. Ferries expects this trend to continue for several reasons:

- 1) the shortage of vessel capacity precludes taking vessels out of service for extended periods of time, particularly during peak season;
- 2) a shortage of drydock capacity in Puget Sound makes it unwise to tie up a drydock for lengthy rebuild projects at the expense of routine preservation and emergency repairs for the remainder of the fleet;
- 3) a continuous approach better distributes preservation funding and staffing requirements across biennia;
- 4) a continuous approach distributes the cost, schedule, and technical risk associated with this work over a greater period; and
- 5) accelerating rates of equipment obsolescence and a dynamic regulatory environment in the maritime industry have shortened the actual lifecycle from initial estimates.

Retirement and Replacement Assumption

The Federal Transit Administration (FTA) has adopted an expected life for ferries of 60 years. Both WSF and Alaskan Marine Highways (AMH) agree. These two ferry systems believe that a vessel should be retired and replaced around 60 years after construction because renovation is likely to be economically impractical and the investment is likely to be made in a vessel whose characteristics are no longer suited for service delivery demands. Factors that favor retirement and replacement of a vessel rather than a second rebuild include:

- **Systems Needing Replacement.** As the chart on the preceding page illustrates, the value of systems needing renovation or replacement is greatest at the 60-year point in a vessel's life. These costs are a dominant consideration in determining whether to do a second rebuild or to retire and replace the vessel.
- **Deferred Preservation.** Consistently spending less on the preservation program than required will result in deferred preservation and a high likelihood that vessels will not reach their 60-year targets.
- **The Economic Impact of Technological Change.** Technological change makes extension of a vessel's life beyond 60 years very expensive. At the 60-year mark, earlier technology may no longer be available or supported by the manufacturer. Replacement of worn out systems requires installation of new types of systems. The new systems may require early replacement of other systems that must be compatible with the new technology. The result is rapid escalation of the costs to keep the vessel in sound operating condition.
- **The Economic Impact of Regulatory Requirements.** Over time, the basic characteristics of a vessel may not meet emerging regulatory standards. For example, a vessel may not meet a U.S. Coast Guard (USCG) requirement for two-compartment subdivision. The vessel might have a 1950's design auto deck with car lanes too narrow for disabled persons to exit their vehicles. Or a vessel may be close to its stability limits and cannot accommodate regulatory improvements that add additional weight.
- **A major impediment to investments in older vessels is the grandfather clause.** The USCG typically requires owners to meet the regulations in existence when the vessel was built, with some exceptions for critical systems; i.e., lifesaving or structural fire protection. If the USCG determines that a vessel is undergoing a major conversion, such as an increase in capacity or significant life extension, the vessel will have to meet the regulations in effect at the time of conversion. As a result, investments to extend the life of a vessel or improve its service capabilities often become even more expensive because grandfathered requirements must also be addressed.
- **Hull Integrity.** The hull is an important limiting factor for a vessel's life expectancy. The hull provides the platform for all other systems and structures. It is more vulnerable to salt-water corrosion than any other part of the vessel. At some point, the cost of maintaining the seaworthiness of the hull becomes economically impractical.
- **Lack of Resale Value.** Resale value does not significantly impact the economic calculus for determining when to retire and replace a WSF ferry. WSF ferries are not suitable for use on most other international or U.S. ferry routes. As a result, their resale value is minimal regardless of when they are sold during their expected life spans.
- **Vessel Characteristics vs. Service Delivery Requirements.** The basic characteristics of a vessel may not be adequate to deal with service delivery requirements emerging in the future. Operational characteristics of a vessel that should be considered in evaluating its ability to provide service include vehicle capacity, passenger capacity, speed, loading and unloading time, draft, and traffic characteristics.

Vessel Rebuild or Retirement and Replacement Plan:

The WSF plan for major rebuilding or retirement and replacement of vessels is summarized in the following two tables.

Table 1 provides the following information about vessels currently in existence or approved for new construction:

- A list of vessels, grouped by vessel class.
- The passenger- and vehicle-carrying capacity of each vessel.
- The year the vessel was built.
- The age of the vessel calculated from 2016.
- The year the vessel was rebuilt (eight vessels still in service have been rebuilt).
- The estimated time for mid-life renovation (rebuilding), expressed as a period that brackets the 30-year point in the vessel's life.
- The estimated time for retirement and replacement, expressed as a period that brackets the 60-year point in the vessel's life,
- Comments regarding exceptions to the practice of rebuilding the vessel, such as for the Issaquah Class ferries; and referral to Table 2 and Figure 3 for the cost and timing of vessel rebuilding or retirement and replacement in WSDOT's proposed Capital Preservation and Improvement Program (CIPP), which covers the 2017-33 biennial period.

**Table 1
Vessel Rebuild or Retirement and Replacement Plan
(Existing Vessels and Approved New Construction)**

Vessel Class	Vessel	Capacity		Year Built	Age as of 2016	Year Rebuilt	Estimated Mid-life Renovation Range	Estimated Retirement- Replacement Range	Comments
		Passengers	Vehicle Spaces						
Jumbo Mark II	Puyallup	2,500	202	1999	17	—	2026 - 2032	2056 - 2062	See Table 2 for estimated rebuild costs.
	Wenatchee	2,500	202	1998	18	—	2025 - 2031	2055 - 2061	See Table 2 for estimated rebuild costs.
	Tacoma	2,500	202	1997	19	—	2024 - 2030	2054 - 2060	See Table 2 for estimated rebuild costs.
Jumbo Mark I	Spokane	2,000	188	1972	44	2004		2029 - 2035	
	Walla Walla	2,000	188	1973	43	2003		2030 - 2036	
Super	Elwha	1,221 (SOLAS)	144	1967	49	1991		2021 - 2027	See Figure 3 for replacement vessel costs.
	Hyak	2,000	144	1967	49	—	2012 - 2018	2024 - 2030	See Table 2 for estimated rebuild costs. See Figure 3 for replacement vessel costs.
	Kaleetan	2,000	144	1967	49	1999		2022 - 2028	See Figure 3 for replacement vessel costs.
	Yakima	2,000	144	1967	49	2000		2023 - 2029	See Figure 3 for replacement vessel costs.
Issaquah 130	Cathlamet	1,200	124 NOTE: added upper car deck in 1993	1981	35	—	LNG Conversion Proposed	2038 - 2044	Rebuild of this vessel is incremental. Estimated costs are shown in Table 2.
	Chelan	1,090 (SOLAS)	124 NOTE: added upper car deck in 1999	1981	35	—	LNG Conversion Proposed	2038 - 2044	Rebuild of this vessel is incremental. Estimated costs are shown in Table 2.
	Issaquah	1,200	124 NOTE: added upper car deck in 1989	1979	37	—	LNG Conversion Proposed	2036 - 2042	Rebuild of this vessel is incremental. Estimated costs are shown in Table 2.
	Kitsap	1,200	124 NOTE: added upper car deck in 1990	1980	36	—	LNG Conversion Proposed	2037 - 2043	Rebuild of this vessel is incremental. Estimated costs are shown in Table 2.
	Kittitas	1,200	124 NOTE: added upper car deck in 1991	1980	36	—	LNG Conversion Proposed	2037 - 2043	Rebuild of this vessel is incremental. Estimated costs are shown in Table 2.
Issaquah 100	Sealth	1,200	90	1982	34	—	LNG Conversion Proposed	2039 - 2045	Rebuild of this vessel is incremental. Estimated costs are shown in Table 2.
Evergreen State	Evergreen State	983	87	1954	62	1988		2016 #	This vessel has been retired.
	Klahowya	800	87	1958	58	1995		2012 - 2018	See Figure 3 for replacement vessel costs.
	Tillikum	1,200	87	1959	57	1994		2014 - 2020	See Figure 3 for replacement vessel costs.
Kwa-di Tabil	Chetzemoka	750	64	2010	6	—	2037 - 2043	2067 - 2073	
	Salish	750	64	2011	5	—	2038 - 2044	2068 - 2074	
	Kennewick	750	64	2012	4	—	2039 - 2045	2069 - 2075	
Misc.	Rhodo-dendron	546	48	1947	69	1991		2016	This vessel has been retired.
	Hiyu	200	34	1967	49	—		2016	This vessel has been retired.
Olympic	Tokitae	1,500	144	2014	2	—	2041 - 2047	2071 - 2077	
	Samish	1,500	144	2015	1	—	2042 - 2048	2072 - 2078	
	Chimacum	1,500	144	2016	0	—	2044 - 2050	2074 - 2080	
	Suquamish	1,500	144	2018	0	—	2046 - 2052	2076 - 2082	

Table 2 displays the proposed 2017 CIPP for vessel preservation:

- The MVs Puyallup, Tacoma and Wenatchee are scheduled for major rebuilds during the 2013-31 biennial time period.
- The MVs Spokane, Walla Walla, Kaleetan, Yakima Elwha, Evergreen State, Klahowya and Tillikum have already been rebuilt.
- The six Issaquah Class vessels are being preserved using an incremental approach rather than major rebuild.

Table 2
WSF Construction Program W
Vessel Preservation Including Major Rebuilds
2013-31 Biennia Planning Period, In Dollars
Based on the 2017-19 Budget Request and Project List

Legend: Major "Rebuilds" Scheduled in the 2013-2031 Biennial Planning Period
 Previously "Rebuilds"
 Incremental Preservation Rather than Major "Rebuild"

Vessel	Prior	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	27 - 29	29 - 31	prior - 31
MV Puyallup	4,189,000	1,530,000	2,133,000	5,183,000	3,410,000	2,358,000	361,000	5,578,000	50,808,000	75,550,000
MV Wenatchee	2,509,000	4,228,000	1,492,000	14,422,000	2,891,000	994,000	3,886,000	10,242,000	44,898,000	85,562,000
MV Tacoma	4,262,000	10,883,000	13,297,000	4,308,000	712,000	66,000	4,371,000	67,063,000	15,195,000	120,157,000
MV Spokane	222,000	13,709,000	5,210,000	4,135,000	1,785,000	20,515,000	6,234,000	2,929,000	4,141,000	58,880,000
MV Walla Walla	3,343,000	2,884,000	1,760,000	4,472,000	10,778,000	10,531,000	5,505,000	2,583,000	2,855,000	44,711,000
MV Hyak	281,000	3,522,000	1,463,000	0	0	0	0	0	0	5,266,000
MV Kaleetan	2,677,000	8,184,000	4,022,000	1,524,000	8,743,000	6,213,000	4,831,000	1,277,000	0	37,471,000
MV Yakima	3,450,000	2,498,000	2,635,000	4,966,000	7,669,000	23,074,000	5,184,000	1,331,000	0	50,807,000
MV Elwha	2,556,000	2,450,000	3,423,000	1,357,000	722,000	0	0	0	0	10,508,000
MV Issaquah	160,000	2,871,000	2,648,000	6,722,000	1,912,000	4,866,000	1,785,000	6,514,000	22,495,000	49,973,000
MV Kittitas	228,000	504,000	5,684,000	2,434,000	5,061,000	20,081,000	4,600,000	1,678,000	2,249,000	42,519,000
MV Kitsap	7,369,000	143,000	4,459,000	4,980,000	2,662,000	10,698,000	3,038,000	3,653,000	1,128,000	38,130,000
MV Cathlamet	1,935,000	815,000	4,828,000	1,678,000	8,743,000	3,953,000	2,876,000	11,474,000	646,000	36,948,000
MV Chelan	4,871,000	1,918,000	3,357,000	2,856,000	5,141,000	9,554,000	18,108,000	2,250,000	3,123,000	51,178,000
MV Sealh	204,000	11,588,000	1,296,000	1,669,000	6,894,000	6,161,000	13,866,000	2,671,000	5,612,000	49,961,000
MV Evergreen State	214,000	57,000	0	0	0	0	0	0	0	271,000
MV Klahowya	557,000	244,000	51,000	0	0	0	0	0	0	852,000
MV Tillikum	531,000	465,000	1,413,000	0	0	0	0	0	0	2,409,000
MV Hiyu	15,000	0	0	0	0	0	0	0	0	15,000
MV Tokitae	0	50,000	25,000	125,000	5,799,000	1,516,000	1,520,000	3,260,000	13,650,000	25,945,000
MV Samish	0	50,000	50,000	724,000	4,608,000	7,784,000	2,226,000	1,825,000	6,614,000	23,881,000
MV Chimacum	0	0	1,000	0	1,447,000	227,000	9,432,000	6,899,000	863,000	18,869,000
MV Chetzemoka	133,000	86,000	2,202,000	1,181,000	1,792,000	82,000	4,882,000	3,502,000	31,755,000	45,615,000
MV Salish	601,000	216,000	3,163,000	501,000	5,076,000	2,430,000	966,000	4,112,000	0	17,065,000
MV Kennewick	742,000	181,000	465,000	2,937,000	2,245,000	2,594,000	156,000	1,214,000	3,926,000	14,460,000
Total Preservation (Inflated Dollars)	41,049,000	69,076,000	65,077,000	66,174,000	88,090,000	133,697,000	93,827,000	140,055,000	209,958,000	888,134,000
Shipyard Implicit Price Deflator	0.929	1.000	1.076	1.159	1.247	1.342	1.445	1.555	1.674	
Total Preservation (15-17 Dollars)	44,185,400	69,076,000	60,457,657	57,112,999	70,631,427	99,590,249	64,930,208	90,041,220	125,400,414	681,425,574

Notes:

- 1 The MVs Evergreen State and Hiyu were retired in the 2015-17 biennium.
2. MV Klahowya was scheduled for retirement in June 2015 but was retained as a standby vessel through June 2017.
3. MV Tillikum is scheduled for retirement in June 2017, but WSF will seek funding to retain it as a standby vessel through June 2021.
4. MV Hyak is scheduled for retirement in June 2018 with the delivery of Suquamish; data for MV Suquamish is not included in this table.
5. No funding has been identified to replace the three remaining Super Class Vessels

Preservation Budget Overview

A summary of the 2017-19 WSF preservation budget request and the ten-year plan:

- Proposed preservation spending amounts to \$205 million, or 56 percent of the total 2017-19 biennium WSF capital budget request, and \$1.16 billion or 48 percent of the total 2017-27 ten-year plan.
- \$139 million, or 68 percent of proposed WSF preservation spending, is for terminals and \$65 million, or 32 percent, is for vessels in the 2017-19 biennium preservation budget request. This difference between terminals and vessels closes some over the 2017-27 ten-year plan. Proposed terminal preservation amounts to \$721 million, or 62 percent, and vessel preservation amounts to \$437 million, or 38 percent.

- The Seattle Terminal receives \$114 million, or 82 percent, of the proposed terminal preservation funding in the 2017-19 terminal preservation budget request and \$329 million, or 46 percent, of proposed terminal preservation funding over the 2017-27 ten-year period.
- The Bainbridge Island terminal, system-wide projects, and the Fauntleroy terminal – combined – are budgeted for \$21 million, or 15 percent, in the 2017-19 terminal preservation budget request. Over the ten-year period, there are preservation spending plans for Fauntleroy at \$95 million and Bremerton at \$38 million that combine for 18 percent of the 2017-27 ten-year plan.
- The MV Tacoma is budgeted for \$13.3 million, or 20 percent, of the proposed 2017-19 vessel preservation budget request. The MVs Kittitas, Spokane, and Cathlamet are each budgeted at between \$4.8 million and \$5.7 million in the 2017-19 preservation budget request.
- The Yakima is budgeted for \$43 million, or 10 percent, of the 2017-27 ten-year plan, and four vessels (the Chelan, Spokane, Kittitas, and Walla Walla) are budgeted for between \$33 million and \$39 million over the ten-year period.

Preservation Investment as a Part of the Overall Capital Program

The Legislature requires the department to categorize the WSF biennial capital budget request and multi-biennial capital plan in terms of three types of expenditures; preservation, improvements and system-wide/administrative activities. To be classified as preservation, an expenditure must meet specific statutory requirements contained in RCW 47.60 and fall within the definition of a preservation project provided by the Office of Financial Management (OFM). Statutory requirements are discussed in an earlier section describing the Ferries LCCM.

OFM has defined a preservation project as a capital project that:

- “Extends the life of existing assets (terminals and vessels) by replacing systems of the asset that are determined to be at the end of their structural, mechanical or electrical lives. Vessel engines, for example, are replaced when they are worn out to keep the vessel operational.
- May upgrade the systems needing to be replaced for structural, mechanical or electrical reasons so long as the replacements for existing systems do not significantly change the program use of an asset (i.e., replacing two worn-out wooden dolphins of a vessel slip at a terminal with two steel dolphins so long as the upgraded steel dolphins do not significantly change the throughput capacity of the terminal).
- Generally, has little effect on future operating programs and budgets, except for reductions in maintenance costs and the deferred preservation backlog.”

OFM defines improvement projects and system-wide/administrative activities as follows:

- “Improvement projects primarily achieve a program goal, such as changing or improving the characteristics of an existing asset to meet new program requirements, or creating a new asset through construction, lease and/or purchase. This category is less concerned with life extension of an asset, and includes projects ranging from building new assets to significant renovation of existing assets. Improvement projects may also improve conditions, accommodate changes in service or clientele, or increase or maintain federal reimbursement.
- System-wide activities are those conducted by engineering management, technical and office staff needed to ensure effective and efficient development and delivery of capital projects. Administrative activities are those performed by management, planning, budgeting, contracting, personnel, accounting, audit, purchasing, administrative and community outreach staff needed to ensure effective and efficient operation of the capital program.”

Construction Program Distribution of Proposed Spending

Preservation is budgeted at higher levels than improvements in the 2017-19 biennium budget request. However, improvements are funded at almost similar levels in the 2017-27 ten-year plan.

The 2017-19 preservation budget request is \$205 million, or 56 percent of the total budget request. Improvements amount to \$147 million, or 40 percent, and project support and administrative activities amount to \$14 million, or six percent.

A majority of proposed preservation spending in the 2017-19 biennium is due to work at the Seattle Terminal, with improvement dollars being dominated by new vessel construction and work at the Mukilteo Terminal. In the 2017-27 ten-year plan (including the 2017-19 biennium) preservation amounts to \$1.17 billion, or 49 percent of the total plan. Improvements amount to \$1.17 billion, or 40 percent, and system-wide and administrative activities amount to \$64 million, or four percent in the ten-year plan.



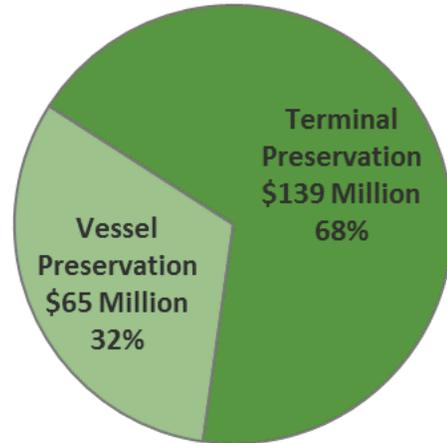
**WSF Construction Program W
2017-19 Budget Request and 2017-27 Ten-Year Plan**
Preservation, Improvements, Systemwide/Administration
(In Millions of Dollars)

	2017-19	2019-21	2021-23	2023-25	2025-27	2017-27	2017-19 %	2017-27 %
Preservation	205	177	257	278	243	1,159	56%	48%
Improvement	147	46	42	353	580	1,168	40%	49%
Systemwide and Admin.	14	14	13	12	12	65	4%	3%
Total Program W	365	237	312	643	835	2,391	100%	100%

Distribution of Preservation Funding Between Terminals and Vessels

The 2017-2019 terminal preservation budget request is over two times vessel preservation budget request. The terminal request amounts to \$139 million or 68 percent of total preservation, and the vessel request amounts to \$65 million or 32 percent. However, over the ten-year planning period (including the 2017-2019 biennium), proposed terminal and vessel preservation spending requests close some. For 2017-2027, proposed terminal preservation spending amounts to \$721 million or 68 percent of total preservation spending, and proposed vessel preservation spending amounts to \$437 million or 32 percent.

**WSF Construction Program
2017-19 Biennium Budget Request
Terminal and Vessel Preservation
\$ in Millions**



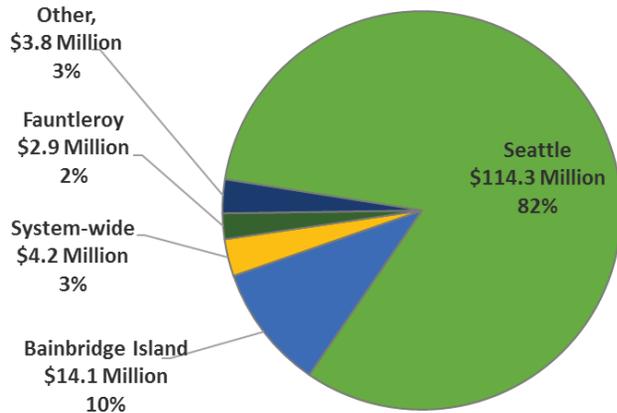
**WSF Construction Program W
2017-19 Budget Request and 2017-27 Ten-Year Plan
Terminal and Vessel Preservation
(In Millions of Dollars)**

	2017-19	2019-21	2021-23	2023-25	2025-27	2017-27	2017-19 %	2017-27 %
Terminal Preservation	139	110	170	144	158	721	68%	62%
Vessel Preservation	65	66	87	134	85	437	32%	38%
Total Program W	205	177	257	278	243	1,159	100%	100%

Preservation by Terminal

The Seattle Terminal’s share of the agency-request 2017-19 WSF terminal preservation budget is \$114.3 million, or 82 percent. The Bainbridge Terminal share is \$14.1 million, or 10 percent and system-wide projects would receive \$4.2 million, or three percent. The remaining terminals’ share would be \$6.7 million, or five percent of the WSF terminal preservation budget. Over the 2017-27 ten-year planning period (including the 2017-19 biennium), the Seattle Terminal would receive \$329.1 million, or 46 percent of the requested terminal preservation budget. The Fauntleroy Terminal’s share is \$94.7 million, or 13, and Kingston, Bremerton, Anacortes, and Bainbridge Island would each receive between \$35.7 million \$41.3 million, totaling \$152.9 million, or 21 percent aggregated. The remaining terminals would receive \$144.6 million, or 20 percent of the ten-year preservation plan. The table below shows the details of requested terminal preservation spending. Terminals are ranked according to requested spending in the 2017-19 budget request biennium.

**WSF Construction Program
2017-19 Biennium Budget Request
Preservation by Terminal
\$ in Millions**



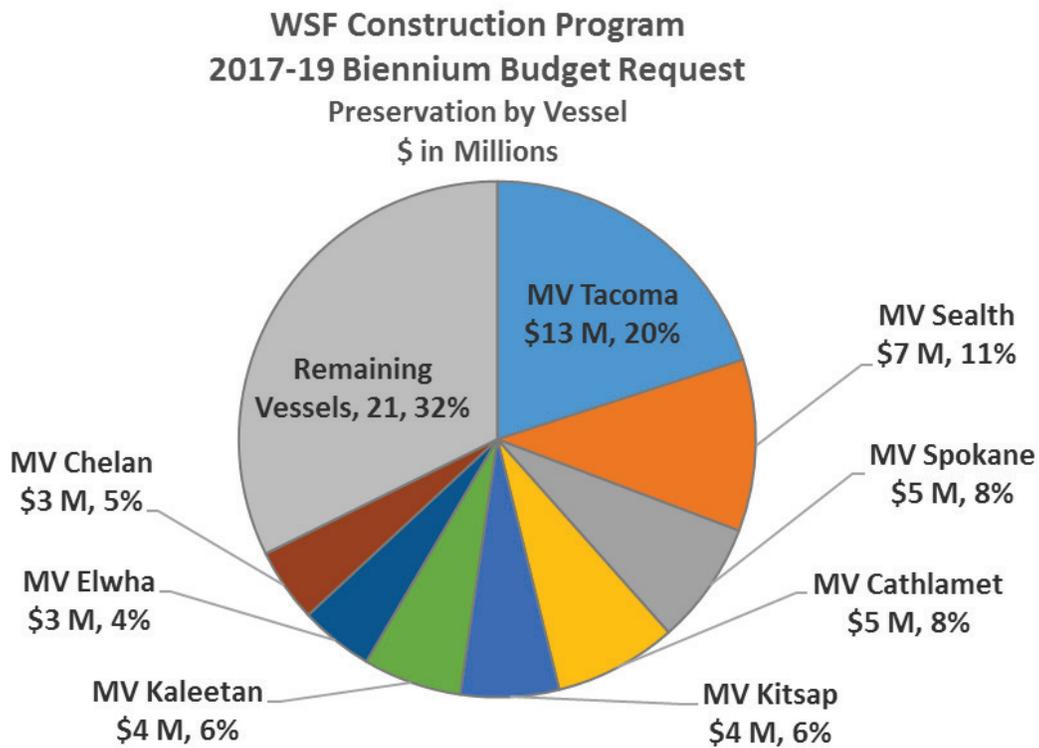
**WSF Construction Program W
2017-19 Budget Request and 2017-27 Ten-Year Plan
Preservation by Terminal
(In Millions of Dollars)**

Terminals	17-19	19-21	21-23	23-25	25-27	17 - 27	17-19%	17-27 %
Seattle	114.3	91.1	102.4	5.5	15.9	329.1	82%	46%
Bainbridge Island	14.1	3.3	2.8	7.3	8.2	35.7	10%	5%
Systemwide	4.2	4.2	4.2	4.2	4.2	21.0	3%	3%
Fauntleroy	2.9	4.0	4.0	14.1	69.8	94.7	2%	13%
Southworth	2.1	0.1	18.8	2.0	1.2	24.3	2%	3%
Kingston	1.4	3.5	16.3	11.9	8.1	41.3	1%	6%
Vashon Island	0.1	0.5	1.9	3.7	6.5	12.7	0%	2%
Eagle Harbor	0.1	0.0	0.4	15.0	4.6	20.1	0%	3%
Lopez Island	0.0	0.4	3.4	5.0	0.0	8.8	0%	1%
Anacortes	0.0	0.2	3.1	18.3	16.1	37.8	0%	5%
Bremerton	0.0	2.2	5.0	30.0	1.0	38.2	0%	5%
Clinton	0.0	0.0	0.0	4.3	1.2	5.5	0%	1%
Coupeville	0.0	0.0	0.0	5.5	1.1	6.6	0%	1%
Edmonds	0.0	0.0	0.0	8.0	10.2	18.3	0%	3%
Friday Harbor	0.0	0.2	1.4	0.8	1.7	4.0	0%	1%
Orcas Island	0.0	0.3	1.7	1.8	0.9	4.7	0%	1%
Point Defiance	0.0	0.0	0.0	1.0	2.4	3.4	0%	0%
Port Townsend	0.0	0.0	0.0	1.8	3.2	4.9	0%	1%
Shaw Island	0.0	0.0	0.0	2.4	0.0	2.4	0%	0%
Systemwide Terminals	0.0	0.3	4.7	1.5	0.5	7.0	0%	1%
Tahlequah	0.0	0.0	0.0	0.0	0.9	0.9	0%	0%
Total Terminals	139.3	110.4	170.0	144.1	157.6	721.4	100%	100%

Preservation by Vessel:

The MV Tacoma requested budget is \$13.3 million, or 20 percent of the requested 2017-19 biennial vessel preservation budget. The MVs Kittitas, Spokane, and Cathlamet shares are between \$4.8 million and \$5.7 million per-vessel for a total of \$15.7 million, or 24 percent. The MVs Kitsap, Kaleetan, Elwha, and Chelan would receive \$3.4 million to \$4.5 million per-vessel for a total of \$15.3 million, or 23 percent. The requested budget for the remainder of the fleet totals \$20.8 million, or 32 percent. Over the 2017-27 ten-year period (including the 2017-19 biennium), the preservation request for the MV Yakima is for \$43 million, or 10 percent of the total.

The MVs Chelan, Spokane Kittitas, and Walla Walla, would each receive between \$33 million and \$39 million and, combined, account for \$147.8 million, or 33 percent, of requested vessel preservation spending. The requested vessel preservation budget for the remainder of the fleet amounts to \$255.4 million, or 57 percent. The table below shows the details of the agency request budget for vessel preservation spending. Vessels are ranked by 2017-19 budget amount.



**WSF Construction Program W
2017-19 Budget Request and 2017-27 Ten-Year Plan
Preservation by Vessel
(In Millions of Dollars)**

Vessels	17-19	19-21	21-23	23-25	25-27	17 - 27	17-19%	17-27 %
MV Tacoma	13.3	4.3	0.7	0.1	4.4	22.7	20%	5%
MV Kittitas	5.7	2.4	5.1	20.1	4.6	37.9	9%	8%
MV Spokane	5.2	4.1	1.8	20.5	6.2	37.9	8%	8%
MV Cathlamet	4.8	1.7	8.7	4.0	2.9	22.1	7%	5%
MV Kitsap	4.5	5.0	2.7	10.7	3.0	25.8	7%	6%
MV Kaleetan	4.0	1.5	8.7	6.2	4.8	25.3	6%	6%
MV Elwha	3.4	1.4	0.7	0.0	0.0	5.5	5%	1%
MV Chelan	3.4	2.9	5.1	9.6	18.1	39.0	5%	9%
MV Salish	3.2	0.5	5.1	2.4	1.0	12.1	5%	3%
MV Issaquah	2.6	6.7	1.9	4.9	1.8	17.9	4%	4%
MV Yakima	2.6	5.0	7.7	23.1	5.2	43.5	4%	10%
MV Chetzemoka	2.2	1.2	1.8	0.1	4.9	10.1	3%	2%
MV Puyallup	2.1	5.2	3.4	2.4	0.4	13.4	3%	3%
MV Walla Walla	1.8	4.5	10.8	10.5	5.5	33.0	3%	7%
MV Wenatchee	1.5	14.4	2.9	1.0	3.9	23.7	2%	5%
MV Hyak	1.5	0.0	0.0	0.0	0.0	1.5	2%	0%
MV Tillikum	1.4	0.0	0.0	0.0	0.0	1.4	2%	0%
MV Sealh	1.3	1.7	6.9	6.2	13.9	29.9	2%	7%
MV Kennewick	0.5	2.9	2.2	2.6	0.2	8.4	1%	2%
MV Klahowya	0.1	0.0	0.0	0.0	0.0	0.1	0%	0%
MV Samish	0.1	0.7	4.6	7.8	2.2	15.4	0%	3%
MV Tokitae	0.0	0.1	5.8	1.5	1.5	9.0	0%	2%
MV Chimacum	0.0	0.0	1.4	0.2	9.4	11.1	0%	2%
Total Vessels	65.1	66.1	88.1	133.7	93.8	446.7	100%	100%

Ferry Improvements

Washington State Department of Transportation

Ferry Improvements

The Ferry Improvement section of the Office of Financial Management budget instructions requires the department to address the following areas:

- Improvement needs assessment
- Vessel deployment plan
- Pre-design studies
- Capital impacts on the operating budget
- System-wide and administrative capital cost and cost allocation

Improvement Needs Assessment

The improvement needs assessment discusses what operational strategies have been considered and what their impacts would be on improvement decisions.

Legislative Direction to Pursue Adaptive Management Practices: The Legislature directed the Washington State Department of Transportation (WSDOT) to develop, and the Washington State Transportation Commission (WSTC) to review, operational strategies to ensure that existing assets are fully utilized and to guide future investment decisions. This initiative is intended to find alternative approaches to expensive capital investment in infrastructure for meeting current and future demand for ferry service. RCW 47.60.327 requires WSDOT to pursue adaptive management practices in its Ferries operating and capital programs in order to keep the costs of the Ferry System as low as possible while continuously improving the quality and timeliness of service.

There are two desired outcomes of adaptive management. The first desired outcome is more efficient and effective demand management. This involves maximizing the use of existing assets through operational and pricing strategies that encourage customers to shift travel times and modes. This spreads existing demand to times and modes that have excess capacity. The second desired outcome is greater operational efficiency. This involves employing operational strategies that reduce operating costs, queue length, and time spent in terminals. Both these outcomes will result in more efficient use of existing resources. This forestalls the need to address service needs through expensive investments in infrastructure.

The law specifically directs the department to develop, and the WSTC to review, enumerated operational strategies that, at a minimum:

- Recognize that each travel shed is unique and might not have the same operational strategies;
- Use data from the current survey conducted under RCW 47.60.286;
- 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.

In developing operational strategies, the following, at a minimum, must be considered:

- 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.

Finally, state law requires that operational strategies must be reevaluated periodically and, at a minimum, before developing a new capital plan.

The department and the WSTC responded to this legislation with a jointly developed evaluation and prioritization of operational strategies included in a report entitled, *Joint Recommendations on Adaptive Management Strategies*, published in 2009. This report is incorporated into the WSF Long-Range Plan in Appendix I.

The department and the WSTC have considered, and in many cases acted on, a number of operational and pricing strategies. Below is a summary of what has been completed, is in the process of being implemented, or has not been pursued.

Reservation System: The vehicle reservation system is the keystone of WSDOT's operational strategies to manage the demand for ferry services and make operations more efficient and effective. The department has implemented Phase 1 of this new system. Phase 1 involves consolidating the existing rudimentary and inflexible reservation systems (for Port Townsend/ Coupeville, Anacortes/Sidney, B.C., and commercial carriers in the San Juan Islands) into a single flexible state of the art system. This system is the base for expansion to other routes in the system. Phase 2 was completed in January 2015 and expanded the system to all vehicles in the San Juan Islands. Phase 3, if funded, will expand the system to all vehicles on most of the other remaining routes in the system.

Enhanced User Information: The department has improved customer communications via the web site to make it easier for customers to plan for avoiding congested time periods. This initiative adds best times to travel information to each sailing schedule for each of the four seasons. It graphically depicts what the lighter and heavier traveled sailings are so that riders can adjust their travel plans accordingly. It also provides current terminal condition information.

Transit Enhancements: Several transit initiatives are underway. The department has modified the sailing schedule on the Edmonds/Kingston route to meet a series of objectives. One is to improve connections with the Sounder commuter rail in Edmonds. Also, WSDOT is engaged in discussions with regional transit partners about improvements that will enhance ferry/bus connections at Colman Dock in downtown Seattle.

Small Car Discounts: WSDOT proposed, and the WSTC adopted, a fare schedule which gives vehicles under 14 feet in length a favorable price compared to standard length vehicles. This fare policy encourages travelers to use smaller cars and frees up vehicle deck space on the ferries during peak periods.

Differential Vehicle versus Passenger Pricing: Differential pricing initiatives include increasing the spread between vehicle and passenger fares and lowering the youth fare. This makes it relatively more attractive financially for riders to travel as a passenger than as a vehicle driver. This was part of the tariff changes implemented in 2015 and 2016.

Fuel Surcharge: The Legislature enacted provisions for a fuel surcharge that may be triggered by certain conditions. The WSTC implemented this provision for the Fall 2011 tariff cycle.

Fuel Conservation: The department instituted vessel slowdowns on selected off-peak sailings with success in reducing fuel consumption. Five-blade propellers have been installed on selected vessels, which are being evaluated to see if they improve fuel efficiency. Capital improvements are being explored that will allow vessels to reduce fuel consumption at the dock while loading and offloading.

Vessel Deployment Plan

The department is required to develop and maintain a vessel rebuild and replacement plan in accordance with RCW 47.60.377 that includes:

- A summary of the condition of all vessels, distinguishing between active and inactive vessels.
- Projected rebuild dates for all vessels.
- Projected retirement dates for all vessels, distinguishing between active and inactive vessels.
- Timelines for vessel replacement, including business decisions, design, procurement and construction.

This information can be found in the preservation section of this document. Condition assessments for the vessels can be found in the table titled, *Washington State Ferries, Condition Category Assessment by Ferry Vessel*. The remaining three categories of information can be found in the table titled, *Table 1, Vessel Rebuild or Retirement and Replacement Plan*.

Additionally, the department provides timelines for construction of vessels that add capacity to the fleet. The following chart provides deployment information about the new Olympic Class vessels.

FY 2018 Vessels Chimacum Added, Klahowya Retired		F/W/S	
Summer			
Anacortes - San Juans - Sidney	124 Chelan	144 Samish	87 Tillikum
	144 Yakima	87 Tillikum	
	144 Elwha	144 Samish	
Port Townsend - Coupeville	64 Kennewick	64 Salish	64 Kennewick Salish Shoulders season only
	144 Tokitae	124 Kitsap	124 Tokitae 124 Kittitas
Edmonds - Kingston	202 Puyallup	188 Spokane	188 Spokane
Seattle - Bainbridge	202 Tacoma	202 Wenatchee	202 Tacoma 202 Wenatchee
Seattle - Bremerton	188 Walla Walla	144 Chimacum	144 Walla Walla 144 Chimacum
Fautleroy - Vashon - Southworth	124 Issaquah	90 Sealth	124 Issaquah 90 Sealth
	124 Cathlamet		124 Cathlamet
	64 Chetzemoka		64 Chetzemoka
Standby (emergency reserve)	124 Kitsap		124 Kitsap
Maintenance Reserve	144 Hyak		144 Hyak
	144 Kaleetan		144 Kaleetan
	87 Klahowya		87 Klahowya
Retired Vessels			

FY 2019 Vessels Forecast Suquamish Added, Hyak Retired		F/W/S	
Summer			
Anacortes - San Juans - Sidney	144 Elwha	144 Samish	87 Tillikum
	144 Yakima	87 Tillikum	
	124 Chelan	144 Samish	
Port Townsend - Coupeville	64 Kennewick	64 Salish	64 Kennewick Salish Shoulders season only
	144 Tokitae	124 Kitsap	144 Tokitae 124 Kittitas
Edmonds - Kingston	202 Puyallup	188 Spokane	202 Puyallup 188 Spokane
Seattle - Bainbridge	202 Tacoma	202 Wenatchee	202 Tacoma 202 Wenatchee
Seattle - Bremerton	188 Walla Walla	144 Chimacum	144 Walla Walla 144 Chimacum
Fautleroy - Vashon - Southworth	124 Issaquah	90 Sealth	124 Issaquah 90 Sealth
	124 Cathlamet		124 Cathlamet
	64 Chetzemoka		64 Chetzemoka
Standby (emergency reserve)	124 Kitsap		124 Kitsap
Maintenance Reserve	144 Kaleetan		144 Kaleetan
	144 Hyak		144 Hyak
	144 Hyak		144 Hyak
Retired Vessels			



KEY

- Jumbo Vessel
- Large Vessel - Super
- Medium Vessel - Issaquah
- Mid-Size Vessel - Sealth/Evergreen
- Hiyu
- New 64-car Vessel

Olympic Class

Updated 9-6-2016 (am)

Pre-design Studies: Pre-design studies are completed as soon as budgets are approved and design begins. The pre-design reports are transmitted to OFM for approval prior to design starting on the preferred option.

Capital Impacts on Operating Budget

Capital investments may cause changes in operating and maintenance requirements. The 2017-19 Ferries capital budget request has three projects that may result in additional ferries operating program costs in the 2017-19 biennium; these projects are construction of a fourth 144-car Olympic Class vessel, replacement of the Mukilteo Terminal, and replacement of structures at Colman Dock Terminal (Seattle). There is also an expected impact to the operating program maintenance budget based on a minimum level of preservation in the 2017-19 biennium. Other projects, such as replacing the dispatch system and ticketing system, may have impacts to the operating program in out biennia.

New Vessel: A fourth new Olympic Class ferry (144-car capacity) will be built and delivered in early fiscal year 2019. Additional appropriation authority for new costs to the operating program is part of a 2017-19 biennium operating program request. The increased costs are due to the addition of the new vessel, which has a larger deck crew than the vessel it is replacing.

Seattle Multi-Modal Terminal (Colman Dock): Replacement of the terminal building, trestle, overhead loading, and passenger-only facility will begin in fiscal year 2018 and will continue into the 2017-19 through the 2021-23 biennia. The construction phase of this project will affect ferry terminal operations and may affect the ferry service schedule and ferry vessel operations. If there are additional costs to the operating program during construction, it is likely there will need to be a request for additional operating budget capacity. Once the project is complete, there will likely be changes in operating costs such as utilities (electricity, stormwater, sewer, etc.), and possibly changes in labor costs depending on how the configuration of the terminal (tollbooths, holding areas, etc.) affects the processing and loading and unloading of vessels and other ferry passengers through the ferry terminal.

Mukilteo Multi-Modal Ferry Terminal: A new ferry terminal is being constructed at Mukilteo in the 2017-19 biennium. The terminal will be located on a different site. WSF leases property next to the current terminal, which is used for vehicle holding lanes. There may be a need to use or lease property near the new terminal and this may require a new lease with additional costs; if not, there will be savings from the end of the lease for the holding lanes at the old terminal once the terminal is no longer being used. Once the project is complete, there will likely be changes in operating costs, such as utilities, and possibly changes in labor costs depending on the configuration of the terminal (tollbooths, holding areas, etc.) in relation to the processing and loading and unloading of vessels and other ferry passengers through the ferry terminal.

Replacement of Wave-to-Go / Ticketing System: The WSF ticketing and reservation system will be replaced in the 2019-21 biennium. At the point the system is replaced, there may be ongoing maintenance costs from the use of a third party vendor. If there are additional costs for the vendor, as compared to the cost for the prior vendor with the previous system, there may be a need for an operating program funding request.

Dispatch System Replacement: The WSF dispatch system is scheduled to be replaced in the 2019-21 biennium. Once the new system is in place, there will likely be ongoing costs in the form of an agreement with a third-party vendor to support the system. It is likely the completion of the project will result in an operating program budget request for ongoing support of the new system if there are additional costs for the new vendor as compared to the prior vendor for the previous system.

Administrative Support Costs: The following section addresses the requirement to include zero-based budget request packages for administrative support, terminal project support, and vessel project support.

Agency:	405 Department of Transportation
Decision Package Code/Title:	A - Administrative Support for WSF Construction
Budget Period:	2017-19
Budget Level:	Zero-based

Program: **W – WSF Construction**

Recommendation Summary Text:

This is the 2017-19 biennium zero-based budget request for administrative support for the Washington State Ferries (WSF) Construction Program W that funds legal, contract administration, program and budget development and management, federal grant administration, capital planning, personnel, accounting, external audit, purchasing, security grant management, administrative, environmental, and communications services.

The administrative support package provides the budget for the following activities in the 2017-19 biennium:

- A-1 – Capital program legal services and contract development and administration;
- A-2 – Capital program development, budget development and management and federal grant administration;
- A-3 – System-wide capital planning and special studies;
- A-5 – Capital program financial and administrative services, including accounting, external audit, purchasing, security grant management, administrative services, and environmental program management; and
- A-6 – Communications services including public involvement, community relations and outreach for long-range capital plans and specific construction projects, coordination to mitigate the adverse impacts of construction, and development of customer information about capital projects.

Consolidated Fiscal Detail: Below is the consolidated fiscal detail, object of expenditure detail and total staffing FTEs for administrative support activities. Tables A-1 through A-6 display this information by administrative activity.

Administrative Support All Activities (A)					
Fiscal Detail					
Detail by Fund	FY 2018	FY 2019	2017-19	2019-21	2021-23
099-1 Puget Sd Capital Construction Account- State	5,126,000	4,624,000	9,750,000	10,238,000	10,610,000
Total by Fund	5,126,000	4,624,000	9,750,000	10,238,000	10,610,000
Staffing FTEs	24.10	24.10	24.10	24.10	24.10

Administrative Support (A)			
Object of Expenditure Detail			
Detail by Object of Expenditure	FY 2018	FY 2019	2017-19
A - Salaries and Wages	1,651,000	1,651,000	3,302,000
B - Benefits	529,000	529,000	1,058,000
C - Personal Service Contracts	561,000	369,000	930,000
E - Goods and Services	1,834,000	1,827,000	3,661,000
G - Travel	39,000	38,000	77,000
J - Capital Outlay	511,000	209,000	720,000
T - Intraagency Reimbursements	1,000	1,000	2,000
Total by Object	5,126,000	4,624,000	9,750,000

Administrative Support (A)						
Salary and FTE Detail						
	FTEs			Dollars		
	FY 2018	FY 2019	2017-19	FY 2018	FY 2019	2017-19
Legal Services and Contracts Staff	6.40	6.40	6.40	453,000	453,000	906,000
Program & Budget Devel & Mgmt Staff	5.50	5.50	5.50	519,000	519,000	1,038,000
Systemwide Planning and Special Studies	1.00	1.00	1.00	85,000	85,000	170,000
Finance and Administration Staff	7.80	7.80	7.80	409,000	409,000	818,000
Communications Staff	2.40	2.40	2.40	185,000	185,000	370,000
Total Staff Dollars and FTEs	23.10	23.10	23.10	1,651,000	1,651,000	3,302,000

Narrative Justification and Impact Statement

Performance measure detail:

Tables B-1 through B-6 provide performance measures for the six activities in the administrative support budget request using the format shown in the table below.

Performance Measures	FY 2018	FY 2019
Outcome Measure		
Output Measures		
Efficiency/Effectiveness Measures		

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? Does this decision package provide essential support to one of the Governor’s priorities? Does this decision package make key contributions to statewide results? Identify important connections or impacts related to this proposal.

The administrative functions covered by this zero-based budget package promote good stewardship of public funds through governmental efficiency and effectiveness. Specific beneficiaries include policy-makers (the Legislature, the Governor, and WSDOT executive management), ferry riders, communities served by the Ferry System and tax payers.

What alternatives were explored by the agency, and why was this alternative chosen?

- The Ferries Division budget request for administrative support to the capital program uses a zero-based budgeting approach. This approach provides transparency and facilitates accountability for how administrative support is delivered.

- The division considered using the incremental budgeting approach for administrative support, but rejected this approach because most of the budget would not be visible and there would be insufficient information to achieve the desired level of accountability for administrative support delivery.
- The division rejected the previous approach that did not develop an identifiable administrative support budget but simply collected administrative costs and included them in project costs because this approach did not provide transparency, created uncertainty in project costs, and made accountability difficult.

What are the consequences of not funding this package?

This zero-based budget package provides administrative support to develop and administer contracts, develop and manage the capital program and budget, maintain the capital plan and other long-range plans, provide necessary HR/personnel support, administer accounts receivable and payable, and communicate with policy-makers and stakeholders interested in the Ferry System. Failure to fund these activities would adversely impact the division’s ability to comply with the many laws pertaining to legislative programs, and the Ferries capital program in particular, and to effectively and efficiently deliver the program.

What is the relationship, if any, to the capital budget?

N/A

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

- FTEs and labor costs are based on specific positions authorized to charge to administrative cost collection centers in the Ferries Division Organization Chart dated August 1, 2014.
- Salaries are based on the WSDOT Labor Pricing Model.
- Non-labor expenses are based on actual expenditures in fiscal years 2012 through 2014.
- Most costs are inflated to 2016 and 2017 dollars using the Implicit Price Deflator for Personal Consumption. The two exceptions are planning studies and 2901 Building rent costs, which are not inflated.

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

- **Budget impacts in future biennia:** By agreement among departmental, OFM, and legislative staff, the department prepares a zero-based budget request for the biennium to which an appropriations act will apply. Future biennia expenditure plans are the inflated value of the budget for the appropriated biennium, excluding one-time only costs. However, actual development of future biennial budget requests will use zero-based budget methodology.
- **Distinction between one-time and on-going functions and costs:** This budget package funds the on-going core administrative support for the WSF Construction Program. There are not one-time costs in this decision package.

Package description:

Legal Services and Contracts

Sub-package A-1 of the administrative support zero-based budget package provides budget capacity for the Ferries Division's Legal Services and Contracts Office (Organizations 361410 and 361320) that prepares contracts and agreements, administers the contracting process, and provides legal assistance in contractual matters relating to construction contracts, engineering consultant agreements, federal provisions in contracts, and capital program agreements with state agencies, local agencies, and private parties. Detailed functions include:

Providing advice, guidance and consultative services relating to contract risk, legal issues, and development and implementation of capital components of strategic business initiatives; and working with the Attorney General's Office to provide legal consultative services to executive management.

Preparing capital program contracts and agreements and administering the capital program contracting process, including the following activities:

- Managing the bidder pre-qualification process;
- Managing the competitive sealed bidding process including development of contractual documents and specifications; advertisement, solicitation and acceptance of bids; contract award, negotiation and execution; contract claims and law suits; contract close out; and management of contractual files and documents;
- Managing the request for proposals (RFP) process;
- Establishing contracts for vessel construction, terminal construction, charter services for mitigation of disruption in service caused by construction;
- Preparing contracts with private parties, cities and counties, and state agencies for co-development ventures;
- Overseeing contractual compliance with all applicable federal requirements and statutes in capital contracts, agreements, and procurements;
- Providing contract information to the Attorney General and WSDOT Risk Management for dispute resolution; and
- Coordinating legal issue reviews with the Attorney General's Office.

Preparing and administering consultant agreements, including the following activities:

- Managing the request for proposals (RFP) process for consultant agreements involving engineering and architectural services;
- Conducting legal and engineering review of consultant agreements;
- Negotiating consultant agreement rates (overhead rates and fee rates) and revising them periodically (typically after one year);
- Approving invoices for payment after reviewing rates and compliance with consultant rules;
- Providing agreement information to the Attorney General and WSDOT Risk Management for dispute resolution; and
- Coordinating legal issue reviews with the Attorney General's Office.

Providing other legal services, including:

- Handling insurance claims for vessel and terminal damages that result in reimbursement of capital expenditures to repair damage to terminals and vessels;

- Providing legal advice on compliance with regulatory agency requirements and federal-aid regulations affecting capital projects.

Table A-1: Fiscal Detail, Object of Expenditure Detail, Salary and FTE Detail for Legal Services and Contract Activities

Legal Services (A1)			
Fiscal Detail			
Detail by Fund	FY 2018	FY 2019	2017-19
099-1 Puget Sd Capital Construction Account- State	613,000	613,000	1,226,000
Total by Fund	613,000	613,000	1,226,000
Staffing FTEs	6.40	6.40	6.40

Legal Services (A1)			
Object of Expenditure Detail			
Detail by Object of Expenditure	FY 2018	FY 2019	2017-19
A - Salaries and Wages	453,000	453,000	906,000
B - Benefits	149,000	149,000	298,000
C - Personal Service Contracts	-	-	-
E - Goods and Services	8,000	8,000	16,000
G - Travel	1,000	1,000	2,000
J - Capital Outlay	1,000	1,000	2,000
T - Intraagency Reimbursements	1,000	1,000	2,000
Total by Object	613,000	613,000	1,226,000

Legal Services (A1)						
Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	2017-19	FY 2018	FY 2019	2017-19
9W002 - WMS3 - Legal Svcs/Contracts Mgr	0.60	0.60	0.60	64,000	64,000	128,000
90830 - 543J - Contract Develop Mgr (Transp Planning Supvr)	0.80	0.80	0.80	79,000	79,000	158,000
A0334 - M0255 - Contract Coord 1	0.60	0.60	0.60	33,000	33,000	66,000
A0335 - M0256 - Contract Coord 2	0.80	0.80	0.80	48,000	48,000	96,000
A0341 - M0256 - Contract Coord 2	0.80	0.80	0.80	48,000	48,000	96,000
A0342 - 148E (M0256) - Y-rated Payroll Coord (Contract Coord 2)	0.80	0.80	0.80	48,000	48,000	96,000
90017 - 530P - Trans. Tech. Engr. 5	1.00	1.00	1.00	85,000	85,000	170,000
A0338 - M0246 - Consultant Coord	1.00	1.00	1.00	48,000	48,000	96,000
Total Staff Dollars and FTEs	6.40	6.40	6.40	453,000	453,000	906,000

Table B-1: Performance Measures for legal services and contract activities

Performance Measures for Legal Services and Contracts	FY 2018	FY 2019
Outcome Measure: POG Result Area-Ability of State Government to Achieve Results Efficiently and Effectively		
<ul style="list-style-type: none"> • Contracting and consultant task approval processes successfully support project delivery 	Yes	Yes
Output Measures:		
<ul style="list-style-type: none"> • Number of vessel construction contracts active during the year • Number of consultant agreements active during the year 	12-18 70-80	12-18 70-80
Efficiency/Effectiveness Measures:		
<ul style="list-style-type: none"> • Number of vessel shipyard visits missed due to delays in processing contracts • Number of state/federal audit finding about the contract process 	0 0	0 0

Package Description:

Program and Budget Development and Management

Sub-package A-2 of the administrative support zero-based budget package provides budget capacity for the Ferries Division's Program and Budget Development and Management Office (Organizations 365310 and 365315) that develops, advocates, and manages the Legislature's program for capital investment in ferry terminals and vessels. This office identifies and prioritizes capital investment needs; develops program plans and budget requests; manages capital financing through the use of financial plans, bond expenditure estimates, and federal and local grant administration; and controls the use of resources through allotments, program item number (PIN) budgets, project change management, work order authorizations, budget and program performance reporting, and indirect cost allocation to projects.

Detailed functions include: Identifying capital program needs for preservation and improvement of Ferry System infrastructure using the life cycle cost model, the Ferry System Plan and problem-opportunity statements and preparing analyses quantifying, evaluating and prioritizing these needs.

Developing the capital program (project list) and preparing the program elements of the:

- 30-Year Metropolitan Transportation Plan (strategic planning horizon),
- 22-Year Ferry System Plan (strategic planning horizon),
- 20-Year Washington Transportation Plan (strategic planning horizon),
- 16-Year WSDOT Capital Improvement and Preservation Program (operational planning horizon), and
- Transportation Improvement Plan (TIP) and State Transportation Improvement Plan (STIP) (operational planning horizon).

Managing capital financing, including:

- Assessment of financial plans (balance sheets and sources and uses statements) supporting capital projects;
- Estimating bond expenditure demand for use in making bond sales; and
- Acquiring federal and local grants, planning for the use of grant funds, and administering grants in accordance with the requirements of grantor agencies.

Managing the Ferries Division federal grant program, including:

- Preparing updates to the TIP and STIP for Ferries projects;
- Preparing grant applications;
- Administering and reporting on federal grants;
- Coordinating division participation in federal audits.
- Assigning specific federal grants to Ferries capital projects; and
- Accounting for the use of federal funds.

Developing the Ferries Division capital budget request, including:

- Preparing program budget narratives for the mission, goals, objectives, performance measures, strategies, analyses of needs, and description and classification of proposed projects;
- Determining capital program, subprogram, activity, and project expenditure plans; sources of funds; objects of expenditure; work force requirements; and projected performance of budget proposals;
- Developing budgets for indirect (administrative and project support) activities; and
- Preparing legislative critiques and fiscal notes and responding to OFM and legislative inquiries.

Developing and managing the biennial plan at the program and project levels through:

- Allotments and program item number (PIN) budgets,
- Project change management,
- Work order authorizations,
- Budget and performance execution reviews, and
- Distribution of indirect costs to projects using a fully allocated costing methodology.

Table A-2: Fiscal Detail, Object of Expenditure Detail, Salary and FTE Detail for Program and Budget Development and Management

Program and Budget Development and Management (A2)			
Fiscal Detail			
Detail by Fund	FY 2018	FY 2019	2017-19
099-1 Puget Sd Capital Construction Account- State	1,230,000	931,000	2,161,000
Total by Fund	1,230,000	931,000	2,161,000
Staffing FTEs	6.50	6.50	6.50

Program and Budget Development and Management (A2)			
Object of Expenditure Detail			
Detail by Object of Expenditure	FY 2018	FY 2019	2017-19
A - Salaries and Wages	519,000	519,000	1,038,000
B - Benefits	160,000	160,000	320,000
C - Personal Service Contracts	-	-	-
E - Goods and Services	48,000	49,000	97,000
G - Travel	1,000	1,000	2,000
J - Capital Outlay	501,000	201,000	702,000
T - Intraagency Reimbursements	1,000	1,000	2,000
Total by Object	1,230,000	931,000	2,161,000

Program and Budget Development and Management (A2)						
Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	2017-19	FY 2018	FY 2019	2017-19
9W045 - WMS3 - Program Development-Budget Director	0.50	0.50	0.50	54,000	54,000	108,000
9W044 - WMS2 - Capital Program Manager	1.00	1.00	1.00	90,000	90,000	180,000
90244 - 543H - Trans Planning Spec 4 (Asst Cap Pgm Mgr)	1.00	1.00	1.00	77,000	77,000	154,000
90226 - 147C - Budget Analyst 3 (Work Orders)	1.00	1.00	1.00	59,000	59,000	118,000
9W062 - WMS2 - Grant Manager	1.00	1.00	1.00	92,000	92,000	184,000
90828 - 543H - Trans Planning Spec 4 (Asst Grant Mgr)	1.00	1.00	1.00	77,000	77,000	154,000
90828 - 543G - Transp Planning Spec 3	1.00	1.00	1.00	70,000	70,000	140,000
Total Staff Dollars and FTEs	6.50	6.50	6.50	519,000	519,000	1,038,000

Table B-2: Program and budget development and management activities

Performance Measures for Program and Budget Devel and Mgmt	FY 2018	FY 2019
<p>Outcome Measures: POG Result Area-Ability of State Government to Achieve Results Efficiently and Effectively</p> <ul style="list-style-type: none"> • Sufficient financial and human resources are obtained to preserve and improve Ferry System infrastructure • The expenditure authorization process supports project delivery while being consistent with the legislative appropriations act and pertinent general and Ferries specific laws • Expenditures are properly accounted for and reported in accordance with pertinent general and Ferries specific laws 	<p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
<p>Output Measures:</p> <ul style="list-style-type: none"> • Number of budget and allotment requests prepared • Number of unanticipated receipts and project change request forms processed • Number of active federal grants administered • Number of work orders administered • Number of financial reports prepared 	<p>3</p> <p>20-30</p> <p>25-30</p> <p>180-220</p> <p>40-50</p>	<p>3</p> <p>20-30</p> <p>25-30</p> <p>230-250</p> <p>50-60</p>
<p>Efficiency/Effectiveness Measures:</p> <ul style="list-style-type: none"> • Use performance-based and zero-based budgeting methods • Percent of agency budget request realized in the legislative appropriations act • Number of audit findings pertaining to budgeting, accounting for and reporting expenditures 	<p>Yes</p> <p>90%</p> <p>0</p>	<p>Yes</p> <p>90%</p> <p>0</p>

Package Description:

System-wide Planning and Special Studies

Sub-package A-3 of the administrative support zero-based budget package funds the Ferries Division's system-wide and route-level long-range planning efforts at the federal, state, regional, and departmental levels (Organization 365110).

Transportation planning requirements are increasingly complex and interwoven and require extensive technical assessments and organizational coordination. Ferries Division planning must address requirements under:

- Federal Moving Ahead for Progress in the 21st Century (MAP-21) planning criteria,
- Washington State's statewide transportation legislation; and
- Washington State's recent climate change legislation, with its implications for environmental sustainability, resource management, and reduction in vehicle-miles travelled.

The Ferries Planning Office leads the Ferries Division's effort to develop a re-considered capital plan and program under ESHB 2358, Laws of 2007 (the Ferry Financing Bill). Detailed planning functions include:

Planning, organizing, directing, coordinating, and controlling development of the Ferries Long-Range (22-year) System Plan that provides the strategic system-wide and route-level framework for specifying service levels, terminal and vessel infrastructure needs, funding sources, and optimizing resource allocations for meeting travel demand.

Preparing the Ferries Long-Range System Plan in accordance with regional, state, and federal guidelines and ensuring coordination and integration with:

- The Puget Sound Regional Council's (PSRC) Metropolitan Transportation Plan (MTP);
- Other Regional Transportation Planning Organizations (RTPOs), including the Island County RTPO, Kitsap County Coordinating Council, and San Juan County Government;
- Ferries Advisory Committees;
- Washington State's Transportation Plan (WTP); and
- Washington State's Climate Change initiative.

Organizing and maintaining the Ferries Division's traffic statistics, both system-wide and by route, to provide key information for long-range capital investment plans and project selections.

Developing, maintaining, and operating a ferry travel forecast model to test the impact on ridership of various planning scenarios including service level changes, differential pricing, and time-of-day usage. The ferry travel model is extensively coordinated with PSRC's regional model and is developed under continuous consultation with the region's travel demand forecast experts. Under the State's climate change initiative, the ferry travel model addresses greenhouse gas emissions.

Table A-3: Fiscal Detail, Object of Expenditure Detail, Salary and FTE Detail for System-wide Planning and Special Projects

Systemwide Planning and Special Projects (A3)			
Fiscal Detail			
Detail by Fund	FY 2018	FY 2019	2017-19
099-1 Puget Sd Capital Construction Account- State	676,000	480,000	1,156,000
Total by Fund	676,000	480,000	1,156,000
Staffing FTEs	1.00	1.00	1.00

Systemwide Planning and Special Projects (A3)			
Object of Expenditure Detail			
Detail by Object of Expenditure	FY 2018	FY 2019	2017-19
A - Salaries and Wages	85,000	85,000	170,000
B - Benefits	26,000	26,000	52,000
C - Personal Service Contracts*	561,000	369,000	930,000
E - Goods and Services	1,000	-	1,000
G - Travel	1,000	-	1,000
J - Capital Outlay	2,000	-	2,000
T - Intraagency Reimbursements	-	-	-
Total by Object	676,000	480,000	1,156,000

Systemwide Planning and Special Projects (A3)						
Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	2017-19	FY 2018	FY 2019	2017-19
TBE - 543H - Trans Planning Spec 5	1.00	1.00	1.00	85,000	85,000	170,000
Total Staff Dollars and FTEs	1.00	1.00	1.00	85,000	85,000	170,000

* Plans and studies detail:

Task	FY 2018	FY 2019	2017-19
Long Range Plan	\$ 220,000		\$ 220,000
Long Range Plan Vessel Service Studies	\$ 110,000	\$ 110,000	\$ 220,000
Plan and Coordinate with Regional Plan Updates	\$ 77,000	\$ 77,000	\$ 154,000
Other Long Range Plan Updates	\$ 99,000	\$ 99,000	\$ 198,000
Planning Support for Tariff Component of EFS Replacement	\$ 55,000	\$ 83,000	\$ 138,000
TOTAL	561,000	369,000	930,000

Table B-3: Performance measures for system wide planning and special studies

Performance Measures System-wide Planning and Special Studies	FY 2018	FY 2019
Outcome Measure: POG Result Area-Ability of State Government to Achieve Results Efficiently and Effectively <ul style="list-style-type: none"> The Ferries Division meets federal, state and regional planning requirements 	Yes	Yes
Output Measure: <ul style="list-style-type: none"> Complete Long-Range Plan and follow-on studies 	Yes	Yes
Efficiency/Effectiveness Measure: <ul style="list-style-type: none"> Number of findings of failure to meet federal, state and regional planning requirements 	0	0

Package Description:

Finance and Administration

Sub-package A-5 of the administrative support zero-based budget package funds finance and administrative services for the Ferries capital program, including: accounting and purchasing services (Organizations 365510 and 365520), external audit services (Organizations 271010 and 271030), administrative services (Organization 365910), security grant administration (Organization 363630), and environmental program management (Organization 363640). Detailed functions include:

Providing accounting services, including:

- Accounting for fixed assets including capitalization, depreciation and retirement of fixed assets, and updating the Transportation Asset Reporting and Tracking System;
- Accounting for federal and local grants including monitoring set-up of agreements in the accounting system, tracking expenditures against grant authorizations, preparing financial reports and reimbursement requests to grantor agencies, monitoring compliance with federal and local grant requirements, and supporting information requests from grantor auditors;
- Ensuring proper accounting for expenditures by treasury account, legislative program, and fiscal period by monitoring expense budget control lines in the accounting system, reviewing accounts payable and receivable coding, monitoring work order entries, preparing journal vouchers to correct transactions, and reconciling and closing work orders;
- Conducting financial transactions including processing consultant invoices, preparing billings under reimbursable agreements, transferring funds, canceling warrants and tracking disposition of aged warrants;
- Reviewing general ledger summaries such as trial balances;
- Reporting construction work in progress;
- Preparing external state and federal financial reports; and
- Providing reception services.

Providing external audit services including:

- Determining the reasonableness of consultant overhead rates;
- Reviewing payments to contractors and consultants;
- Identifying and resolving audit exceptions;
- Determining amounts due from or owed to contractors and consultants; and
- Providing other external audit support as required.

Providing administrative services including:

- Managing building leases and rental agreements and acting as tenant liaison for service changes, maintenance and repair issues;
- Performing office space planning, developing tenant improvements, and preparing modular office configurations;
- Managing the Ferries Division's fleet of TEF vehicles and equipment;
- Providing centralized review and approval of non-project related rent, telecommunications, copier, and TEF payments;
- Managing mail distribution and collection;
- Administering state vehicle, employee, and visitor parking programs;
- Coordinating vessel galley investments;
- Overseeing periodic physical inventory;

- Purchasing goods and services related to administrative activities; and
- Providing staff-aid support to the Division’s Deputy Chief for Finance and Administration.
- Providing administration of Homeland security grants.

Providing environmental program management, including:

- Assessing the regulatory environment to identify impacts on the policies and procedures used by engineering organizations to deliver the capital program;
- Developing, implementing, integrating and maintaining environmental protection policies and procedures for engineering organizations.

Table A-5: Fiscal Detail, Object of Expenditure Detail, Salary and FTE Detail for financial and administrative services, including accounting, external audit, payroll and administrative services

Financial and Administrative Services (A5)			
Fiscal Detail			
Detail by Fund	FY 2018	FY 2019	2017-19
099-1 Puget Sd Capital Construction Account- State	2,359,000	2,352,000	4,711,000
Total by Fund	2,359,000	2,352,000	4,711,000
Staffing FTEs	6.80	6.80	6.80

Financial and Administrative Services (A5)			
Object of Expenditure Detail			
Detail by Object of Expenditure	FY 2018	FY 2019	2017-19
A - Salaries and Wages	409,000	409,000	818,000
B - Benefits	146,000	146,000	292,000
C - Personal Service Contracts	-	-	-
E - Goods and Services	1,766,000	1,759,000	3,525,000
G - Travel	35,000	35,000	70,000
J - Capital Outlay	3,000	3,000	6,000
T - Intraagency Reimbursements	-	-	-
Total by Object	2,359,000	2,352,000	4,711,000

Financial and Administrative Services (A5)						
Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	2017-19	FY 2018	FY 2019	2017-19
90057 - 143M - Fiscal Analyst 5	0.10	0.10	0.10	6,000	6,000	12,000
A0300 - M0233 - Accountant	1.00	1.00	1.00	63,000	63,000	126,000
A0311 - M0232 - Accounting Asst. 3	1.00	1.00	1.00	52,000	52,000	104,000
90815 - 542H - Facilities Planner	0.25	0.25	0.25	18,000	18,000	36,000
A0327 - M0270 - Mail Clerk	0.50	0.50	0.50	20,000	20,000	40,000
A0322 - M0210 - Receptionist	0.50	0.50	0.50	22,000	22,000	44,000
A0328 - M0252 - Buyer 3	0.20	0.20	0.20	11,000	11,000	22,000
A0339 - M0252 - Buyer 2	1.00	1.00	1.00	52,000	52,000	104,000
09W024 - WMS2 - Enviro. Prog. Mgr	0.25	0.25	0.25	24,000	24,000	48,000
9P011 - 543G - Trans Planning Spec 3 (Security Grants)	1.00	1.00	1.00	70,000	70,000	140,000
A0215 - M0226 - Staff Aide	0.50	0.50	0.50	27,000	27,000	54,000
- - EXTERNAL AUDITOR (HQ)	0.50	0.50	0.50	44,000	44,000	88,000
Total Staff Dollars and FTEs	6.80	6.80	6.80	409,000	409,000	818,000

Table B-5: Performance measures for financial and administrative services, including accounting, external audit, purchasing and administrative services

Performance Measures for Finance and Administrative Services	FY 2018	FY 2019
<p>Outcome Measures: POG Result Area-Ability of State Government to Achieve Results Efficiently and Effectively</p> <ul style="list-style-type: none"> • The Ferries Division efficiently and effectively meets its capital program financial obligations • Expenditures are properly accounted for and reported in accordance with pertinent general and Ferries specific laws 	<p>Yes</p> <p>Yes</p>	<p>Yes</p> <p>Yes</p>
<p>Output Measures:</p> <ul style="list-style-type: none"> • Dollar amount of accounting transactions (in millions) • Number of FTEs supported by administrative services 	<p>\$100-150</p> <p>115-135</p>	<p>\$100-150</p> <p>115-135</p>
<p>Efficiency/Effectiveness Measures:</p> <ul style="list-style-type: none"> • Close the biennium in compliance with RCW 43.88.290 • Number of audit findings pertaining to accounting for and reporting expenditures 	<p>Yes</p> <p>0</p>	<p>Yes</p> <p>0</p>

Package Description:**Communications**

Sub-package A-6 of the administrative support zero-based budget package funds communications services for the Ferries capital program; including public involvement and community relations and outreach (Organization 368010) and coordination for mitigation of the adverse impacts of construction and customer information (Organization 368110).

Detailed functions include: Performing public involvement and community relations and outreach activities pertaining to long-range capital plans and project design alternatives including:

- Preparing and distributing, through a variety of media, notification of long-range capital plans and project design alternatives to customers, communities, and the general public;
- Planning, organizing, and coordinating public involvement and community relations activities to facilitate agency-public dialogue about long-range capital plans and capital project design alternatives;
- Participating in public meetings and design presentations;
- Collecting, analyzing, and reporting responses from customers, communities, and the general public regarding long-range capital plans and project design alternatives; and
- Communicating to policy makers input from customers, communities, and the general public regarding long-range capital plans and project design alternatives.

Coordinating mitigation of the adverse impacts of construction projects on customers, communities, and the general public including:

- Preparing notifications to riders that construction will disrupt or curtail ferry service and require that they adjust their means of transportation;
- Coordinating measures to facilitate safe and efficient movement of riders into and out of the terminal and through construction areas;
- Coordinating with transportation providers to mitigate the adverse impact of construction on modal connections by making adjustments in service levels, schedules, and pick-up/drop-off locations;
- Leasing transportation services to mitigate the impacts of construction disruptions on ferry service; and
- Coordinating with communities to mitigate the impact of construction-related changes in ferry traffic flows on local transportation networks.

Providing general public information support to the capital program including:

- Preparing press releases;
- Preparing web pages and information brochures describing capital projects;
- Preparing information about capital projects for use by the agency's information agents; and
- Coordinating public disclosure requests.

Table A-6: Fiscal Detail, Object of Expenditure Detail, Salary and FTE Detail for communications services, including public involvement, community relations and outreach, business development, coordination to mitigate the adverse impacts of construction and customer information

Communications Services (A6)			
Fiscal Detail			
Detail by Fund	FY 2018	FY 2019	2017-19
099-1 Puget Sd Capital Construction Account- State	249,000	249,000	498,000
Total by Fund	249,000	249,000	498,000
Staffing FTEs	2.40	2.40	2.40

Communications Services (A6)			
Object of Expenditure Detail			
Detail by Object of Expenditure	FY 2018	FY 2019	2017-19
A - Salaries and Wages	185,000	185,000	370,000
B - Benefits	48,000	48,000	96,000
C - Personal Service Contracts	-	-	-
E - Goods and Services	11,000	11,000	22,000
G - Travel	1,000	1,000	2,000
J - Capital Outlay	4,000	4,000	8,000
T - Intraagency Reimbursements	-	-	-
Total by Object	249,000	249,000	498,000

Communications Services (A6)						
Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	2017-19	FY 2018	FY 2019	2017-19
9W049 - WMS 3 - Corp. Comm. Dir	0.50	0.50	0.50	54,000	54,000	108,000
A0301 - M0226 - Staff Aid	0.50	0.50	0.50	27,000	27,000	54,000
9W018 - WMS 2 - Cust. Comm. Mgr	0.20	0.20	0.20	19,000	19,000	38,000
9W054 - WMS 1 - Pub. Invol. Mgr	0.60	0.60	0.60	43,000	43,000	86,000
9W055 - 197K - Comm. Consultant 3	0.60	0.60	0.60	42,000	42,000	84,000
Total Staff Dollars and FTEs	2.40	2.40	2.40	185,000	185,000	370,000

Table B-6: Performance measures for communications services, including public involvement, community relations and outreach, coordination to mitigate the adverse impacts of construction and customer information

Performance Measures for Communications Services	FY 2018	FY 2019
Outcome Measure: POG Result Area-Ability of State Government to Achieve Results Efficiently and Effectively <ul style="list-style-type: none"> The public is informed about the nature and impact of long-range plans The public is informed about the nature and impact of terminal projects 	Yes Yes	Yes Yes
Efficiency/Effectiveness Measure: <ul style="list-style-type: none"> Number of findings of inadequate statutorily required public involvement 	0	0

2017 - 2019 Decision Package

Agency: 405 Department of Transportation

Decision Package Code/Title: V – Vessel Project Support for the WSF Capital Construction Program

Budget Period: 20172019

Budget Level: Zero-base

Program: W WSF Construction
Sub-Program: W2 Vessel Construction

Recommendation Summary Text:

This is the zero-based budget request for decision package V – Vessel Project Support provided by the Vessel Maintenance, Preservation, and Engineering Organization to the WSF Capital Construction Program (W) – Vessel Capital Construction Sub-Program (W2).

Consolidated Fiscal Detail:

On the following page is the consolidated fiscal detail and FTE detail for the budget activity packages included in V – Vessel Project Support for the WSF Capital Construction Program. Ferries Division will prepare a new zero-based budget request in each succeeding budget development cycle that will replace the out-biennium placeholders established by the 16LEGFIN budget. Details of individual budget activity packages follow.

Fiscal Detail:

	FY 2018	FY 2019	2017-2019	2019-2021	2021-2023
A90 PSCC-State	3,216,186	3,216,000	6,432,000	3,653,000	3,787,000
Total by Fund	3,216,186	3,216,000	6,432,000	3,653,000	3,787,000
Staffing FTEs	17.275	17.275	17.275	17.275	17.275

V - Vessel Project Support for WSF Capital Construction			
Object of Expenditure Detail			
Object of Expenditure	FY 2018	FY 2019	2017-2019
A - Salaries and Wages	1,454,338	1,454,338	2,908,676
B - Benefits	459,913	459,913	919,826
C - Personal Service Contracts			
E - Goods and Services	1,301,749	1,301,749	2,603,498
G - Travel			
J - Capital Outlay	-	-	-
T - Interagency Reimbursements	-	-	-
Total by Object	3,216,000	3,216,000	6,432,000

V- Vessel Project Support for WSF Capital Construction						
Salary and FTE Detail						
Budget Activity Packages	FTEs			Dollars		
	FY 2018	FY 2019	Biennial Average	FY 2018	FY 2019	Total
V-1 - VE Management, Supervision & Support	11.0	11.0	11.0	916,010	916,010	1,832,020
V-2 - Vessel Planning/Design	3.5	3.5	3.5	304,735	304,735	609,470
V-3 - Vessel Noise Control Abatement	0.15	0.15	0.15	15,121	15,121	30,242
V-4 - Vessel Technical Support Activities	2.625	2.625	2.625	218,472	218,472	436,945
Total	17.275	17.275	17.275	1,454,338	1,454,338	2,908,676

Budget Activity Package: V-1 – Vessel Preservation and Engineering Management, Supervision and Support

Recommendation Summary Text:

This activity provides budget capacity for the supervision and support for the new construction, preservation, and engineering elements of the Vessel Maintenance, Preservation & Engineering (VMPE) Organization at Ferries Division. It funds all or portions of the salaries of personnel who are essential to the ongoing construction, preservation, and improvement of ferry vessels. These core individuals oversee, coordinate, lead and manage all elements of the vessel capital program regardless of specific vessel capital projects and are thus funded in the project support budget rather than by individual projects.

This activity funds supervision, project support, and office support for the vessel construction / preservation office (organizations 362150 / 367310) and the vessel design office (organization 362140) that accomplish preliminary engineering and construction for the preservation of existing ferries and the acquisition of new ferries. The types of activities funded include executive management, supervision of project design and construction organizations, office engineering support, and administrative support.

These core personnel include the following:

- Director, Vessel Engineering and Maintenance (0.5 FTE)
- Senior Port Engineer, Construction and Preservation
- Chief Naval Architect
- Vessel Construction Manager
- Vessel Business Manager
- Vessel Life Cycle Cost Model Analyst
- Vessel Capital Budget Specialist
- Vessel Work Order Specialist (2 FTE)
- Vessel Project Administrator
- Vessel Technical Librarian
- Staff Aide

Executive management is performed by the Director, Vessel Engineering:

- Developing strategic goals, objectives, strategies, performance measures and plans; operational policies, strategies and plans for delivering the vessel capital program;
- Integrating and coordinating goals, objectives strategies and plans of the capital and operating programs to effectively and efficiently accomplish Ferries Division's mission;
- Developing and implementing innovative approaches and best practices, such as, alternative construction methods, financial and business case analyses, quality control procedures, department procedural standards, and emergency response protocols;
- Approving the organizational structure, establishing personnel policies, procedures and practices, appointing personnel to positions, and allocating staff and consultants to accomplish work plans;
- Developing strategies and policies for the media, the Transportation Commission and the Legislature;
- Providing oversight of capital project planning and execution
- Administering personnel performance management process, workforce development and succession planning

Supervision of the Vessel Construction and Preservation team is performed by the Senior Port Engineer for Construction and Preservation and includes:

- Planning, organizing, directing, coordinating and controlling the development and delivery of vessel capital projects;
- Developing capital investment priorities and recommending selection of projects;
- Developing the capital budget request and approving expenditures for design and construction;
- Making policy and approving designs for preservation of existing vessels and construction of new vessels;
- Developing and adjusting schedules for shipyard projects that coordinate with WSF's Operating schedule
- Overseeing the Vessel Emergency Repair Program
- Resolving bid protests, awarding construction contracts, and settling construction claims.

Supervision of the vessel planning and design office is performed by the Chief Naval Architect and includes:

- Developing and implementing policies and strategies for organizational structure and requirements for staff and material resources to deliver vessel planning and design capital projects;
- Supervising preliminary engineering tasks relating to energy efficiency initiatives, environmental compliance, permitting, designs, plans, and estimates;
- Directing peer review of designs and quality and constructability assessments, and "PE stamping" engineering drawings, specifications and reports;
- Developing staffing requirements, organization charts, position descriptions, hiring procedures and conducting recruiting, interviewing and hiring activities for the vessel planning and design office consisting of marine engineers and marine designers.
- Managing the engineering library, including cataloguing, storing and retrieving vessel drawings, environmental documentation, design reports, special studies, etc.
- Overseeing RFP development activities for new vessel design-build contract
- Managing on-call Naval Architecture support contracts

Supervision of the vessel construction office is performed by the Vessel Construction Manager and includes:

- Developing and implementing policies and strategies for organizational structure and requirements for staff and material resources to deliver vessel construction projects;
- Developing and implementing policies and plans relating to personnel actions and corrective/disciplinary actions;
- Leading the team responsible for development and delivery of capital construction projects;
- Supervising project inspection offices and construction project support activities;
- Overseeing environmental and permitting compliance;
- Reviewing and approving change orders, construction claims and negotiations;
- Coordinating and communicating vessel construction activities;
- Providing technical assistance to project managers relating to the preparation of emergency contracts, change orders, estimates, materials certification, final records and other contract administration duties;
- Preparing organizational plans to deliver the vessel construction work program;

Supervision of the vessel maintenance, preservation and engineering budgets is performed by the Vessel Business Manager and includes:

- Development, recommendation, implementation and execution of strategic plans and biennial budgets for the vessel capital and operating programs;
- Coordinate collection of information in response to inquiries from, and communicate to, external financial, programmatic and administrative inquiries including WSDOT, OFM, and Legislature
- Supervise tracking and reporting of VMPE capital expenditures; maintenance and updating of VMPE cost allocation system; assembly, maintenance and updating of vessel budget items in the capital financial systems including Transportation Executive Information System (TEIS) and the Capital Program Management System (CPMS); development and updating of budget decision packages and white papers for all VMPE budget areas.
- Coordinate collection, evaluation and reporting of financial information for VMPE performance reports including confidence and quarterly reports and financial reporting for any future project management reporting systems.
- Administering change management processes;
- Liaison with Capital Program Development for capital budget matters including development and modification of biennium budgets and budget development procedures.

Administrative services by the Staff Aide include:

- Support to management: monitoring workload and budget resources; attending and recording minutes of meetings; preparing monthly management reports; facilitating the flow of documents requiring executive approval; maintaining policies and procedures manuals;
- Single Point of Contact: Providing a single point of contact with Human Resources, Training, Payroll, Information Technology, Budget, Accounting, Purchasing and Administrative Services;
- Communication services: maintaining staff seating charts and phone/e-mail lists; providing reception of and information to visitors and backup phone reception; arranging meetings and sending notices; forwarding and distributing mail and facsimiles; providing word processing services, including formal correspondence to federal, state and local officials and the public and draft documents from handwritten notes and oral instruction; coordinating printing services;
- Personnel and payroll services: coordinating with HR to update organization charts; maintaining organization and personnel files containing items such as, staff evaluations and position classification questionnaires; coordinating hiring of temporary help; assisting with new staff orientations, including obtaining login scripts, mainframe accounts, remote access accounts, telephone installations, computer equipment and business cards; processing requests for security badges; preparing the staff training schedule; reviewing staff time sheets; entering semi-monthly pay documents into the mainframe;
- Travel services: making travel arrangements for staff; reviewing requests for travel reimbursements; submitting travel documentation to Accounting; dispatching motor pool vehicles and scheduling maintenance;
- Procurement services: Ordering, receiving, storing and monitoring inventories of stores wants items and office and computer supplies using MPET; ordering special equipment, such as computers, ergonomic equipment, cell phones/PDAs, cubicle accessories, name plates, etc.; coordinating building service requests; reviewing and approving monthly billings for both commercial and non-commercial charges; conducting inventories of minor capital equipment.

Fiscal Detail:

Detail by Fund	FY 2018	FY 2019	2017-2019	2019-2021	2021-2023
A90 PSCC-State	1,207,629	1,207,629	2,415,259	2,415,259	2,415,259
Total by Fund	1,207,629	1,207,629	2,415,259	2,415,259	2,415,259
Staffing FTEs	11.5	11.5	11.5	11.5	11.5

V-1 - Vessel Preservation & Engineering Management, Supervision & Support Object of Expenditure Detail				
Object of Expenditure	FY 2018	FY 2019	2017-2019	
A - Salaries and Wages	916,010	916,010	1,832,021	
B - Benefits	291,619	291,619	583,238	
C - Personal Service Contracts	-	-	-	
E - Goods and Services	-	-	-	
G - Travel	-	-	-	
J - Capital Outlay	-	-	-	
T - Interagency Reimbursement	-	-	-	
Total by Object	1,207,629	1,207,629	2,415,259	

V-1 - Vessel Preservation & Engineering Management, Supervision & Support Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	Biennial Average	FY 2018	FY 2019	Total
Director of Vessel Engineering & Maintenance, EMS05	0.50	0.50	0.50	62,845	62,845	125,690
Sr. Pres. Port Engr, EMS 4	1.00	1.00	1.0	103,005	103,005	206,010
Chief Naval Arch, WMS 3	1.00	1.00	1.00	86,123	86,123	172,246
Vsl Construction Mgr, WMS 3	1.00	1.00	1.00	86,123	86,123	172,246
Vsl Business Manager, 533G	1.00	1.00	1.00	100,806	100,806	201,612
Vsl LCCM Analyst 539V	1.00	1.00	1.00	80,723	80,723	161,446
Vsl Cap Budget Spec, 543H	1.00	1.00	1.00	80,723	80,723	161,446
Vsl Work Order Spec, 530L	2.00	2.00	2.00	132,520	132,520	265,040
Vsl Proj Admin, 530L	1.00	1.00	1.00	66,260	66,260	132,520
Tech Librarian, 261C	1.00	1.00	1.00	60,017	60,017	120,034
Staff Aide, M0226	1.00	1.00	1.00	56,865	56,865	113,730
Total	11.5	11.5	11.5	916,010	916,010	1,832,021

Narrative Justification and Impact Statement

Performance measure detail:

Performance Measures for V-1 – Vessel Preservation and Engineering Management, Supervision and Support:	FY 2018	FY 2019
Outcome Measure: POG Result Area—Improve statewide mobility of people, goods and services <ul style="list-style-type: none"> • Deliver projects on time and on budget (90% standard) 	Yes	Yes
Output Measures (Biennial-Fiscal Years Not Available) <ul style="list-style-type: none"> • Number of vessel preliminary engineering phase projects • Number of vessel construction phase projects • Vessel preliminary engineering budget • Vessel construction budget Number of vessel design organization FTEs; Number of vessel construction organization FTEs	30 30 \$65,000,000 39	30 30 \$65,000,000 39
Efficiency/Effectiveness Measures POG Result Area--Improve the Ability of State Government to Achieve Results Efficiently and Effectively <ul style="list-style-type: none"> • Delivery planned scope of work for project support activities on time and on budget • Develop and manage program IAW RCWs 43.88 and 47.60 • Spend IAW legislative appropriations and provisos • Properly account for expenditures by program, fund, proviso and fiscal period 	Yes Yes Yes Yes	Yes Yes Yes Yes

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

The projects discussed herein support the following WSDOT Strategic Goals:

- Objective 2.4 Ferry Vessel Maintenance and Preservation
- Objective 5.1 Capital Project Management and Delivery
- Objective 5.4 Accountability and Communication
- Objective 5.7 Planning and Prioritization

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

- WDOT Ferry Preservation – Vessels
- WSDOT Ferry Operations – Vessels
- WDOT Transportation Management and Support

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

This package supports the state-wide result of good stewardship by planning, overseeing and executing the ferry vessel preservation and improvement program.

What are the other important connections or impacts related to this proposal?

- **Impact on agency clients and services:** This package ensures that ferry customers travel on safe and reliable vessels and that growth in ferry customer travel demand is met subject to budget constraints.

- **Impact on other state programs or units of government:** None
- **Other:** None

What alternatives were explored by the agency, and why was this alternative chosen?

This activity complies with the requirements of ESHB 2358, Laws of 2007 by developing a support budget for supervision and support of the vessel preservation and engineering division and allocating the cost to projects.

Alternative approaches are:

- Ferries Division could revert to the prior cost allocation system which did not develop overhead budgets but simply collected support costs as they occurred and allocated them to projects.
- Instead of allocating support costs to projects, Ferries Division could allocate them to new subprograms.
- Support budgets could use the traditional operating budget methodology based on adjusting or adding new initiatives to a base carried forward from the prior fiscal period, instead of using a zero-base budget methodology.

What are the consequences of not funding this package?

Failure to fund this activity will jeopardize Ferries Division's ability to plan, organize, direct, coordinate, and control the Vessel Preservation and Improvement Program. Vessels will fall into disrepair and will not be able to meet regulatory requirements for regular drydockings, resulting in loss of U.S. Coast Guard (USCG) certification, which would result in the shutdown of the vessel prior to realizing the vessels expected full service life. This would then require earlier replacement than scheduled.

Super Class vessels are approaching end of 60-year service life. Pre-construction activities must begin in this biennium for replacement vessels.

Jumbo Mark II vessels are facing equipment obsolescence; failure to renew this equipment will result in decreased reliability and substantial service impacts. These vessels serve the routes of highest ridership in the system.

Vessels are a continuation of the Washington State highway system. Some island routes have no other means for delivery of goods and services.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

- FTEs: 11.5
(Fiscal Detail table and narrative above displays FTE detail.)
- Labor costs: Wages: \$1,832,021 | Benefits: \$583,238 | Total: \$2,415,259
- Non-labor expenses: None

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

- **Budget impacts in future biennia:** Ongoing funding. For the purpose of long-range financial planning in this budget development cycle, the proposed 2017-19 vessel supervision and office support budget is assumed to continue into future biennia with adjustments for inflation. However, it should be noted that Ferries Division will prepare a new zero-based budget request in each succeeding budget development cycle, which will replace the out-biennia placeholders established by the prior budget development cycle.
- **Distinction between one-time and ongoing functions and costs:** All functions and costs are ongoing.
- **Changes from the previous biennium:** None

Expenditure calculations and assumptions.

None

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

- **Distinction between one-time and ongoing functions and costs:** All of the costs are for ongoing functions.
- **Budget impacts in future biennia:** None at this time.
- **Changes from the previous biennium:** There are no changes from the previous biennium.

Budget Activity Package: V-2 – Vessel Planning / Design

Recommendation Summary Text:

This activity funds the Ferries Division's Vessel Planning / Design Department (Vessel Design), which promotes efficient and effective vessel design and construction through investigating, studying, and developing processes and methods for improving design, engineering, and shipboard applications. This also enables timely response by Vessel Design to emergent ferry issues.

This program provides tools and studies that assist in maintaining or enhancing Vessel Design's capability for supporting the ferry fleet and includes the following:

- **Design Tools**

Provides for essential design tools used by the Vessel Design staff to support preservation and improvement of the vessel fleet. These include:

- **AutoCAD:** The maintenance, upkeep, training and continued support of the AutoCAD drawing development software system including licenses, training, and standards that are essential to development of the technical drawings that are critical elements of vessel preservation contracts.
- **PipeFlow:** The maintenance, upkeep, training, and continued support of this piping system design and analysis software tool.
- **Rhino 3D:** The maintenance, upkeep, training, and continued support of this three-dimensional graphical interface tool used for developing designs of revised systems/arrangements and is an essential tool for exploring design alternatives.
- **Finite Element Analysis:** The maintenance, upkeep, training, and continued support of the LISA finite element analysis tool that enables analysis of structural loads in complex structures.
- **Beasy Corrosion Modeling Software:** The finite element analysis tool to analyze corrosion mechanisms such as dissimilar metals, electrolysis, and other galvanic modes.

- **Design Studies & Standards**

Provides for anticipated design studies as mandated by ESHB 3209. These include:

- **Emissions Testing:** WSF will be systematically testing the emissions levels on all the vessels to determine the present benchmark for the system's emission model. The study includes the installation of ports in the exhaust system on a range of vessels in the fleet. The exhaust systems include the main engines, ship's service generators and boilers.
- **Steering Control System:** develop an integrated steering control system for the Jumbo Class vessels. The control system shall be PLC based using industry standard equipment to avoid obsolescence in the future.
- **New vessel RFP Development:** Develop RFP for new vessel Design-Build Contract IAW RCW 46.60.810-824. In accordance with the ferries Division Long Range Plan, this initiative includes all pre-design activities for WSF's next class of ferries. These activities will be led by a dedicated naval Architect under the direction of the Chief Naval Architect. Contracts/Legal and Planning department support will also be required. The program will extensively leverage commercial third party resources through division's existing on-call Naval Architecture contracts. Products include Needs Statement, Alternatives Analysis, Project Definition and RFP development.
- **Jumbo Mk II Propulsion Control System Obsolescence RFP Development:** Utilize positions Project Engineer 90174 and Inspector Specialist 90175 to plan and execute a major preservation project to replace obsolete elements of the Jumbo Mark 2 propulsion system. This will also require substantial support from contracts/legal staff. The project will leverage existing Naval Architecture on-call contracts. Project steps include:
 - Develop an overall procurement strategy and project plan, including scope, budgetary cost estimate and timeline.

- Solicit industry input through the RFI process. Develop multiple alternatives for sustaining the vessel propulsion system through the end of its projected service life of 60 years. Alternatives may include scope, execution strategy, sequence/phasing, lifecycle support strategy, etc. Prepare estimates for acquisition and lifecycle support. Evaluate alternatives and update project plan to reflect the alternative that minimizes total lifecycle cost.
- Develop and issue an RFP to include design, construction, and associated logistics support elements such as training, spare parts, service, and obsolescence management.
- Execute the contract on the vessels Wenatchee, Tacoma and Puyallup utilizing capital funds IAW LCCM.
- **Unanticipated USCG/IMO Regulatory Changes:** Request is in support of any design studies that may emerge as a result of unanticipated USCG, International Maritime Organization, or any other regulatory agency changes that may require changes in vessel designs.
- **Fuel Conservation:** Request is for funding what is currently undefined for further vessel improvements associated with fuel conservation and air emissions reduction. Potentially includes a design study for fuel consumption indication in the pilothouse of ferries and additional design study work for positive restraint, propellers and speed reductions.
- **Vessel Design Standards:** Request is to enable work on developing Vessel Design Standards as required by ESHB 3209.
 - Note: Details of who will complete the design studies and development of the Vessel Design Standards are not defined. These are values based on estimated total scope of effort and will consist of an integrated effort by the Chief Naval Architect who is covered in V-1 and existing Vessel Design and contracting staff who charge their work to capital projects.
- **Design Consumables:** Provides for consumables utilized in executing engineering functions including the following:
 - Offices Supplies
Office printer/copier paper, admin supplies, pens, pencils, notebooks.
 - Color Printer
Lease and Maintenance Agreement.
 - Plotter Supplies
Maintenance Agreement, supplies, paper.
 - Data Acquisition System Supplies
Strain gauge, wires, and miscellaneous hardware.
 - Library subscription fees for reference materials replacement.
 - Library Cataloging System
WSF Terminal Engineering and WSF Vessel Engineering Libraries currently maintain five disparate cataloging systems with limited interoperability. Each system grew out of a discrete need to index, locate, and deliver technical documents from varying agencies or formats. It has been the desire of both libraries to have a unified catalog for some time, to pull document delivery into the system, and, ideally, make the catalog available for the WSDOT Library for reference. In addition to streamlining the current library catalogs, the unified catalog also anticipates greater use and building the engineering collections into a comprehensive WSF resource (including training, planning, etc.).

Fiscal Detail:

Detail by Fund	FY 2018	FY 2019	2017-2019	2019-2012	2021-2023
A90 PSCC - State	1,204,809	1,204,809	2,409,618	TBD	TBD
Total by Fund	1,204,809	1,204,809	2,409,618	TBD	TBD
Staffing FTEs	3.5	3.5	3.5	3.5	3.5

V-2 - Vessel Planning/Design Object of Expenditure Detail				
Object of Expenditure	FY 2018	FY 2019	2017-2019	
A - Salaries and Wages	304,735	304,735	609,470	
B - Benefits	95,825	95,825	191,651	
C - Personal Service Contracts	-	-	-	
E - Goods and Services	804,249	804,249	1,608,498	
G - Travel	-	-	-	
J - Capital Outlay	-	-	-	
T - Interagency Reimbursement	-	-	-	
Total by Object	1,204,809	1,204,809	2,409,618	

V-2 - Vessel Planning/Design Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	Biennial Average	FY 2018	FY 2019	Total
Naval Architect 2, 539W	1.0	1.0	1.0	89,104	89,104	178,208
Project Engineer,533G	1.0	1.0	1.0	100,806	100,806	201,612
Inspector Specialist,533E	1.0	1.0	1.0	84,816	84,816	169,632
Contracts Specialist 2,144G	0.5	0.5	0.5	30,009	30,009	60,018
Total	3.5	3.5	3.5	304,735	304,735	609,470

Narrative Justification and Impact Statement

Performance measure detail:

Performance Measures for V-2 – Vessel Planning/Design	FY 2018	FY 2019
Outcome Measures:		
• Office equipment operation maintained without loss of service	Yes	Yes
• AutoCAD update / training completed for full design staff		
• Rhino3D use expanded to 2 more disciplines to improve concept examination / assessment	Yes Yes	Yes Yes
• Technical Library maintains efficiency		
• Beasy Corrosion modeling software used to improve vessel configuration to reduce chronic corrosion issues	Yes Yes	Yes Yes
Output Measures:		
• Complete Design Studies	Yes	Yes
• RFP Developed for new vessel Design-Build	-	Yes
• RFP Developed for Jumbo Mark II Propulsion System		Yes

Is this decision package essential to implement a strategy identified in the agency's strategic plan? If so, please describe.

The projects discussed herein support the following WSDOT Strategic Goals:

- Objective 2.4 Ferry Vessel Maintenance and Preservation
- Objective 5.1 Capital Project Management and Delivery
- Objective 5.7 Planning and Prioritization
- Goal 1 Strategic Investments

Does this decision package provide essential support to one of the Governor's priorities? If so, please describe.

This activity supports efficient and effective delivery of the Ferries Division capital program.

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

This activity supports the result area of good stewardship of public resources. It addresses obsolescence of the program's largest and most valuable assets, the Jumbo mark II. It begins the process of recapitalizing the Super Class vessels.

What are the other important connections or impacts related to this proposal?

None.

What alternatives were explored by the agency, and why was this alternative chosen?

Design Tools & Design Studies: The only other option for design tools and completion of design studies is to completely contract out engineering work to design firms who use similar tools. Doing this will cost more based on standard expenses incurred to date when using support contractors for similar efforts at current state-of-the-market rates; plus, it will be harder to integrate such efforts with current fleet operating methodologies and standards. Ability to respond in a timely fashion to emergent needs may also be compromised if efforts have to be coordinated first through the contractual process.

Design Consumables: Basic consumables such as printer and photocopier paper, administrative supplies, pens, pencils, notebooks, library materials, and maintenance agreements are necessary for basic office and engineering functions.

What are the consequences of not funding this package?

Design and construction staffs will not have the basic tools that allow them to complete their work. Fleet obsolescence and vessel recapitalization requirements will not be met. The impact is long-term reduction in service reliability and potentially level of service.

What is the relationship, if any, to the capital budget?

Design efforts supports renewal of obsolete systems IAW LCCM. It also supports vessel renewal IAW ferries Division Long-Range Plan.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None

Expenditure calculations and assumptions.

- FTEs: 3.5
- Non-labor expenses: \$1,652,870 (detailed below)

(Object Code E – Goods & Services)

• Design Tools:	
○ AutoCAD Support	35,000
○ Pipe Flow Analysis Tool	4,000
○ Rhino3D CAD Tool	1,500
○ Finite Element Analysis Software	3,200
○ <u>Beasy Corrosion Modeling Software</u>	<u>38,000</u>
Sub-Total	\$81,700
• Design Studies & Standards:	
○ Emission Testing	100,000
○ Steering Control System	20,000
○ Redundant Power System	15,000
○ Fuel Conservation	23,000
○ <u>Vessel Design Standards</u>	<u>12,500</u>
Sub-Total	\$170,500
• Design Consumables	
○ Office Supplies (\$625/month)	13,500
○ Plotter Supplies (\$625/month)	13,500
○ Data Acquisition System Supplies	17,070
○ Library Subscription Fees	12,600
○ <u>Library Cataloging System</u>	<u>54,000</u>
Sub-Total	\$110,670
• <u>Training and Administrative Tasks (Based on prior expenditures)</u>	<u>90,000</u>
Sub-Total	\$90,000
• Naval Architecture Support	
○ Pre-Design Studies for new vessel Design-Build RFP	755,628
○ <u>MK2 Propulsion Control System RFP Development</u>	<u>400,000</u>
Sub-Total	\$1,200,000
▪ TOTAL:	\$1,608,498

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

- **Budget impacts in future biennia:** Continued maintenance of design tools and staff capability to utilize them will require recurrent funding. Consumption of consumables will continue as design efforts continue for life cycle support of the vessel fleet. Design studies will be required in future biennia to different degrees depending on planned and also unplanned vessel improvements.
- **Distinction between one-time and ongoing functions and costs:** All costs and functions are ongoing with the exception of the new vessel RFP development and Jumbo Mark II propulsion System RFP development.

- **Changes from the previous biennium:** This budget submission makes the following changes:
 - Design Tools:
 - Added Beasy Corrosion Modeling Software
 - Removed Data Acquisition System Tools
 - Design Studies:
 - Continues Steering Control System Study for Jumbo Class (Issaquah vessels complete)
 - Adds new vessel Design-Build RFP development
 - Adds Jumbo MK2 Propulsion Control System renewal RFP development
 - Design Consumables:
 - Added Data Acquisition System Supplies.
 - Removed remote operated vehicle purchase

Budget Activity Package: V-3 – Vessel Noise Control Abatement

Recommendation Summary Text:

This activity provides budget capacity for the vessel noise control abatement program, which protects people by meeting Ferries Division’s commitment to address hazardous noise exposure to the engine room crews aboard vessels. This project searches for and abates hazardous noise conditions throughout the fleet.

This is a risk management issue and is therefore a priority issue for the agency. The Ferries Division has received complaints about hazardous noise conditions aboard its vessels, and in past biennia has been involved in litigation and found liable for causing hearing impairment to vessel crew members. Since the 2003-05 biennium, Ferries Division has been conducting noise surveys of vessel areas that are suspected or are reported to exhibit excessive noise characteristics. These noise surveys have been conducted by an acoustics consultant. Following identification of noise hazards, Ferries Division institutes corrective action, generally through installation of technically feasible engineering noise controls during shipyard preservation periods. Following the corrective action, noise surveys are again conducted to ensure correction of the problems

Fiscal Detail:

Detail by Fund	FY 2018	FY 2019	2017-2019	2019-2021	2021-2023
A90 PSCC - State	49,506	9,506	99,012	99,012	99,012
Total by Fund	49,506	49,506	99,012	99,012	99,012
Staffing FTEs	0.15	0.15	0.15	0.15	0.15

V-3 - Vessel Noise Control Abatement			
Object of Expenditure Detail			
Object of Expenditure	FY 2018	FY 2019	2017-2019
A – Salaries and Wages	15,121	15,121	30,242
B - Benefits	4,385	4,385	8,770
C - Personal Service Contracts	-	-	-
E - Goods and Services	30,000	30,000	60,000
G - Travel	-	-	-
J - Capital Outlay	-	-	-
T - Interagency Reimbursement	-	-	-
Total by Object	49,506	49,506	99,012

V-3 - Vessel Noise Control Abatement Salary and FTE Detail						
List positions by classification	FTEs			Dollars		
	FY 2018	FY 2019	Biennial Average	FY 2018	FY 2019	Total
Vessel Project Engineer, 533G	0.15	0.15	0.15	15,121	15,121	30,242
Total	0.15	0.15	0.15	15,121	15,121	30,242

Narrative Justification and Impact Statement

Performance measure detail:

Performance Measures for V-3 – Vessel Noise Control Abatement	FY 2018	FY 2019
Outcome Measures:		
<ul style="list-style-type: none"> Conduct noise surveys of vessels reported to have noise hazards or are suspected of having noise hazards 	Yes	Yes
Output Measures:		
<ul style="list-style-type: none"> Take corrected actions as necessary in response to noise surveys 	Yes	Yes

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

- Objective 1.2 Ferries Safety
- Objective 1.5 Worker Safety

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

- Ferry Maintenance – Vessels
- Ferry Preservation – Vessels
- Ferry Improvements – Vessels
- Ferry Operations – Vessels

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

This activity ensures the safety of the traveling public and department staff.

What are the other important connections or impacts related to this proposal?

- **Impact on agency clients and services:** No impacts on clients or services.
- **Impact on other state programs or units of government:** Prevention may reduce the liability of the Ferries operating program for employee hearing injury claims.
- **Other:** None.

What alternatives were explored by the agency, and why was this alternative chosen?

The alternative would be to not establish a basis for noise levels on the vessels. As a consequence, vessels would not have knowledge of whether the vessels are producing noise above acceptable levels or be able to have an adequate response to claims of hearing loss. Noise aboard vessels must be

controlled and reduced to acceptable levels in order to provide a safe environment for crews and the riding public.

What are the consequences of not funding this package?

The Ferries Division will not be able to determine, address, and correct excessive noise situations aboard its vessels, with possible hearing impairment impact on crew personnel and the riding public.

What is the relationship, if any, to the capital budget?

None.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

- FTEs: 0.15 Assumes a Vessel Project Engineer (533G)
- Labor costs: Wages: \$30,242 | Benefits: \$8,770 | Total: \$39,012
- Non-labor expenses: \$60,000 for consultant support costs.
The effort required to measure existing sound levels, analyze, and propose sound mitigation modifications to vessels requires the expertise afforded by a vendor (Object Code E – Goods & Services).

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

- **Budget impacts in future biennia:** Anticipate that there will be a continued need for noise reduction aboard the vessels. Noise problems can develop from changes in vessel configuration and installed machinery and equipment. This is an area that will require monitoring throughout the life of each vessel.
- **Distinction between one-time and ongoing functions and costs:** The requested budget is expected to be an ongoing cost. Changing conditions may require future action and costs to correct emergent noise problems.
- **Changes from the previous biennium:** There are no changes from the previous biennium.

Budget Activity Package: V-4 – Vessel Technical Support Activities

Recommendation Summary Text:

This activity provides timely funding for the Ferries Division's Vessel Engineering and Maintenance Department pre-construction and construction activities required to meet minor emergent capital needs throughout the ferry fleet.

Typical activities include toxic waste reduction activities; navigation/communications installations, radar lab testing, and interfacing activities vital to safe transport; preliminary engineering for preservation projects including scheduling and data collection; sprinkler system borescope inspections, procedure development for the regulatory annual testing of safety devices, forensic analysis to support root cause failure analyses, construction consumables necessary to efficiently complete office, and vessel construction tasks and vessel preservation special projects.

This program provides tools and studies that assist in maintaining or enhancing Vessel Construction's capability for supporting the ferry fleet and includes the following:

- **Radar Laboratory Equipment**

- The Radar and Navigational Equipment Lab is used to test new capital equipment and plan for integration with existing systems prior to purchase and installation on the vessels. The Lab is critical to Ferries Division programs and plays a vital role in preserving and improving vessel navigation and communication systems.
- The proper testing and interfacing of these systems are vital for the safe transport and passage of passengers and vehicles on vessels.
- It is necessary to purchase and test the equipment prior to fleet-wide deployment to engineer how to integrate and operate the equipment. This equipment is used as emergency repair equipment for fleet needs when failures occur above normal levels and timely periods of response. The equipment is then returned to the Lab when the need is over. Support is necessary to the Lab to ensure capital purchases are effectively deployed.

- **Schedules for Fleet-wide Vessel Preservation Periods**

This request provides the budget for a Port Engineer's efforts in conjunction with the Senior Port Preservation Engineer and the Vessel Construction Manager (the two latter are funded under V-1) for continued refinement and revisions of the Fleet-wide Vessel Preservation Period Schedules. The schedules for laying-up of vessels for preservation work must: meet USCG requirements for periodic inspection and maintenance; be responsive to vessel operation requirements in serving the riding public; consider availability of civilian shipyard facilities; and must include adjustments in schedules for emergent material conditions which impact vessel availability. Significant progress has been made in developing these schedules using online tools during the 2015-17 biennium; however, continued testing and modifications are necessary.

- **Bilge and Void Maintenance Program**

The *Washington State Ferries Financing Study II, Auto-Passenger Vessel Preservation and Replacement Report* dated January 10, 2008, in Recommendation 4, Maintenance and Preservation Recommendations, recommended that the Ferries Division institute a bilge and void maintenance program. The department concurred with this recommendation and has implemented such a program. Program activities continue. This effort encompasses the following:

- Continued update of vessel hull inspection / documentation drawings by a Marine Designer.

- Continued review of hull inspection results and planning for shipyard repairs by a Project Engineer.
- Continued review, oversight and direction of any necessary changes for vessel crew inspection processes by a Port Engineer.
- Continued research and implementation by one or more of the above for improved bilge / hull preservation systems.
- **Vessel Sprinkler System Bore Scope Inspections**
Eleven vessels with galvanized sprinkler system piping have repeatedly failed annual sprinkler system tests. The US Coast Guard has mandated increased testing and other costly remedial actions until the affected piping is replaced. Bore Scope inspections by specialty service providers have proven an effective means of pinpointing the damaged piping areas. Inspection results show that failures are isolated to a relatively small percentage of the overall piping systems. This methodology prevents unnecessary renewal of pipe while ensuring the problem areas are addressed.
- **Forensic Services to Support Root Cause Failure Analyses**
As part of its asset management reliability program, Ferries division conducts Root Cause Analyses following significant equipment failures in order to prevent recurrence. Occasionally, it is necessary to conduct laboratory analysis of failed components to determine the nature and cause of the failure. Examples include metallurgical analyses of a failed engine component or post-fire forensic analysis of a failed electrical component.
- **Development of Periodic Safety Test Procedures (PSTP)**
Since the submittal of the 2015-17 capital decision package, the US Coast Guard has required that Periodic Safety Test Procedures be approved by the US Coast Guard Marine Safety Center in Washington, DC. Such procedures are typically delivered when a new asset is acquired, but Ferries Division does not have current procedures that reflect the present configuration of our fleet. This new regulatory requirement requires the dedicated effort of a fleet engineer, working with original equipment manufacturers and the USC Coast Guard, to bring our vessels into compliance.
- **Equipment Obsolescence Mitigation**
Many systems in our aging fleet have major components that are no longer commercially available. While capital funding may be available for the replacement, design efforts are often required to modify the systems to accommodate the new components. This activity funds design efforts for our most critical systems as these obsolete components are identified.
- **Construction Consumables**
Provides consumables for Vessel Construction staff including:
 - Coveralls
 - Hard Hats
 - Safety Glasses
 - Inspection tools (e.g. weld gauges, pit gauges, mirrors, flashlights, dry film thickness tools)
 - Calibration of testing equipment (e.g. ultrasonic tester)
 - Cell phone replacements for those damaged during normal shipyard use
 - 2 laptop computers – planning factor for replacement of two laptops
 - 2 office printers – planning factor for replacement of two printers

Note: Laptops and printers are susceptible to damage due to frequent relocation of inspection staff to different shipyard locations.

Fiscal Detail:

Detail by Fund	FY 2018	FY 2019	2017-2019	2019-2021	2021-2023
A90 PSCC - State	754,056	754,056	1,508,113	TBD	TBD
Total by Fund	754,056	754,056	1,508,113	TBD	TBD
Staffing FTEs	2.625	2.625	2.625	TBD	TBD

V-4 - Vessel Technical Support Activities Object of Expenditure Detail				
Object of Expenditure	FY 2018	FY 2019	2017-2019	
A - Salaries and Wages	218,472	218,472	436,945	
B - Benefits	68,084	68,084	136,168	
C - Personal Service Contracts	-	-	-	
E - Goods and Services	467,500	467,500	935,000	
G - Travel	-	-	-	
J - Capital Outlay	-	-	-	
T - Interagency Reimbursement	-	-	-	
Total by Object	754,056	754,056	1,508,113	

Narrative Justification and Impact Statement

Performance measure detail:

Performance Measures for V-4 – Vessel Technical Support Activities	FY 2018	FY 2019
Output Measures:		
<ul style="list-style-type: none"> All drydock contract packages have updated hull documentation drawings 	Yes	Yes
<ul style="list-style-type: none"> Vessel hull inspections completed by crews / hull inspection team and results prepared in time to provide to USCG inspector prior to each Annual Inspection 	Yes	Yes

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

The projects discussed herein support the following WSDOT Strategic Goals:

- Objective 2.4 Ferry Vessel Maintenance and Preservation
- Objective 5.1 Capital Project Management and Delivery
- Objective 5.4 Accountability and Communication
- Objective 5.7 Planning and Prioritization

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

- Ferry Maintenance – Vessels
- Ferry Preservation – Vessels
- Ferry Improvements – Vessels
- Ferry Operations – Vessels

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

This activity supports the state-wide result of good stewardship by planning, overseeing, and executing the ferry vessel preservation and improvement program in an efficient and effective manner.

What are the other important connections or impacts related to this proposal?

Impact on agency clients and services: More efficient scheduling of shipyard visits could increase vessel availability for marine transportation service.

Impact on other state programs or units of government: None.

Other: None.

What alternatives were explored by the agency, and why was this alternative chosen?

The only other option for the activities identified herein is to completely contract out for any of these efforts which will cost more based on standard expenses incurred to date when using support contractors for similar efforts at current state of the market rates. Additionally, it will be harder to integrate such efforts with current fleet operating methodologies and standards. Ability to respond in a timely fashion to emergent needs may also be compromised if efforts have to be coordinated first through the contractual process. Finally, the Bilge and Maintenance Plan is a legislatively and USCG mandated program.

What are the consequences of not funding this package?

Failure to fund this activity will jeopardize Ferries Division’s ability to continue with essential programs that:

- Ensure vessels are preserved properly,
- Ensure efficient and executable schedules are developed to further essential vessel maintenance and preservation activities,
- Maintain a viable Radar Laboratory which is essential to ensuring acquisition of adequate vessel navigation and communication systems integrated into the vessel,
- Ensure integration of Ferries Division’s vessel preservation and improvement program into the department-wide Project Management and Reporting System.
- Vessel navigation/communications equipment will become out of date and compliance with U.S. Coast Guard regulations.

What is the relationship, if any, to the capital budget?

None.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

- **Radar Laboratory:**
 - FTEs: 0.25 (Vessel Master-equivalent to EMS4)
 - Labor costs: Wages: \$42,014 | Benefits: \$14,922 | Total: \$56,936
 - Non-labor expenses: \$50,000
 - VHF Radios, Landing Radars, Automatic Identification System (AIS), and the S57 & NOAA Charting Systems Program (Object Code E – Goods & Services)

- **Navigation/communication equipment:**
 - FTEs: 0.75 (Vessel Master – equivalent to EMS4)
 - Labor costs: Wages: \$106,042 | Benefits: \$20,007 | Total: \$126,049
 - Navigation and communication systems – radars, radios, electronics
- **Develop Maintenance Schedules:**
 - FTEs: 0.125 (Port Engineer, EMS4)
 - Labor Costs: Wages: \$26,014 | Benefits: \$7,460 | Total: \$33,466
 - Non-labor expenses: \$20,000
 - Estimated need for vendor/WSDOT IT support for further development of schedules (Object Code E – Goods & Services)
- **Bilge & Void Maintenance Program:**
 - FTEs: 0.50 (Port Engineer, EMS4; Project Engineer, 533G; Marine Designer, 538Y)
 - Labor Costs: Wages: \$71,612 | Benefits: \$29,046 | Total: \$ 100,658 (Average of EMS4, 533G, 538Y)
 - Non-labor expenses: None
- **Vessel Sprinkler System Bore Scope Inspections:**
 - FTE's: None
 - Labor Costs: None
 - Non-Labor Expenses: \$246,000
- **PMRS Support:**
 - FTEs: 0.0
 - Labor Costs: None
 - Non-labor expenses: \$40,000
 - Estimated need for vendor/WSDOT HQ support for further implementation of PMRS (Object Code E – Goods & Services)
- **Forensic Services to Support Root Cause Failure Analyses:**
 - FTE's: None
 - Labor Costs: None
 - Non-Labor Expenses: \$240,000
- **Development of Periodic Safety Test Procedures (PSTP):**
 - FTE's: 1.0 (Staff Chief Engineer rate)
 - Labor Costs: Wages: \$99,870 | Benefits: \$19,974 | Total: \$119,844
 - Non-Labor Expenses: None
- **Equipment Obsolescence Mitigation**
 - FTE's: None
 - Labor Costs: None
 - Non-Labor Expenses: \$200,000 estimate (Object Code E – Goods & Services)
- **Construction Consumables**
 - FTEs: 0.0
 - Labor Costs: None
 - Non-labor expenses: \$40,000
Based on historical usage (Object Code E – Goods & Services)
- **Training and Administrative Tasks: \$100,000**
Based on historical usage (Object Code E – Goods & Services)

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

- **Budget impacts in future biennia:** Failure to fund this activity could jeopardize the Vessel Preservation and Improvement program's ability to manage the Vessel program and maintain the vessels.
- **Distinction between one-time and ongoing functions and costs:** All functions and costs are ongoing.

Changes from the previous biennium:

- Added Vessel Sprinkler System Bore Scope Inspections
- Added Forensic Services to Support Root Cause Failure Analyses
- Added Development of Periodic Safety Test Procedures (PSTP)
- Added Equipment Obsolescence Mitigation

17-19 Transportation Budget Decision Package

Agency: 405 Department of Transportation
Decision Package Code/Title: T – Terminal Project Support Package
Budget Period: 2017-19
Budget Level: Zero-based

Program: W – WSF Construction
Sub-Program: W1 – Terminal Construction

Recommendation Summary Text:

This is the zero-based budget request for decision package T – Terminal Project Support for the WSF Construction Program to support the Washington State Ferries (WSF) Terminals Construction Sub-Program (W1). It provides budget capacity for the following activities in the 2017-19 biennium:

- T-1 – Terminal Engineering Project Controls: program management & planning, scoping and biennial book-building, and implementation of asset management system.
- T-2 – Terminal Engineering Technical Support: steel pile inventory, imaging support, data collection and terminal base-map updates.
- T-3 – Terminal Program Planning and Design Standards: terminal design standards revisions.
- T-4 – Terminal Engineering Studies: terminal structures seismic evaluations for 2017-19 biennium.
- T-5 – Regulatory Compliance and Inspections: Bridge load ratings, bridge and underwater inspections, scour monitoring and landing aid inspections, mechanical and electrical inspections, paving and building inspection, terminal maritime security inspections, environmental support, and overweight vehicle evaluation program.
- T-6 – Terminal Engineering Supervision, Office Support and Supplies.

Consolidated Fiscal Detail: Below is the consolidated fiscal detail and FTE detail for the budget activity packages included in T – Terminal Project Support for WSF Construction Program. WSF will prepare a new zero-based budget request in each succeeding budget development cycle that will replace the out-biennium placeholders established by the 14LEGFIN budget. Details of individual budget activity packages follow.

Fiscal Detail			
Detail by Fund	FY 2018	FY2019	Total
A90-Puget Sound Capital Construction - State	3,276,529	3,231,734	6,508,263
Total by Fund	3,276,529	3,231,734	6,508,263

Objects of Expenditure:

**T- Terminal Project Support for
the WSF Construction Program**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	1,832,125	1,763,155	3,595,280
B - Benefits	651,282	613,957	1,265,239
C - Personal Service Contracts	90,000	160,000	250,000
E - Goods and Services	449,810	441,310	891,120
G - Travel	14,212	14,212	28,424
J - Capital Outlay	106,143	106,143	212,286
T - Interagency Reimbursements	75,000	75,000	150,000
Vendor Services	57,957	57,957	115,914
Total by Object	3,276,529	3,231,734	6,508,263

Salary and FTE Details:

**T- Terminal Project Support for
the WSF Construction Program**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
T-1 Terminal Engr Project Controls	4.90	4.90	4.90	530,441	530,441	1,060,882
T-2 Terminal Engr Technical Support	1.49	1.49	1.49	148,258	148,258	296,516
T-3 Terminal Planning & Design Standards	0.55	0.55	0.55	65,347	65,347	130,694
T-4 Terminal Engineering Studies	1.25	1.25	1.25	149,866	149,866	299,732
T-5 Regulatory Compliance & Inspections	6.58	6.38	6.48	776,667	694,483	1,471,150
T-6 TE Supervision, Office Support & Supplies	7.50	7.50	7.50	800,773	800,773	1,601,546
Total Staff Dollars and FTEs	22.27	22.07	22.17	2,471,352	2,389,168	4,860,520

Budget Activity Package: T-1 Terminal Engineering Project Controls
PIN: 998901A

Terminal Asset Management (M05482E)

Objects of Expenditure:

**T-1 Terminal Engineering Project Controls
Terminal Asset Management**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	122,192	122,192	244,384
B - Benefits	46,433	46,433	92,866
J - Capital Outlay	33,774	33,774	67,547
Total by Object	202,398	202,398	404,797

Salary and FTE Details:

**T-1 Terminal Engineering Project Controls
Terminal Asset Management**

Salary and FTE Detail						
List Position by Classificaiton	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
BRIDGE ENGINEER 5	1.00	1.00	1.00	122,192	122,192	244,387
Total Staff Dollars and FTEs	1.00	1.00	1.00	122,192	122,192	244,387

The Terminal Engineering Asset Management Model was first developed in the 2009-11 biennium in accordance with ESHB 1094. The WSF Terminal Engineering Asset Management Model is a tool to aid Terminal Engineering in prioritizing projects for preservation. This tool also provides a method to evaluate different methods of preservation, such as refurbishment, partial refurbishment, or replacement. This model aids in tracking WSF Terminal Engineering WSDOT Results Washington Goals.

The Terminal Engineering Asset Management Model contains over 700 assets spread out over the 20 terminals. Assets include buildings, over water structures, pavement, mechanical systems, and electrical systems.

Failure risk of each asset is evaluated based on age and condition, vessel impact, exposure to storms, exposure to scour, and seismic vulnerability. Consequence cost of asset failure includes emergency repairs and the effects of ferry service shutdown or delay to the ferry rider community. This model along with the LCCM will facilitate identification of a prioritized spending program for capital budgeting.

This current biennium 2015-17 work has begun establishing a Vessel Engineering Asset Management Model. The Vessel Engineering Asset Management Model will contain 1,200 assets spread among 22 vessels. Assets include Communication, Navigation, Lifesaving systems, Major Mechanical/Electrical systems, Piping systems, Propulsion systems, Security systems, Structural Steel (Hull, Superstructure, Tanks), and Passenger/crew spaces.

The Vessel Asset Management Model, combined with the Terminal Engineering Asset Management model, will be used to prioritize capital projects for all of WSF.

In order to maintain, review, and further develop the Asset Management Models, a full time position has been added in 2015-17 biennium and will continue in the 2017-19 biennium. This position will coordinate the model input and output with subject matter experts within Terminal Engineering and Vessel Engineering. Subject matter experts include Marine Project Engineers, Vessel Project Engineers, Structural Engineers, Mechanical Engineers, Electrical Engineers, Operations Staff, Naval Architects, and Maintenance Engineers. Additional consultants will be required for review and special assignments.

Scoping and Program Planning (M05483E)

Objects of Expenditure:

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	295,745	295,745	591,489
B - Benefits	112,383	112,383	224,766
E - Goods and Services	37,577	37,577	75,154
Total by Object	445,705	445,705	891,409

Salary and FTE Details:

T-1 Terminal Engineering Project Controls Scoping & Planning / Project Controls						
Salary and FTE Detail						
List Position by Classificaiton	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
TRANSPORTATION ENGINEER 2	1.00	1.00	1.00	94,585	94,585	189,173
TRANSPORTATION ENGINEER 2	0.50	0.50	0.50	47,293	47,293	94,588
TRANSPORTATION ENGINEER 3	0.40	0.40	0.40	41,159	41,159	82,319
TRANSPORTATION ENGINEER 3	1.00	1.00	1.00	103,020	103,020	206,043
TRANSPORTATION TECH ENGINEER	1.00	1.00	1.00	122,192	122,192	244,384
Total Staff Dollars and FTEs	3.90	3.90	3.90	408,249	408,249	816,507

Project controls and reporting, and scoping and program planning includes the following efforts:

- Manage and control the biennial scoping and cost estimating process for Terminal Engineering.
- For activities not directly attributable to specific projects, estimate construction project costs, market conditions, development and maintenance of estimating tools, and analysis of unit bid prices specific to terminals.
- Enforce WSDOT/WSF project standards that are required to be met prior to Advertisement of Capital (Subprogram W1) and Maintenance (Subprogram X6) projects.
- Organize and conduct biennial budget development and book building for subprogram W1. Prepare related documentation (white papers, decision packages, etc.).
- Identify current and future preservation projects using the Life Cycle Cost Model (LCCM), the Asset Management System, TEIS project list, and CPMS.

- Use life-cycle analyses to evaluate the economic efficiency between competing alternative improvement options.
- Maintain and utilize LCCM tools to answer legislative queries on biennial preservation and maintenance needs.

Narrative Justification and Impact Statement

What specific performance outcomes does the agency expect?

The department has refined its project management process for delivering its capital projects. This process includes best practices, tools, templates, and examples that will enhance the communication process for both design and construction project management. Implementation of the continuous improvement recommendations will ensure the ongoing success of the asset management program within Terminal Engineering in order to determine the optimized spending programs for capital assets.

Consistent and accurate reporting and measurement of projects will improve agency credibility and will assist with making effective and efficient business decisions based on improved management of project scope, schedule and cost.

Asset management implementation of the continuous improvement recommendations resulting from the 2009-17 development effort will ensure the ongoing success of the asset management program within Terminal Engineering in order to determine the optimized spending programs for capital assets.

Performance measure detail:

Performance Measures for T-1 – Terminal Engineering Project Controls:	FY 2018	FY 2019
<p>Outcome Measures:</p> <ul style="list-style-type: none"> • POG Result Area – Improve state, regional and local transportation systems. • Maintain tools that monitor the age and condition of terminal facilities. • Estimate future Terminal preservation needs using the life-cycle cost model, per RCW 47.60.345. • POG Result Area – Strengthen government's ability to achieve results efficiently and effectively. 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<p>Output Measures:</p> <ul style="list-style-type: none"> • Updated asset plan for each of the asset class in the LCCM and Asset Management Model • Review Terminal Engineering's construction specifications for conformance with maritime industry best practices. • Ensure utilization of industry standards to estimate asset life, per RCW 47.60.345. • Develop biennial scoping documents for preservation and improvement projects. • For activities not directly attributable to specific projects, estimate construction project costs and analyze unit bid prices specific to Terminals. • Respond to legislative and executive queries on Terminal Engineering project delivery and program planning. 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

Performance Measures for T-1 – Terminal Engineering Project Controls:	FY 2018	FY 2019
Efficiency/Effectiveness Measures:		
<ul style="list-style-type: none"> Meet deadlines for submittal of requirements to policy makers. 	Yes	Yes

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

This activity package is necessary to support all preservation and improvement projects in WSF capital program, allowing WSF to meet the goals of safety, preservation, mobility, environment and stewardship.

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

The activities covered by this decision package support WSF’s Terminal Engineering Department in the implementation of improvement and preservation projects that improve and maintain the state’s marine transportation systems by maintaining the tools that monitor the age and condition of terminal facilities using the Life-Cycle Cost Model (LCCM) and the Asset Management Model. The LCCM and the Asset Management Model also allows WSF to estimate the future Terminal preservation needs per RCW 47.60.345.

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

Approval of this decision package improves statewide mobility of people, goods and services by supporting the delivery of projects on time and on budget (90 percent standard). The activities covered by this decision package support WSF’s Terminal Engineering Department in the implementation of improvement and preservation projects that improve and maintain the State’s marine transportation system, which serve statewide travel and are considered by the legislature to be of statewide significance.

What are the other important connections or impacts related to this proposal?

Utilization of asset management provides a structured and prioritized approach to improving upon current WSF practices. Asset management constitutes a framework within which customers and WSF come to agreements about the quantity and quality of the service to be provided, as well as associated costs. In the case of WSF, Level of Service (LOS) standards would be used to drive decisions about how much ferry service to provide, and the nature of the customer experience. From such LOS standards flow decisions about the size, location, aesthetics, timing, and prioritization of vessels and terminals. Implementation of the Asset Management continuous improvement recommendations will provide a standardized, objective decision-making process that is transparent to the Ferries Division customers and other agencies. The Level of Service (LOS) standards that are used to justify the spending programs are readily available to those outside the agency and are based on consideration of impact to customers.

What alternatives were explored by the agency, and why was this alternative chosen?

Although WSF has a good understanding of the location, performance, and condition of all of its terminal assets, ensured in part through a regular, thorough program of inspection and documentation, asset data are not integrated and cross-analyzed in order to optimize improvement, preservation, and maintenance work programs. The alternative to implementing the continuous improvement recommendations would be to utilize the asset management program at a sub-optimal level that would

fail to fully realize the asset management practices as outlined in the Asset Management Study and in accordance with ESHB 1094.

What are the consequences of not funding this package?

Failure to fund this decision package will jeopardize the ability of WSF's Terminal Engineering Department to develop and manage the capital program.

If asset management implementation and updating is not funded, it would result in incomplete level of utilization of Asset Management program, and a lack of standardization in the use of the asset management program that was developed in 2009-13. WSF would not be able to fully utilize a system to improve on its current practices and to continue using the recommendations of the asset management study mandated in ESHB 2358. There were three key findings in the asset management study:

1. WSF relies on the subjective judgment of individuals and poorly documented institutional knowledge to make decisions about the nature, frequency, and prioritization of maintenance. The organization cannot demonstrate that its maintenance protocols are based on any systematic analysis of risk and cost within a structured LOS framework.
2. A chief criticism of the Ferry Financing Study was that WSF relies solely on an imperfect LCCM for predicting and programming preservation projects. The LCCM was found to be imprecise and in many cases led to overstatement of needs. Although it has been improved, it still lacks the full range of inputs necessary to optimize preservation, and it does not provide mechanisms to consider the interdependency of maintenance and preservation programs.
3. WSF lacks both a strategic framework and the analytical tools for systematic asset management. As such, WSF does not develop or adhere to documents that set forth plans for acquiring, operating, maintaining, and preserving assets or asset classes throughout their life-cycle.

What is the relationship, if any, to the capital budget?

Scoping, which is an activity under this decision package prepares the project budgets for capital improvement and preservation projects.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change? None.

Expenditure calculations and assumptions.

- FTEs and labor costs are based on typical positions anticipated to charge to indirect project support cost collection centers.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the Enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

Funding for the Terminal Engineering Department's program planning efforts is expected to continue in future biennia.

Due to the increased level of analysis in the risk-based LCCM, there will be additional ongoing costs above the current condition-based version of the LCCM. The ongoing costs in future biennia to maintain the asset management program will include the current effort to update the asset condition information, and the additional cost of validation and updating consequence costs including repair and ridership impact costs

The overall project controls and reporting, program planning and asset management budget will be developed using a zero-based budget approach for each budget cycle.

Budget Activity Package: T-2 – Terminal Engineering Technical Support
PIN: 998901B
WIN: M05427E, M05431E, and M05471D

Recommendation Summary Text:

The activity package funds CADD and imaging software upgrades and updates to the seven-year old terminal aerial photos. Terminal technical support activity package costs and budget will be distributed to all preservation and improvement projects.

CAE/CADD & Imaging Support (M05431E)

Objects of Expenditure:

**T-2 Terminal Engineering Technical Support
CAE Imaging Support**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	20,381	20,381	40,763
B - Benefits	7,877	7,877	15,754
Vendor Services	52,500	52,500	105,000
Total by Object	80,758	80,758	161,516

Salary and FTE Details:

T-2 Terminal Engineering Technical Support

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
TRANSPORTATION ENGINEER 4	0.05	0.05	0.05	5,604	5,604	11,208
TRANSPORTATION ENGINEER 4	0.10	0.10	0.10	11,205	11,205	22,410
IT SPEC 5	0.10	0.10	0.10	11,449	11,449	22,898
Total Staff Dollars and FTEs	0.25	0.25	0.25	28,258	28,258	56,517

Printing and imaging equipment and related software are used for the production of basemaps, schedules, plan sheets, and presentation graphics. CADD software and utilities are necessary for viewing, printing, and revising AutoCAD documents submitted by consultants. WSDOT uses MicroStation, which is not industry standard; therefore, the need for translation software is ongoing. In addition, drafting utilities are needed for design of mechanical Ferries structures including 3D solid modeling and mechanical drafting and, for in-water engineering design, unification of bathymetric and topographic data. Also, due to the increase in the length of time required for a workstation to be in service before retirement there will be an increasing number of incidences when the hardware in a workstation will no longer be able to run Level Playing Field software. At this point WSF will be faced

with either upgrading all or part of its computer hardware inventory. In order for WSF to produce the ever more complex graphic elements the agency requires it will have to provide for nominal upgrades to the engineering workstations so that they can be used to run Level Playing field software.

Data Collection and Terminal Basemap Updates (M05471D)

Objects of Expenditure:

**T-2 Terminal Engineering Technical Support
Data Collection and Terminal Basemap Updates**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	81,982	81,982	163,964
B - Benefits	31,153	31,153	62,306
Vendor Services	10,457	10,457	20,914
Total by Object	123,592	123,592	247,184

Salary and FTE Details:

T-2 Terminal Engineering Technical Support

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
IT SPECIALIST 5	0.10	0.10	0.10	11,449	11,449	22,897
TRANSPORTATION TECHNICIAN 1	0.10	0.10	0.10	6,972	6,972	13,945
TRANSPORTATION TECHNICIAN 2	0.20	0.20	0.20	15,717	15,717	31,434
TRANSPORTATION TECHNICIAN 3	0.10	0.10	0.10	8,704	8,704	17,408
TRANSPORTATION TECHNICAL ENGINEER WMS02	0.10	0.10	0.10	12,218	12,218	24,436
TRANSPORTATION ENGINEER 2	0.05	0.05	0.05	6,645	6,645	13,289
TRANSPORTATION ENGINEER 3	0.20	0.20	0.20	18,917	18,917	37,834
TRANSPORTATION ENGINEER 4	0.20	0.20	0.40	20,580	20,580	41,160
TRANSPORTATION ENGINEER 4	0.10	0.10	0.10	11,207	11,207	22,414
TRANSPORTATION TECHNICIAN 1	0.05	0.05	0.05	3,929	3,929	7,858
Total Staff Dollars and FTEs	1.20	1.20	1.40	116,336	116,336	232,675

Narrative Justification and Impact Statement

What specific performance outcomes does the agency expect?

- Plan production efficiency and incorporation of scour/bathymetric survey data into project and terminal plans.
- More accurate design models and the ability to share information between other state agencies and offices.
- Preparation of geo-referenced ortho-photos and high accuracy aerial base-maps based on current aerial photography.

Performance measure detail:

Performance Measures for T-2 – Terminal Technical Support	FY 2018	FY 2019
<p>Outcome Measures:</p> <ul style="list-style-type: none"> • POG Result Area – Strengthen government's ability to achieve results efficiently and effectively. <ul style="list-style-type: none"> ○ CAE/CADD & Imaging Support: Effective transportation system governance and management through the efficient file sharing, translation and processing both inside and outside WSDOT. ○ Base-map & Site Plans Revision: Allow WSDOT to keep complete information on each facility thus allowing up to date information to be kept for the LCCM. Construction expenses by reducing the number or unknowns that the Contractor faces when they work on WSF projects would be decreased. 	<p>Yes</p> <p>Yes</p>	<p>Yes</p> <p>Yes</p>
<p>Output Measures:</p> <ul style="list-style-type: none"> • Base-map & Site Plans Revision 	<p>Yes</p>	<p>Yes</p>
<p>Efficiency/Effectiveness Measures:</p> <ul style="list-style-type: none"> • Improve communication and project design efficiency with updated after construction changes the layout of structures at a terminal. 	<p>Yes</p>	<p>Yes</p>

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

This package supports the *WSDOT Ferries Division Final Long-Range Plan (Long-Range Plan)* by facilitating WSF’s efforts to maintain and improve terminals.

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

Funding for the CAE/CADD and imaging support and base-map and site plans revision activities will strengthen WSF’s ability to achieve results efficiently by maintaining and improving file sharing, translation and processing capabilities both inside and outside WSDOT.

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

Ferry connections that serve statewide travel are considered by the legislature to be of statewide significance. Maintaining CAE/CADD and imaging support, base-map and site plans revision capabilities contributes to the improvement and preservation of terminal facilities.

What are the other important connections or impacts related to this proposal?

Impact on agency clients and services:

- CAE/CADD & Imaging Support: WSF works with counties and cities that request information in formats other than those native to WSF. Commonly requested formats includes: CAD file in AutoCad, TIF images, PDF images, DXF images, and a few other minor formats. Without updates, the communications between these entities and WSF will be impacted.

Impact on other state programs or units of government:

- CAE/CADD & Imaging Support: WSF works with the Bridge and Structures Office in Olympia, which uses MicroGDS, and the Equipment and Facilities Office /Architecture in Olympia, which use AutoCAD. WSF does not use the same software as either of these departments and therefore are required to translate any shared graphical information from one format to another.
- Data Collection and Terminal Basemap Updates: More complete information will give more certainty to the work on site and will speed project delivery.

What alternatives were explored by the agency, and why was this alternative chosen?

CAE/CADD & Imaging Support

Software upgrades require no change in funding, as they are a yearly-recurring cost. Eliminating this sub-activity was considered but doing so would compromise WSF’s ability to meet Objective 5.3 Information Technology and Decision Support Systems: Ensure that information technology and decision support systems support WSDOT’s key business functions. Without the imaging support activity, project and program delivery that would not be supported to the level desired, including:

- The ability to translate AutoCAD files: WSDOT uses MicroStation, which is not industry standard; therefore, the need for translation software is ongoing.
- Discrepancies in design models and bathymetric and topographic data.
- The ability to produce complex graphics: Due to the increase in the length of time required for a workstation to be in service before retirement there will be an increasing number of incidences when the hardware in a workstation will no longer be able to run Level Playing Field software. At this point the Ferries Division will be faced with either upgrading all or part of its computer hardware inventory. If the upgrades are not available, the Ferries Division’s ability to produce the ever more complex graphic elements required by the agency will be limited.
- Efficient plan production: Increases in the amount of time required for plan production, potentially impact project schedules.
- Effective communication: Growing difficult in file sharing and communication with the Ferries Division’s clients and consultants.

- Maintaining industry standards.

Data Collection and Terminal Basemap Updates

- *Alternative 1: Complete base-maps* – This is the preferred alternative. In 2005, it was recognized that building base-maps of the terminals would save trips for surveying structures and utilities, as well as reduce design errors by compiling all existing structures that had been built from the time a terminal was put into service. Information for the completion will need to come from several divisions within WSF including WSF IT and WSF Eagle Harbor Maintenance.
- *Alternative 2: Complete base-maps during the design of large projects* – With this alternative, design efficiency is not achieved because the extent of the base-map always exceeds the scope of the design. In addition, small preservation and maintenance projects that occur in the waiting period before a large project is funded continue to incur higher costs due to field reconnaissance, design inefficiencies, and higher risk due to utilities that are unknown or not located accurately.

What are the consequences of not funding this package?

- CAE/CADD & Imaging Support: The benefit of funding Imaging Support will be to directly and indirectly improve the mobility of people and goods, in conformance with the State’s strategic framework; conversely, the effect of non-funding is sustaining the condition of inefficient design production.
- Data Collection and Terminal Basemap Updates: The benefit of funding Base-mapping will be to directly and indirectly improve the mobility of people and goods, in conformance with the State’s strategic framework; conversely, the effect of non-funding is sustaining the condition of inefficient design production.

What is the relationship, if any, to the capital budget?

None.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

CAE/CADD & Imaging Support:

- WSF staff hours are required for installation and management of the equipment and software, which will be charged to the projects currently being worked on.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the Enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.
- Non-labor expenses are for equipment, software, and licenses. Cost for software upgrades recurs yearly.
 - Hardware costs:
 - Additional RAM requirement to run Level Playing Fields software (bring workstations to 8 GB RAM)
16 workstations x \$250/workstation = \$4,000
 - Contingency and maintenance for year two on all hardware = \$2,500

- Software upgrades:
 - Update workstation photo editing software to allow more accurate design efforts
60 workstations x \$180/workstation = \$10,800
 - Institute the use of Project Wise for larger scale projects (Seattle, Mukilteo)
Additional Server Space= \$8,500
Engineer's time= 80 hrs. x \$75/hr.= \$6,000
 - Purchase and training for following:
AutoCad support = \$2,350/year
 - Maintenance for two years on all software = \$4,000

Base-map & Site Plans Revision

- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

- CAE/CADD & Imaging Support: Software costs are expected to recur biennially. Hardware costs are expected to recur only when a component has reached or exceeded its IT retirement date. Software upgrades and hardware replacement costs are ongoing and require a fairly consistent level of funding across biennia.
- Base-map & Site Plans Revision: After all of the terminals have complete base-maps, future projects will fund incorporation of changes and as-built data into the base-maps. By building on completed base-maps and updating them using construction as-built information the State saves the cost of performing an additional full survey of the terminal sites in the future.

Package Description:

Steel Piling Inventory (M05427E)

Objects of Expenditure:

**T-2 Terminal Engineering Support
Steel Piling Inventory**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	2,551	2,551	5,102
B - Benefits	1,112	1,112	2,224
Capital Outlay	150	150	300
Total by Object	3,813	3,813	7,626

Salary and FTE Details:

**T-2 Terminal Engineering Technical Support
Steel Piling Inventory**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
TRANSPORTATION ENGINEER 3	0.02	0.02	0.02	2,058	2,058	4,116
MAINTENANCE SPECIALIST 3	0.02	0.02	0.02	1,605	1,605	3,210
Total Staff Dollars and FTEs	0.04	0.04	0.04	3,663	3,663	7,326

Steel Piling was purchased in past biennia for use in future projects, in order to avoid the rapidly-increasing price of steel and impacts to project schedule due to long lead time of pipe. Escalation in the price of steel was offset by purchasing before steel prices rose, and by purchasing in bulk. In 2008, all the pipe was consolidated in a WSDOT storage facility in Puyallup, Washington. Funding is for maintenance and inventory management of the piling, and maintenance of the WSDOT site in which it will be stored.

Budget Activity Package: T-3 Terminal Program Planning and Design Standards
PIN: 998901C
WIN: M05408E

Recommendation Summary Text:

As regulations and codes change, efforts need to be directed towards maintaining design manuals so that they stay current.

Objects of Expenditure:

**T-3 Terminal Program Planning & Design Standards
 Design Standard Revisions**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	47,468	47,468	94,936
B - Benefits	17,878	17,878	35,756
C - Personal Service Contracts	0	20,000	20,000
E - Goods and Services	16,000	10,500	26,500
G - Travel	5,000	5,000	10,000
Total by Object	86,346	100,846	187,192

Salary and FTE Details:

**T-3 Terminal Program Planning & Design Standards
 Design Standards Revisions**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
TRANSPORTATION ENGINEER 3	0.25	0.25	0.25	25,724	25,724	51,449
TRANSPORTATION ENGINEER 4	0.05	0.05	0.05	5,604	5,604	11,208
BRIDGE ENGINEER 5	0.05	0.05	0.05	6,109	6,109	12,218
MARINE PROJECT ENGINEER	0.05	0.05	0.05	6,669	6,669	13,338
BRIDGE ENGINEER 7	0.05	0.05	0.05	7,286	7,286	14,572
MARINE MECHANICAL ENGINEER	0.05	0.05	0.05	6,669	6,669	13,338
BRIDGE ENGINEER 7	0.05	0.05	0.05	7,286	7,286	14,572
Total Staff Dollars and FTEs	0.55	0.55	0.55	65,347	65,347	130,696

The Terminal Engineering Design Manuals document the standards used by WSF. WSF terminals use distinctly marine- and upland-related design elements. Some of these elements unique to Ferries include: Architectural guidelines, traffic standards (pertaining to speed limits 15mph and less), mechanical and electrical specifications, security expectations, marine traffic planning, and incorporation of operational level-of-service standards. By providing budget authority to maintain formalized design guidelines, this proposal helps WSF align its design and plans preparation process with the existing WSDOT standards. It also helps ensure the accountability, accuracy, and reliability of terminal design efforts

It is important that design manuals are updated to incorporate changes and improvements identified through the use of the manuals and to maintain the relevance of the information contained therein.

Narrative Justification and Impact Statement

What specific performance outcomes does the agency expect?

Terminal Design Manual will continue to be updated to improve usability and as regulations and codes change to remain relevant.

Performance measure detail:

Performance Measures for T-3 – Terminal Design Standards	FY 2016	FY 2017
Outcome Measures: <ul style="list-style-type: none"> Maintain efficiency in design: Support government accountability. 	Yes	Yes
Output Measures: <ul style="list-style-type: none"> Revised <i>Terminal Design Manual</i> 	Yes	Yes
Efficiency/Effectiveness Measures: <ul style="list-style-type: none"> <i>Terminal Design Manual</i> will remain relevant. 	Yes	Yes

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

Goal: Mobility

1. *Long-Range Plan* includes an initiative to improve the quality, effectiveness and efficiency of the transportation system. An up-to-date terminal design manual will maintain the specific engineering design criteria for the ferry terminal systems and structures that will be constructed by these projects. The Terminal Program Planning & Design Standards activity package facilitates strategically adding capacity to the ferry system to provide congestion relief.

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

Updated design manuals strengthen government's ability to achieve results efficiently and effectively by providing current, consistent design standards for terminal improvement and preservation projects and maximizing design efforts.

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

Ferry connections that serve statewide travel are considered by the legislature to be of statewide significance. Updated design manuals are an efficient and effective approach to the design of improvements and preservation projects at the ferry terminals.

What are the other important connections or impacts related to this proposal?

Design manuals that are current will result in an increase in efficiency; all designers will have the same criteria and guidelines thereby reducing misguided assumptions and leveling the playing field between new designers and experienced designers.

What alternatives were explored by the agency, and why was this alternative chosen?

The only alternative is to leave the design manuals as is. This would result in a declining use and applicability and subsequently result in a wasted effort of prior expenditures.

What are the consequences of not funding this package?

This would result in a declining use of the manuals as their applicability would diminish with new regulations and codes.

What is the relationship, if any, to the capital budget?

None.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

- FTEs and labor costs are based on typical positions anticipated to charge to indirect project support cost collection centers.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the Enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

Updating and maintaining the manuals is ongoing cost. There will be ongoing maintenance required to keep the manuals current in 2017 and beyond.

Budget Activity Package: T-4 – Terminal Engineering Studies
PIN: 998901D
WIN: M05485F

Recommendation Summary Text:

To maintain the safety of the traveling public and the evaluation of the competency of WSF’s structures, this decision package covers the development and prioritization of seismic retrofit projects.

At WSF, 75 percent of trestles, transfer spans, and overhead loading structures were designed before 1998. Before this time, structures design (the Uniform Building Code, or UBC) did not include soil characteristics in the earthquake design. At WSF, terminal buildings, which the public uses, need to be evaluated for life safety in a seismic event. Most of these buildings were built before 1995.

The WSF mission is to provide safe and reliable ferry service to our customers. Studies have indicated there is a 10 percent chance in the next 50 years of a major earthquake occurring in the Puget Sound region (500 year EQ Event). In a major seismic event, WSF terminals will not be able to operate.

Movement of people and commerce will be stopped.

In 2009-11, a study was initiated to identify all ferry terminal seismic structural vulnerabilities and develop a seismic retrofit prioritization method. These deficiencies are numerous. WSF does not have the financial resources to retrofit and or replace all of these structures. Through this decision package, WSF will prioritize these projects so that the projects that provide the most benefit towards public safety and ferry operations will be addressed first. A long-range plan for replacement or retrofit will be developed as a result of this Seismic Retrofit Program. This long-range plan will become part of WSF Capital Improvement Program.

Fiscal Detail:

Fiscal Detail			
Detail by Fund	FY 2018	FY2019	Total
A90-Puget Sound Capital Construction - Sta	205,835	190,272	396,107
Total by Fund	205,835	190,272	396,107

Package Description: Terminal Engineering Studies (M05485F)

Objects of Expenditure:

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	116,242	110,757	226,999
B - Benefits	42,374	32,296	74,670
J - Capital Outlay	47,219	47,219	94,437
Total by Object	205,835	190,272	396,106

Salary and FTE Details:

**T-4 Terminal Engineering Studies
Tml Structures Seismic Evaluations 17-19**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
BRIDGE ENGINEER 5	1.00	1.00	1.00	113,441	113,441	226,882
BRIDGE ENGINEER 7	0.25	0.25	0.25	36,425	36,425	72,850
Total Staff Dollars and FTEs	1.25	1.25	1.25	149,866	149,866	299,732

This proposal directly addresses the WSDOT goal of maintaining the safety of the traveling public. The objectives of this seismic retrofit program are to minimize the risks of complete structure collapse, minimize the loss of life and disruption of commerce. In addition, requirements of the Code of Federal Regulation will be met with these studies.

WSF’s terminals are a composition of structures containing trestles, transfer spans, towers, overhead loading systems, buildings, and other components. In general, these structures were built to previous design codes that do not meet current seismic design standards.

Current retrofit standards are to review existing bridge structures for both a 100-year and 1,000-year recurrence level earthquakes. Expectation is that after a 100-year earthquake event, there is no operational loss to any terminal facility and that no collapse occurs due to a 1,000-year earthquake event. This is a departure from past design codes that used a single 475-year recurrence level earthquake for design of the structures.

With the difference in seismic design standards, it is anticipated that all structures should be reviewed. This includes a few complex structures that should potentially be analyzed by advanced analytical methods. To provide advanced analytical skills and software programs specialist would be used to provide the necessary analysis capabilities.

Narrative Justification and Impact Statement

What specific performance outcomes does the agency expect?

This activity package will contribute to the improved safety of the traveling public during and after and seismic event and will enable WSF to meet the requirements of the Code of Federal Regulations.

Performance measure detail:

Performance Measures for T-4 – Terminal Engineering Studies	FY 2018	FY 2019
Outcome Measures:		
<ul style="list-style-type: none"> • Prepare for emergencies: <ul style="list-style-type: none"> ○ Prioritize seismic retrofit improvement projects 	Yes	Yes
Output Measures:		
<ul style="list-style-type: none"> • Prioritized list of projects for retrofit or replacement 	Yes	Yes
Efficiency/Effectiveness Measures:		
<ul style="list-style-type: none"> • Projects will be identified for funding in the 2020-21 biennium. 	Yes	Yes

Is this decision package essential to implement a strategy identified in the agency's strategic plan? If so, please describe.

Goal: Safety

1. *Long-Range Plan* includes improvements that can be demonstrated to add significant value, including seismic projects. Seismic code for existing structures has been updated since many of WSF's structures were designed and constructed. Without developing and then implementing specific seismic retrofit projects, WSF would be unable to ensure the safety of its terminals in an earthquake event as structures that have not been built to resist a seismic event are at risk for failure when an earthquake occurs.
2. The Strategic Implementation Plan includes the strategy of improving WSDOT's emergency response capabilities. The retrofit of terminals will improve WSDOT's emergency response capabilities by improving the likelihood of maintaining ferry operations after an earthquake.

Does this decision package provide essential support to one of the Governor's priorities? If so, please describe.

Seismically retrofitting terminals improves the likelihood of maintaining the statewide mobility of people, goods, and services after an earthquake and improves the safety of people and property by managing the risk associated with earthquake events.

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

After a significant seismic event, the state's marine highways may be relied upon to provide transportation to emergency response vehicles and first responders, especially if roads become impassable. The retrofit of terminals will improve service by increasing the likelihood of maintaining operations after an earthquake.

What are the other important connections or impacts related to this proposal?

- **Agency clients and services:** Retrofit of terminals will improve service by increasing the likelihood of maintaining operations after an earthquake. Loss of use of any WSF terminal would result in a total shutdown of that transportation route, and effectively stop all traffic, including public and commercial.
- **Other state programs or units of government:** Retrofit of terminals will improve service by increasing the likelihood of maintaining operations after an earthquake. Loss of use of any WSF terminal would result in a total shutdown of that transportation route, and effectively stop all traffic, including emergency vehicles.

What alternatives were explored by the agency, and why was this alternative chosen?

The alternatives are to:

1. Do nothing. This puts WSF's marine transportation at severe seismic risk.
2. Replace all terminal facilities with new structures designed to current earthquake codes. This option would require excessive capital costs with a low benefit cost ratio.

Continuing the program will allow WSF to prioritize retrofit projects and reduce the seismic risk.

What are the consequences of not funding this package?

Without developing and then implementing specific seismic retrofit projects, WSF would be unable to ensure the safety of its terminals in an earthquake event as structures that have not been built to resist a seismic event are at risk for failure when an earthquake occurs.

What is the relationship, if any, to the capital budget?

The seismic retrofit prioritization program will result in future capital budget requests for funding to retrofit or replace the most critical terminal assets.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

- The effort required for the seismic retrofit prioritization program is similar to the effort required for the seismic retrofit evaluation of terminal structures performed in the 2015-17 biennium.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the Enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.
- Non-Labor Costs – Consultant: A Structural Engineer Seismic Specialist is required for the seismic retrofit program. According to the Seismic Retrofit Guidelines many of WSF's structures are considered irregular. Irregular Structures are not addressed in the Seismic Retrofit Guidelines. The Seismic Specialist will be brought in to provide analysis and retrofit recommendations for irregular structures and review and comment on WSF reports produced as part of the seismic retrofit program.
 - The billing rate for a Seismic Specialist is \$210/hour X 595 = \$125,000.

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

The seismic retrofit prioritization program is a one-time cost. The seismic retrofit prioritization program will result in future requests for funding to retrofit or replace the most critical terminal assets.

Budget Activity Package: T-5 – Regulatory Compliance and Inspections

PIN: 998901E

WIN:

Bridge Load Ratings (M05426F)

Object of Expenditure

**T-5 Regulatory Compliance & Inspections
Bridge Load Ratings**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	78,655	18,404	97,059
B - Benefits	28,733	6,739	35,472
Total by Object	96,839	25,143	132,531

FTE and Salary Details:

**T-5 Regulatory Compliance & Inspections
Bridge Load Ratings**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
BRIDGE ENGINEER 5	0.70	0.17	0.44	85,533	20,773	106,306
BRIDGE ENGINEER 7	0.15	0.03	0.09	21,855	4,371	26,226
Total Staff Dollars and FTEs	0.85	0.20	0.53	107,388	25,144	132,532

Per CFR Title 23 Part 650.313, FHWA, and the AASHTO Manual for Bridge Evaluation, the department must perform load ratings and revise existing load ratings of all terminal structures that resist traffic or other moving loads. Load Rating calculations provide a basis for determining the safe load carrying capacity of a structure.

The FHWA recently published a new requirement to Load Rate all structures for Specialized/Hauling Vehicles by December 31, 2017. These vehicles carry heavier loads at closer spacing. Because Washington state allows these specialized trucks to travel on public roads, the capacity of the WSF structures must be checked. These trucks will likely require more load restrictions at the WSF Ferry terminals. Additional effort during fiscal year 2018 is required to complete this task by December 31, 2017.

Approval of this request will also provide the resources to complete or update terminal load ratings based on the following:

- Terminal mechanical/structural upgrades or modifications
- Updates in structural bridge codes
- Revisions in capacity as a result of bridge inspections
- Unanticipated damage or changes to the structures
- Construction of new terminals

On an annual basis, the WSDOT Bridge and Structures Office performs structural inspections and reports this data to the WSDOT Ferries Division Terminal Engineering Structural Design Unit. The Load Rating Program will review these reports and identify areas of concern.

Overweight Vehicle Evaluation Program (M05493C)

Object of Expenditure:

**T-5 Regulatory Compliance & Inspections
Overweight Vehicle Evaluation Program**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	19,879	19,879	39,757
B - Benefits	7,192	7,192	14,384
Total by Object	27,071	27,071	54,142

Salary and FTE Details:

**T-5 Regulatory Compliance & Inspections
Overweight Vehicle Evaluation Program**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
BRIDGE ENGINEER 5	0.15	0.15	0.15	18,329	18,329	36,658
BRIDGE ENGINEER 7	0.06	0.06	0.06	8,741	8,741	17,482
Total Staff Dollars and FTEs	0.21	0.21	0.21	27,070	27,070	54,140

This request maintains budget authority for Washington State Ferries' (WSF) Terminal Overweight Vehicle Evaluation Program. In accordance with the Washington State Commercial Vehicle Guide vehicles registered with a GVW in excess of 80,000 pounds must have special permission from WSF to ensure that overweight vehicles do not damage any terminal structures. WSF's Overweight Vehicle Evaluation Program analyzes overweight vehicles to ensure terminal structures (trestles, transfer spans, etc.) are not damaged by these vehicles.

Approval of this request will provide the resources to do the following:

- Maintain procedures to efficiently analyze overweight vehicle loads.
- Approve Overweight Vehicle Permit Requests for travel on WSF Timber Trestles and Transfer Spans.
- Revise criteria and guidelines for restricting overweight truck axle weight and spacing if necessary.
- Coordinate with Terminal Agents to be sure the Overweight Procedure is carried out correctly at each terminal.

Inspection Program

WSF inspection program includes the following sub-projects, which are described in detail below:

- Bridge & Underwater Inspection
- Scour Monitoring & Landing Aid Inspections
- Mechanical and Electrical Inspections
- Paving and Building Inspections

Bridge & Underwater Inspection (M05468E)

Object of Expenditure:

**T-5 Regulatory Compliance & Inspections
Bridge & Underwater Inspections**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	156,414	153,180	309,594
B - Benefits	58,729	53,476	112,205
C - Personal Services	0	50,000	50,000
E - Goods and Services	4,000	0	4,000
G - Travel	3,000	3,000	6,000
Total by Object	222,144	259,656	481,800

Salary and FTE Details:

**T-5 Regulatory Compliance & Inspections
Bridge & Underwater Inspections**

Salary and FTE Detail						
List Position by Classificaiton	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
MARINE PROJECT ENGINEER	0.15	0.15	0.15	20,009	20,009	40,018
TRANSPORTATION ENGINEER 3	0.10	0.10	0.10	10,289	10,289	20,578
BRIDGE ENGINEER 4	0.05	0.05	0.05	5,604	5,604	11,208
BRIDGE ENGINEER 6	0.50	0.50	0.50	66,699	66,699	133,400
BRIDGE ENGINEER 5	0.50	0.50	0.50	61,096	61,096	122,194
BRIDGE ENGINEER 3	0.50	0.50	0.5	51,448	51,448	102,896
Total Staff Dollars and FTEs	1.80	1.80	1.80	215,145	215,145	430,293

Structural and Dive Inspections:

The National Bridge Inspection Standards (NBIS) are published in the Code of Federal Regulations (CFR) Title 23, Part 650, and Subpart C. The NBIS sets the national standard for the proper safety inspection and evaluation of bridges and applies to all structures defined as highway bridges located on all public roads. Every 24 months, qualified personnel from the WSDOT Bridge Preservation office are responsible for inspecting and reporting on the ferry terminal trestles, transfer spans, and passenger overhead loading structures. Underwater inspections are required at least every 60 months. Bridge Preservation staff, in concurrence with WSF, inspects some structures more frequently due to age or type of construction.

Scour Monitoring & Landing Aid Inspection (M05469E)

Object of Expenditure:

**T-5 Regulatory Compliance & Inspections
Scour Monitoring & Landing Aid Inspections**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	32,001	32,001	64,002
B - Benefits	13,492	13,492	26,984
E - Goods and Services	15,000	0	15,000
G - Travel	232	232	464
Total by Object	60,725	45,725	106,450

Salary and FTE Details:

**T-5 Regulatory Compliance & Inspections
Scour Monitoring & Landing Inspections**

Salary and FTE Detail						
List Position by Classificaiton	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
TRANSPORTATION ENGINEER 2	0.20	0.20	0.20	18,917	18,917	37,835
TRANSPORTATION TECH 2	0.10	0.10	0.10	7,858	7,858	15,716
BRIDGE ENGINEER 5	0.10	0.10	0.10	12,218	12,218	24,436
BRIDGE ENGINEER 1	0.05	0.05	0.50	4,353	4,353	8,706
MARINE ENGINEER	0.02	0.02	0.02	2,146	2,146	4,292
Total Staff Dollars and FTEs	0.47	0.47	0.92	45,492	45,492	90,985

Scour and Landing Aid Inspections:

The propellers' wash from vessels causes scour of the sediment at the base of the landing aid structures and trestles. The depth of the scour is recorded with bathymetric soundings, then documented for assessment by the structural engineers. Scour monitoring is performed yearly, and in accordance with the National Bridge Inspection Standards and CFR Title 23, Part 650 Subpart C-Bridges, Structures, and Hydraulics

Landing aids (dolphins, wingwalls, transfer spans, and trestles) are critical structures in the terminal inventory. Landing aid inspections are performed yearly on wingwalls and dolphins in order to assess the condition, operability, and safety of these structures.

Mechanical & Electrical Inspections (M05470E)

Object of Expenditure:

**T-5 Regulatory Compliance & Inspections
Mechanical & Electrical Inspections**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	205,137	205,137	410,273
B - Benefits	36,421	36,421	72,842
E - Goods and Services	30,000	36,000	66,000
Total by Object	271,557	277,558	549,115

Salary and FTE Details:

**T-5 Regulatory Compliance & Inspections
Mechanical & Electrical Inspections**

Salary and FTE Detail						
List Position by Classificaiton	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
BRIDGE ENGINEER 7	0.15	0.15	0.15	21,854	21,854	43,708
ELECTRICIAN	0.35	0.35	0.35	30,020	30,020	60,041
MACHINIST TRANS	0.35	0.35	0.35	36,754	36,784	73,539
MACHINIST TRANS	0.35	0.35	0.35	36,754	36,784	73,539
MARINE ELECTRICAL ENGINEER	0.40	0.40	0.40	53,359	53,359	106,719
MARINE PROJECT ENGINEER	0.10	0.10	0.10	13,339	13,339	26,678
TRANSPORTATION ENGINEER 2	0.10	0.10	0.10	9,459	9,459	18,918
BRIDGE ENGINEER 6	0.30	0.30	0.30	40,019	40,019	80,039
Total Staff Dollars and FTEs	2.10	2.10	2.10	241,558	241,618	483,182

Mechanical and Electrical Inspection / Preservation:

Qualified Ferries personnel are responsible for inspecting the mechanical and electrical components of the transfer spans, and passenger overhead loading structures, in accordance with the National Bridge Inspection Standards and CFR Title 23, Part 650, Subpart C-Bridges, Structures, and Hydraulics.

Additionally, inspections are conducted on service panels throughout the facility that feed the critical infrastructure. These inspections document the condition, as well as replace obsolete or components that do not meet the current safety and regulatory requirements.

Paving & Building Inspections (M05488E)

Object of Expenditure:

**T-5 Regulatory Compliance & Inspections
Paving & Building Inspections**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	18,691	18,691	37,382
B - Benefits	6,654	6,654	13,308
E - Goods and Services	1,138	1,138	2,276
G - Travel	80	80	160
Total by Object	26,563	26,563	53,126

Salary and FTE Details:

**T-5 Regulatory Compliance & Inspections
Paving & Building Inspections**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
TRANSPORTATION ENGINEER 2	0.07	0.07	0.07	9,337	9,337	18,674
TRANSPORTATION ENGINEER 3	0.02	0.02	0.02	2,667	2,667	5,334
TRANSPORTATION TECHNICIAN 2	0.03	0.03	0.03	4,002	4,002	8,004
TRANSPORTATION ENGINEER 4	0.02	0.02	0.02	2,668	2,668	5,336
TRANSPORTATION ENGINEER 3	0.03	0.03	0.03	4,002	4,002	8,004
MARINE PROJECT ENGEER	0.02	0.02	0.02	2,668	2,668	5,336
Total Staff Dollars and FTEs	0.19	0.19	0.19	25,344	25,344	50,687

Paving and Building Inspections

Paving Inspections are performed in-house by WSF staff using the WSDOT Local Programs guidelines. WSF is developing a predictive model that will forecast the optimum time to rehabilitate pavement with performance curves that are unique to low speeds and traffic holding.

Inspections of terminal buildings are a biennial inspection and as-needed activity for ensuring the safety and operation of the buildings and vendor areas. Also, this information is used to update the WSDOT Facilities Inventory system.

All of these reports are used to update the condition parameter in the LCCM, per RCW 47.660.345(2). Additionally, the reports are used to identify items that require repair and preservation, calculate load ratings, and verify as-built systems.

Terminal Maritime Security Inspections (M05492C)

Object of Expenditure

**T-5 Regulatory Compliance & Inspections
Terminal Maritime Security Inspections**

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
C - Personal Services Contract	85,000	85,000	170,000
Total by Object	85,000	85,000	170,000

Terminal Maritime Security

Qualified WSDOT personnel are responsible for inspecting the mechanical and electrical components of the physical security system at the Washington State Ferries terminals, per 33 CFR 105 on an annual basis.

These inspections are used to document the condition as well as document obsolete systems or components that do not meet current security and/or regulatory requirements or current industry standards

Environmental Support (M05478E)

Object of Expenditure:

Environmental Support

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	83,361	83,361	166,722
B - Benefits	31,309	31,309	62,618
C - Personal Services Contracts	5,000	5,000	10,000
E - Goods and Services	50,000	50,000	100,000
G - Travel	900	900	1,800
J - Capital Outlay	25,000	25,000	50,000
T - Interagency Reimbursements Liaisons	50,000	50,000	100,000
Total by Object	245,570	245,570	491,140

0

Salary and FTE Details:

**T-5 Regulatory Compliance & Inspections
Environmental Support**

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
TRANSPORTATION PLANNING SPECIALIST 5	0.70	0.70	0.70	85,533	85,533	171,066
TRANSPORTATION PLANNING SPECIALIST 4	0.20	0.20	0.20	22,413	22,413	44,826
TRANSPORTATION PLANNING SPECIALIST 4	0.06	0.06	0.06	6,722	6,722	13,444
Total Staff Dollars and FTEs	0.96	0.96	0.96	114,668	114,668	229,336

Environmental Support: WSF developed the System-wide Terminal Regulatory program to deal with the increasing regulatory requirements for ferry transportation capital projects at federal, state, and local levels that cause project delays and increase cost. In response to project delays and cost, the state Legislature enacted the Transportation Permit Efficiency and Accountability Committee (TPEAC) to improve environmental permitting for transportation projects across the state. In order to comply with the numerous environmental requirements, WSF developed strategies including programmatic permits, Reference Biological Assessment (BA), terminal construction permitting procedures, commitment tracking, compliance monitoring, marine research, inter-agency and intra-agency coordination, state legislation analysis, federal regulatory reviews, and local ordinance, to ensure that WSF’s mandate to safely operate ferries across Puget Sound is preserved.

The program has helped reduce WSF’s costs and time for permitting maintenance and some preservation projects by as much as 75 percent. It is expected that the program will continue to help reduce costs and time for permitting most terminal preservation projects. The Reference BA reduced the ESA consultation time by 30 percent. It also brings predictability in timing project execution, mitigation requirements and compliance with environmental regulations and requirements.

There are several regulatory changes and new species listed under ESA that have been introduced to ensure better protection of the environmental and ESA species, and water quality. These regulatory changes have significant cost increases and project delays to WSF’s capital construction program if the Reference BA is not updated.

Narrative Justification and Impact Statement

What specific performance outcomes does the agency expect?

This activity package funds activities required by legislation, code, and statute. The outcomes of these efforts will facilitate maintenance, preservation, and improvements at terminal facilities by implementing or updating the procedures and assessment tools used by WSF to make preservation and improvement decisions.

Performance measure detail:

Performance Measures for T-5 – Regulatory Compliance	FY 2018	FY 2019
<p>Outcome Measures:</p> <ul style="list-style-type: none"> • Preserve and maintain state, regional and local transportation systems <ul style="list-style-type: none"> ○ Establish criteria governing the cumulative loss of lateral strength from stub piling repairs ○ Determine condition of terminal assets, to be used as basis for updating the LCCM. • Prepare for and respond to emergencies <ul style="list-style-type: none"> ○ Identify ferry terminal seismic structural deficiencies. ○ Prioritize seismic retrofit improvement projects. • The condition of the facilities will be documented and used to make decisions on the preservation of the structures in the LCCM. • Repair decisions will be made on various sub-components of the terminal assets. • Improve the quality of Washington natural resources. • Establish safeguards to protect natural resources. • Promote compliance of species protection laws. • Develop programmatic permits to expedite permitting of future capital maintenance, preservation, and improvement projects. • Ensure more predictable, efficient and effective environmental permitting of terminal capital maintenance, preservation and improvement projects. • Improve the quality of Washington’s natural resources. 	<p>Yes</p>	<p>Yes</p>
<p>Output Measures:</p> <ul style="list-style-type: none"> • Load ratings for each terminal structure, documented in writing including all supporting computations and a clear statement of all assumptions used in calculating the load rating. • Approved overweight vehicle evaluation procedure; including an updated program, integrated with the load rating program. • Update of Structural Capacity Data • Structural Inspection Reports • Underwater Inspection Reports • Scour/Bathymetric Surveys • Mechanical/Electrical Inspections • Landing Aids Inspections • Building Inspections • Paving Inspections • Programmatic Permits • Updated Reference BA • Background noise level measurements at 19 terminals and the Eagle Harbor Maintenance Facility. 	<p>Yes</p>	<p>Yes</p>
<p>Efficiency/Effectiveness Measures:</p>		

Performance Measures for T-5 – Regulatory Compliance	FY 2018	FY 2019
<ul style="list-style-type: none"> Adhere to the Code of Federal Regulations by assessing the safety and load-carrying capacity of Ferries bridge structures. 	Yes	Yes
<ul style="list-style-type: none"> Update the condition rating component of the LCCM as determined by inspection and structural analysis. 	Yes	Yes
<ul style="list-style-type: none"> Reduce cost and time for permitting terminal preservation projects with streamlined compliance strategies. 	Yes	Yes
<ul style="list-style-type: none"> Bring predictability to the timing of project execution, by meeting mitigation requirements. 	Yes	Yes
<ul style="list-style-type: none"> Comply with environmental regulations and requirements. 	Yes	Yes
<ul style="list-style-type: none"> Improve scope, schedule and budget development by establishing a better understanding of construction impacts and permitting requirements. 	Yes	Yes

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

Goal: Terminal Preservation

- Inspections are necessary for updating of the LCCM. An updated LCCM is required for developing the budget request for terminal preservation funding. RCW 47.60.345
- Terminal preservation projects must be permitted by local, state and federal jurisdictions before construction can take place.
- Terminal preservation projects will be programmed to achieve Category 1 (vital) and Category 2 (non-vital) preservation performance targets, per the Office of Financial Management.

Goal: Safety

- Load rating analysis uses inspections of existing conditions of the terminal structures for calculating the load-carrying capacity of every transfer span and trestle. This analysis is used for overweight vehicle applications and to document and monitor the structural capacity of WSF’s bridge structures. The national standards for the proper safety inspection and evaluation of all highway bridges are met with this analysis. Inspections are required for compliance with the CFR, to find and monitor deteriorating structural conditions so that serviceability, safety and functional obsolescence can be determined.
- Load rating analysis uses inspections of existing conditions of the terminal structures for calculating the load-carrying capacity of every transfer span and trestle. This analysis is used for overweight vehicle applications and to document and monitor the structural capacity of WSF’s bridge structures. The national standards for the proper safety inspection and evaluation of all highway bridges are met with this analysis.

Goal: Environment

- The system-wide environmental compliance ensures more predictable, efficient and effective environmental permitting of terminal capital maintenance, preservation and improvement projects. It also helps WSF to communicate TE environmental compliances to stakeholders.

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

The environmental activities support WSF’s compliance with environmental regulations contributing to the state’s efforts to improve the quality of Washington's natural resources.

The inspection program and load rating analysis contribute to the preservation of WSF’s ability to move people, goods and services by monitoring the condition of terminal structures and systems and protecting structures from unnecessary stress.

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

Funding the environmental support activities allows coordination between WSF and WSDOT Headquarters Environmental Services staff on issues of statewide significance, including in-water work permits, environmental compliance, and standards and safeguards.

What are the other important connections or impacts related to this proposal?

Impact on agency clients and services:

Bridge Load Ratings: Evaluating the load-carrying capacity of WSF’s bridge structures will provide information needed to post legal load limits, and bring Ferries bridge structures into compliance with CFR Title 23 Part 650.313, the WSDOT Bridge Design Manual, and AASHTO Manual Condition Evaluation of Bridges. In addition, evaluating the continuing changing capacity of terminal structures and improving the accuracy of the overweight vehicle approval process will make the terminals safer for the traveling public.

Environmental Support: Reviewing and analyzing bills and regulations gives WSF the opportunity to influence final rule making that may affect ferry services and project delivery. This increases efficiency and effectiveness in delivering ferry terminal capital projects in a more predictable environmentally responsible manner.

Impact on other state programs or units of government:

Paving and Building Inspections: Conducting the pavement survey program with WSDOT resources and pavement structural condition ratings will provide cost-effective pavement rehabilitation forecasts.

Environmental Support: WSF will coordinate with WSDOT statewide and with WSDOT Headquarters on matters of statewide significance.

What alternatives were explored by the agency, and why was this alternative chosen?

Bridge Load Ratings: The following alternatives were considered, but were discarded since they could result in unnecessary risks to customer safety:

1. Do not update calculations based on bridge inspections. Load ratings would be inaccurate not truly reflecting the capacity of the structures.
2. Do not perform checking of calculations. Checking of calculations is standard practice in the structural engineering profession.

Overweight Vehicle Evaluation Program: Maintaining the existing overweight vehicle evaluation procedure was considered, but discarded since the existing procedure was developed several years ago. Since the overweight vehicle evaluation procedure was developed, codes have changed, and terminal

assets have degraded. Continuing to use this procedure as is, may result in damage to terminal assets and a risk to the traveling public.

Inspection Program: The inspection program is a well-established need and required to meet federal and legislative requirements and the terminal preservation program's needs. Within the inspection program WSF uses many alternatives to meet this need, including:

- Combining inspections into groups;
- Allocating the same resource for consistency;
- Contracting out select inspections where appropriate;
- Streamlining methods; and
- Using previously proven methods modified for the uniqueness of the terminal structures.

Environmental Support: As an alternative, WSF could secure environmental permits and approvals on a project-by-project basis, which would result in additional costs and delays. Without the proactive approach, WSF will be required to consult with layers of environmental regulators; the US Army Corps of Engineers, WDFW, DAHP, local governments, USFWS and NMFS on every terminal construction project individually which impact project schedules and increase work load for both WSF and the regulatory agencies. Individual ESA consultation for projects takes between 90 to 360 days. WSF may have to use consultant services or hire more FTE to respond to the changing requirements in a reactionary mode, rather. This method of responding to environmental changes and requirements is not efficient and detrimental to project delivery, and costly. WSF is currently saving up to 75 percent of the time it takes to permit a maintenance project due to increase in use of programmatic permits. Not understanding issues with pile driving noise effect on fish, marine mammals, and sea birds; and shading effect on fish migration under dock through special studies and research, WSF would not have the best available science information to negotiate project mitigation and conservation measures.

What are the consequences of not funding this package?

Bridge Load Ratings: Not funding this package will result in a violation of previously stated state and federal requirements and jeopardize the safety of the traveling public.

Overweight Vehicle Evaluation Program: Without the funding, WSF will be unable to update its structural models and structural analysis tools with data from the latest WSDOT Bridge and Structures Office Reports. This becomes a serious safety risk, as WSF will not be able to accurately analyze the structural integrity of its terminals. Terminal structures may be more damaged than previously assessed and may require repairs at a faster rate. This proposal ensures the structural safety of the terminals and the alignment of WSF's data with WSDOT Bridge and Structures Office findings.

Inspection Program: WSF will not be in compliance with federal and legislative requirements will not have the information needed to update the capital preservation program as well as identifying any emerging asset problems with the terminals.

Environmental Support: Should the system-wide environmental compliance not be funded, WSF's terminal capital projects may not comply with federal, state and local laws and regulations. WSF will not be able to coordinate with WSDOT statewide and with WSDOT Headquarters on matters of statewide significance. Project development cost will increase and permitting uncertainties will grow which will put projects at risk.

What is the relationship, if any, to the capital budget?

Environmental Support: Without the environmental support in advance of terminal construction projects, the terminal construction program will not meet the legislative schedule and budget requirements because of uncertainties surrounding permit conditions, increasing the capital budget required for each project with in-water construction.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

Bridge Load Ratings & Overweight Vehicle Evaluation Program:

- The number of FTEs is estimated based on the amount of effort required to perform the load rating analysis.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the Enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.

Inspection Program:

- The FTEs are based on the scheduled inspections and the typical positions required to complete the inspections.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the Enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.
- The dive consultant will be used for the Seattle dive inspection in 2017. WSDOT Bridge Preservation Office dives all WSF terminals except Eagle Harbor and Seattle, which are too big for their work load. The WSDOT BPO administers the consultant agreement and uses their divers on some of the facilities. The cost estimate of \$100,000 is based on our most recently completed dive at Seattle with escalation factors.
- Personal Service Contracts includes \$40,000 as a placeholder for terminal maritime security inspections.
- Goods and services are to cover the replacement of bathymetric sounding gear, vendor services, remote access, man lift rentals, and Bridge Office inspection supplies.

Environmental Support:

- The FTEs are based on the anticipated level of effort to perform the activities identified.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the Enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.
- The consultant tasks include:

- Updating the environmental permitting procedure manual.
- Reference Biological Assessment updates to include new listed species, project impacts and mitigation techniques.
- The U.S Army Corps 18 pile programmatic has been revoked by the Corps. WSF needs to do a formal ESA consultation for a new programmatic permit that will allow WSF to install 24 inches or larger piles for terminal maintenance projects.

The estimate is based on past work to update these manuals, and developing permitting strategies for WSF based on the four distinct tasks at \$25,000 each. One major assumption to use consultants is that WSDOT does not have the FTE to do this work in-house.

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

Load Restrictions: Funding for load rating analysis will be ongoing per the previously stated federal and state requirements. Development of the expanded overweight vehicle evaluation program is a one-time cost. Future biennia will require funding for the ongoing implementation of the overweight vehicle evaluation program, including the procedures developed in the 2011-13 biennium.

Inspection Program: Inspections are an ongoing expense and will continue to be with adjustments to cost based on the inspections required in each biennium. Funding for the inspection program will continue in future biennia. The budgets for these activities will be developed using a zero-based approach for each budget cycle.

Environmental Support: Funding for renewing programmatic permits, updating the Reference BA, research underwater noise impacts, coordinate with regulatory agencies and ESO, and environmental stewardship will continue in future biennium. Funding for renewing programmatic permits, updating the Reference BA, research underwater noise impacts, coordinate with regulatory agencies and ESO, and environmental stewardship will continue in future biennium.

Budget Activity Package: T-6 – TE Supervision, Office Support and Supplies
PIN: 998901F
WIN: M05489E

Recommendation Summary Text:

This decision package provides the budget capacity for supervision and office support for WSF terminal construction office (organizations 362210) and the terminal design office (organization 362230) that accomplishes preliminary engineering, right-of-way acquisition, and construction for the preservation and improvement of ferry terminals. The types of activities funded include executive management, supervision of project design and construction organizations, tribal relations, climate change study contribution, and administrative support.

Fiscal Detail:

T-6 TE Supervision

Fiscal Detail			
Detail by Fund	FY 2018	FY2019	Total
A90-Puget Sound Capital Construcion - State	1,087,063	1,087,063	2,174,126
Total by Fund	1,087,063	1,087,063	2,174,126

Package description: TE Supervision, Office Support & Supplies (M05489E)

Object of Expenditure:

T-6 TE Supervision, Office Support & Supplies

Object of Expenditure Detail			
Detail by Objects of Expenditure	FY 2018	FY2019	Total
A - Salaries and Wages	551,426	551,426	1,102,852
B - Benefits	209,542	209,542	419,084
E - Goods and Services	296,095	296,095	592,190
G - Travel	5,000	5,000	10,000
T - Interagency Reimbursement Construction office	25,000	25,000	50,000
Total by Object	1,087,063	1,087,063	2,174,126

Salary and FTE Details:

T-6 TE Supervision, Office Support & Supplies

Salary and FTE Detail						
List Position by Classification	FTEs			Dollars		
	FY 2018	FY2019	Biennial Average	FY 2018	FY2019	Total
LIBRARY AND ARCHIVAL PROFESSIONAL 2	1.00	1.00	1.00	78,581	78,581	157,162
Secretary	1.00	1.00	1.00	75,958	75,958	151,916
Staff Aide	1.00	1.00	1.00	83,700	83,700	167,400
TRANSPORTATION PLANNING SPECIALIST 5	0.50	0.50	0.50	61,096	61,096	122,192
WMS BAND 3	0.50	0.50	1.00	56,000	56,000	112,000
WMS BAND 3	1.00	1.00	1.00	103,249	103,249	206,498
WMS BAND 3	1.00	1.00	1.00	103,249	103,249	206,498
TRANSPORTATION PLANNING SPECIALIST 5	1.00	1.00	1.00	117,692	117,692	235,384
EMS BAND 4	1.00	1.00	1.00	121,249	121,249	242,498
Total Staff Dollars and FTEs	8.00	8.00	8.00	800,773	800,773	1,601,547

Executive management and oversight is performed by the Deputy Assistant Secretary of Construction and Operations. One third of the Deputy Assistant Secretary of Construction and Operations' time is allocated to Terminal Engineering and includes the following activities:

- Provide leadership, strategic direction, visionary thinking and long-term planning to ensure secure and economical capital programs related to terminal operations, maintenance, preservation and new construction;
- Provide leadership and tactical direction to WSF employees and executive management to facilitate effective resolution of day-to-day operational issues;
- Manage available funds to successfully accomplish WSF's biennial programs within the legislatively authorized levels;
- Identify, create and assist in implementing operational cost-savings opportunities and strategic initiatives;
- Represent WSF to outside entities including the United States Coast Guard and the Legislature;
- Lead implementation of the vehicle reservation system; and
- Provide overall direction for the Ferries' Capital Preservation Program for terminals.

Executive management is performed by the Director of Terminal Engineering and includes:

- Developing strategic goals, objectives, strategies, performance measures and plans; operational policies, strategies and plans for delivering the terminal capital program;
- Integrating and coordinating goals, objectives strategies and plans of the capital and operating programs to effectively and efficiently accomplish WSF's mission;
- Developing and implementing innovative approaches and best practices, such as alternative construction methods, financial and business case analyses, quality control procedures, safety performance standards, department procedural standards, and emergency response protocols;
- Approving the organizational structure, establishing personnel policies, procedures and practices, appointing personnel to positions, and allocating staff and consultants to accomplish work plans,
- Developing strategies and policies for media, the Transportation Commission and the Legislature.

- Planning, organizing, directing, coordinating and controlling the development and delivery of terminal capital projects;
- Developing capital investment priorities and recommending selection of projects;
- Developing the capital budget request and approving expenditures for design, right-of-way acquisitions and construction at terminals;
- Serving as the lead SEPA authority, approving environmental documentation and plans for projects and related mitigation and cleanup;
- Developing strategies and conducting evaluations of complex engineering systems, shoreline impacts, contaminated sites, and other environmental conditions, as part of negotiations and settlement of legal disputes;
- Making policy and approving designs of buildings, docks, structures, toll facilities, security systems, machinery et al.; and
- Resolving bid protests, awarding construction contracts, and settling construction claims.

Supervision of terminal planning and design includes:

- Developing, recommending and implementing strategic program plans and biennial budget requests;
- Developing and implementing the detailed staff and consultant utilization plan for design of capital projects;
- Assigning and supervising project managers;
- Overseeing the development and approval of project scope, budget and schedule;
- Supervising preliminary engineering tasks relating to environmental compliance, permitting, designs, and plans, specifications and estimates;
- Directing environmental compliance, peer review of designs and quality and constructability assessments; and
- Reviewing stamped engineering drawings, specifications and reports.

Supervision of terminal construction includes:

- Developing and implementing policies and strategies for organizational structure and requirements for staff, consultant services and material resources to deliver terminal construction projects;
- Developing and implementing policies and plans relating to personnel actions and corrective/disciplinary actions;
- Leading the management team responsible for development and delivery of the capital preservation projects;
- Supervising project inspection offices and project support activities;
- Overseeing environmental and permitting compliance;
- Reviewing and approving change orders, construction claims and negotiations; and
- Coordinating and communicating terminal construction activities.

Tribal relations activities include:

- Developing tribal relations and negotiation strategies for capital projects;
- Providing coordination between tribal representatives, terminal project managers and various WSDOT, local, state and federal officials;
- Facilitating government-to-government and routine working meeting involving Tribes;
- Assisting in drafting agreements with Tribes; and
- Training WSF staff in tribal culture, strategies, and negotiating practices.

Office engineering activities include:

- Preparing work orders authorization requests to obtain spending authority for capital projects and set up cost collection centers;
- Monitoring capital project budgets; and
- Managing the engineering library, including cataloguing, storing and retrieving terminal drawings, environmental documentation, design reports, and special studies.

Administrative services include:

- Support to management: monitoring workload and budget resources; attending and recording minutes of meetings; preparing monthly management reports; facilitating the flow of documents requiring executive approval; maintaining policies and procedures manuals and the ferry route reference manual;
- Single Point of Contact: Providing a single point of contact with Human Resources, Training, Payroll, Information Technology, Budget, Accounting, Purchasing and Administrative Services;
- Consultant invoices: reviewing consultant invoices for proper formatting, drafting approval memos, and routing to project managers for approval;
- Communication services: maintaining staff seating charts and phone/e-mail lists; providing reception of and information to visitors and backup phone reception; arranging meetings and sending notices; forwarding and distributing mail and facsimiles; providing word processing services, including formal correspondence to federal, state and local officials and the public and draft documents from handwritten notes and oral instruction; coordinating printing services;
- Personnel and payroll services: coordinating with HR to update organization charts; maintaining organization and personnel files containing items such as, staff evaluations and position classification questionnaires; coordinating hiring of temporary help; assisting with new staff orientations, including obtaining login scripts, mainframe accounts, remote access accounts, telephone installations, computer equipment and business cards; processing requests for security badges; preparing the staff training schedule; reviewing staff time sheets; entering semi-monthly pay documents to mainframe;
- Travel services: making travel arrangements for staff; reviewing requests for travel reimbursements; submitting documentation to Accounting; dispatching motor pool vehicles and scheduling maintenance; and
- Procurement services: Ordering, receiving, storing and monitoring inventories of stores wants items and office and computer supplies using MPET; ordering special equipment, such as computers, ergonomic equipment, cell phones/PDAs, cubicle accessories, name plates, etc.; coordinating building service requests; reviewing and approving monthly billings for both commercial and non-commercial charges; conducting inventories of minor capital equipment.

Narrative Justification and Impact Statement

What specific performance outcomes does the agency expect?

This activity package supports Terminal Engineering by providing the supervision, office support and supplies required to deliver projects on time and on budget.

Performance measure detail:

Performance Measures for T-6 – TE Supervision, Office Support and Supplies	FY 2018	FY 2019
Outcome Measures: <ul style="list-style-type: none"> Delivering project on time and on budget. 	Yes	Yes
Output Measures: <ul style="list-style-type: none"> Number of terminal preliminary engineering phase projects. (The number of projects are proposed and subject to change.) Number of terminal right-of-way phase projects. (The number of projects are proposed and subject to change.) Number of terminal construction phase projects. (The number of projects are proposed and subject to change.) Terminal preliminary engineering budget. Terminal right-of-way budget. Terminal construction budget. Number of terminal construction FTEs. 	 \$9 M 0 \$86 M 48	 0 43 \$8 M 0 \$87 M 48
Efficiency/Effectiveness Measures: <ul style="list-style-type: none"> Delivery planned scope of work for project support activities on time and on budget. Develop and manage program IAW RCWs 43.88 and 47.60. Spend IAW legislative appropriations and provisos. Properly account for expenditures by program, fund, proviso and fiscal period. 	Yes Yes Yes Yes	Yes Yes Yes Yes

Is this decision package essential to implement a strategy identified in the agency’s strategic plan? If so, please describe.

- Goal: Preservation
Terminal Engineering supervision, office support and supplies are necessary to support and facilitate terminal preservation and improvement projects.
- Goal: Stewardship
Funding the tribal relations activities ensures ongoing WSDOT awareness, particularly at the leadership team level, of key tribal interests affected by transportation programs and projects and how those interests can be factored into policy and project management decisions.

Does this decision package provide essential support to one of the Governor’s priorities? If so, please describe.

This activity package improves statewide mobility of people, goods and services by supporting the delivery of projects on time and on budget (90 percent standard).

This activity package strengthens government's ability to achieve results efficiently and effectively by providing WSF Terminal Engineering employees the supervision, support and supplies they need to deliver projects.

Does this decision package make key contributions to statewide results? Would it rate as a high priority in the Priorities of Government process? If so, please describe.

This activity package supports Terminal Engineering improvement and preservation project implementation.

What are the other important connections or impacts related to this proposal?

None.

What alternatives were explored by the agency, and why was this alternative chosen?

This decision package complies with the requirements of ESHB 2358, Laws of 2007 by developing a support budget for supervision and support of Terminal Engineering and allocating the cost to projects. Alternative approaches, which were considered but rejected, are:

- WSF could revert to the previous cost allocation system that does not develop overhead budgets but simply collects support costs as they occur and allocates them to projects.
- Instead of allocating support costs to projects, WSF could allocate them to new subprograms.
- Support budgets could use the traditional operating budget methodology based on adjusting or adding new initiatives to a base carried forward from the prior fiscal period, instead of using a zero-base budget methodology.

What are the consequences of not funding this package?

Failure to fund this decision package will prevent WSF's ability to plan, organize, direct, coordinate and control terminal capital investments and provide organizational support for design and construction efforts.

What is the relationship, if any, to the capital budget?

None.

What changes would be required to existing statutes, rules, or contracts, in order to implement the change?

None.

Expenditure calculations and assumptions.

- FTEs and labor costs are based on specific positions that historically charged to the administrative overhead cost collection centers.
- Salaries are based on the Step L of the 2016 compensation schedule and includes changes to benefit rates and general wage increases that were included in the enacted 2016 Supplemental Operating Budget.
- Benefits are based upon the Washington State Department of Transportation Cost Distribution Rates for permanent employees at regular time.
- Non-labor expenses are based on projected expenditures in the 2015-17 biennium inflated to 2018 and 2019 dollars using the Implicit Price Deflator for Personal Consumption forecast, and include 25 percent of the non-labor expenses for the Deputy Assistant Secretary of Construction & Operations.

Which costs and functions are one-time versus ongoing? What are the budget impacts in future biennia?

For the purpose of long-range financial planning in this budget development cycle, the proposed 2017-19 terminal supervision and office support budget is assumed to continue into future biennia with adjustments for inflation. However, it should be noted that WSF will prepare a new zero-based budget request in each succeeding budget development cycle that will replace the out-biennium placeholders established by the prior budget development cycle.

TEIS Ferry Requirements

TEIS FERRY REQUIREMENTS

The Department will submit the Washington State Ferries TEIS project list electronically.

Additional Ferry Requirements

ADDITIONAL FERRY REQUIREMENTS

The Department will submit an update to the Greater Level of Detail that was originally required by Chapter 247, Laws of 2010 electronically.

Personnel Information

FTE Summary Detail for 2017-19 Agency Request Budget

Pgm Code	Program Title	2015-17 Enacted with 2016 Supplemental	2017-19 Agency Request	Agency Request versus 2015-17 w/2016 Supplemental
Operating Budget				
B	Toll Operations & Maintenance	50.3	61.4	11.1
C	Office of Information Technology	225.1	248.1	23.0
D	Facilities Maintenance & Operations	81.7	81.7	0.0
F	Aviation	10.6	10.6	0.0
H	Pgm. Delivery Management & Support	247.0	254.5	7.5
K	Transportation Economic Partnerships	2.0	2.0	0.0
M	Highway Maintenance and Operations	1,542.8	1,562.9	20.1
Q	Traffic Operations	242.4	247.4	5.0
S	Transportation Management & Support	172.2	184.7	12.5
T	Transp. Planning, Data, & Research	186.5	186.5	0.0
U	Charges from Other Agencies	0.0	0.0	0.0
V	Public Transportation	24.7	24.7	0.0
X	Ferries Maintenance and Operations	1,739.1	1,738.7	(0.4)
Y	Rail	10.2	10.5	0.3
Z	Local Programs	43.7	43.7	0.0
Subtotal Operating		4,578.3	4,657.5	79.2
E	Transportation Equipment Fund (TEF)	209.3	209.3	0.0
Total Operating		4,787.6	4,866.8	79.2
Capital Budget				
D	Capital Facilities	7.5	7.5	0.0
I	Highway Improvements	1,202.7	1,205.0	2.3
P	Highway Preservation	795.0	795.0	0.0
Q	Traffic Operations	10.3	10.3	0.0
W	Ferries Construction	126.0	125.7	(0.3)
Y	Rail	29.0	12.0	(17.0)
Z	Local Programs	0.0	0.0	0.0
Total Capital		2,170.5	2,155.5	(15.0)
Total Budget (Appropriated only)		6,748.8	6,813.0	64.2
Total Budget (Includes TEF)		6,958.1	7,022.3	64.2

