Appendix A

Consolidated Interview Questions

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J10047 VMPI Plan Interview Questions:

Questions for interview with Tim Browning/Vern Day:

General

- Is there a list or description of preventative maintenance items done by the vessel crew or EH?
- What work items do they do during the scheduled lay ups that would be on the critical path and drive the duration of the lay up period?
- How much maintenance does EH accomplish relative to the vessel crew?
- Are there any preservation items can the staff chiefs accomplish without port engineer approval?
- Within preservation program, what specific condition based monitoring is done to predict the SOW for preservation items.
- Are there any preservation items that get deferred due to time constraints?
- Are there any preservation items that get deferred due to cost?
- Are there any preservation items that get deferred due to condition?
- Is there a record of Preservation items accomplished and/or deferred?
- Which preservation items are on the critical path?
- Are they on the critical path due to the process or available labor?
- What work is done by EH personnel in the shipyard already?
- Do you have time to do work in the shipyard?
- If not, what work would be good to do in the shipyard?
- Does it depend on the time of year?
- Is most of the EH work in the summer on terminals?
- Would there be scheduling issues associated with performing more EH work in the summer on vessels to reduce out of service time?
- Does performing EH work in a shipyard really reduce the workload on the vessel or is there a work list of deferred preservation items?
- What work is farmed out to contractors?
- Is there any work that is farmed out due to limited EH personnel availability?
- What work could EH do that would reduce cost or time compared to contracting out?
- What kind of work is EH really good at?

- How much time is spent during lay up or in the SY dealing with emergent work?

Information Flow

- What does the flow of information look like for vessel preservation? Is it similar to preventative maintenance?

Underway/Standby Preservation

- What kind of preservation work is currently done with the vessel underway? Done by EH personnel?
- Is it possible for contractors to perform work while the vessel is underway? What kind of work could be performed?
- Is there a downside to having vessel crew perform more preservation while the vessel is underway?
- Can some preservation work be performed at night? If so, what kind of work?
- What kind of maintenance/preservation work can be done while the vessel is in standby so WSF can button up the ship and use standby vessel for emergency use?

Budgeting

- If the job cap was increased from $120K/item, what kind of work would EH want to do? Have the labor force to do? Have the time to do?
- Does EH have a separate budget? Or does it use part of the money set aside from M, P, and I?
- Do contracting constraints (limits on EH work) impact how budgets are developed?

Questions for interview with Mike LaCroix:

General

- Has there been any more progress in developing rules of thumb for how many vessels are scheduled for maintenance at any one time vs. time of the year?
- Is there a list or description of preventative maintenance items done by the vessel crew or EH?
- What work items do they do during the scheduled lay ups that would be on the critical path and drive the duration of the lay up period?
- How much maintenance does EH accomplish relative to the vessel crew?
- What maintenance items can the staff chiefs accomplish without port engineer approval?
- What specific PMS items are conditioned based?
- Within preservation program, what specific condition based monitoring is done to predict the SOW for preservation items.
- If fleet wide or class wide maintenance standards were put in place, how would it be supported among the staff chiefs?
- Are there any PMS items that get deferred due to time constraints?
- Are there any PMS items that get deferred due to cost?
- Are there any PMS items that get deferred due to condition?
- Is there a record of PMS items accomplished and/or deferred?
- Is the frequency and/or duration of PMS or preservation items affected by vessel route in any way? If so, which routes/times have the biggest impact to these items?

Information Flow

- What is PMS?
- What does the flow of information look like for vessel maintenance?
- Is it possible to see an example of a work item that was generated in MPET and accomplished in EH?

Underway/Standby Maintenance

- What are the goals of vessel maintenance underway?
- What kind of maintenance is currently done with the vessel underway?
- How would staff chiefs feel about brining EH personnel on board for maintenance during vessel operation? Any turf issues?
- Is it possible for contractors to perform work while the vessel is underway? What kind of work could be performed?
- What do you think about modifying the quarterly staff chief reports to include equipment/system obsolescence, parts availability, and more forward thinking condition reporting? Would it be supported among the staff chiefs?

- Is there a downside to having vessel crew perform more maintenance or preservation while the vessel is underway?
- In a typical operating day, what systems can be worked on by vessel crew? Vessel class specific? Route specific?
- Can some maintenance work be performed at night? If so, what kind of work?
- What kind of maintenance can be done while the vessel is in standby so WSF can button up the ship and use standby vessel for emergency use?
- Is underway maintenance limited by personnel availability?

Budgeting

- Who establishes the budget for a work item?
- How is the budget developed? Labor and materials estimates?
- Is there a method to prioritize items by budget?
- Do contracting constraints (limits on EH work) impact how budgets are developed?
- Are there overall budgets by route, vessel class, or specific vessel?
- Are budgets set every biennium or more frequently?
- How are relatively high cost but infrequent items, such as topsides painting, budgeted?
- Does the budgeting process distinguish between maintenance and preservation items?
- Who reviews and approves budgets?

Questions for interview with Staff Chief Engineers:

General

1) Are there particular maintenance items that can be incorporated into a fleet wide or class wide standard?

a. If so, how would this benefit WSF?

2) Is it reasonable for EH personnel or contractors to perform maintenance and preservation activities while the vessel is underway, tied up between sailings, or in standby?

a. If so, what activities could be accomplished?

3) How would changing from an annual EH lay-up period to a biannual lay-up period affect the condition of your vessel?

a. If some of the annual EH work could be accomplished while your vessel was in a commercial shipyard would it be reasonable to change to a biannual lay-up period?

4) What factors do you consider when assigning priorities to work items entered into MPET?

5) What kinds of inspections or assessments are conducted on systems in the LCCM to help determine their condition relative to what is anticipated in the LCCM?

a. How are the results from the vibration analysis reports used to generate work requests?

Questions for WSF VMP&I Management

1) **TB/MLa/VD:** We've looked at the service work plan - Does the class of vessel, route, type of work scope, and/or similar work scopes between vessels currently influence scheduling at EH in any way? (It appears it does for some vessel classes, but not all.) If yes, to what degree & how – If no – why not? {Any additional comments or insights related to why this practice is or is not being universally followed, is appreciated.}

2) **VD / MLaC/ TB / PB**: Going right down the list, how many (rough % basis) of *Ernst and Young's* 2007 "Performance Audit Report's ten (10) recommendations – and how many (rough % basis) of *CRG's* 2008 "Washington State Ferries Financing Study II: Auto Passenger Vessel Preservation and Replacement Final Report" recommendations - and how many (rough % basis) of Alion's LCCM Phase II Study recommendations have been (a) Seriously reviewed and evaluated by WSF management, (b) taken to heart, initiated, and are either well underway or completed to the full extent of the consultants recommendations, (c) initiated, stalled in implementation, and will probably not be completed, and (d) not acted upon and/or are not being considered in any meaningful way. A follow up question:
   a) List the reasons - and please be as descriptive and comprehensive as possible with these reasons - *why* specific recommendations contained in those references fell into categories (c) or (d). (Simply answering "Not Applicable", "wouldn't work" or "doesn't fit our operations model" probably won't provide enough of the information we are looking for.)

3) **VD / TB / MLaC / RL:** Please identify at least 3-6 capital or maintenance projects (more would be better if the information is easily available) that contain similar enough work scopes and/or elements, that were conducted (a) via contractors and also (b) by the EH work force. {We need this information to make objective comparisons between the performance of state forces and contractors, for similar or near similar scopes of work – RFP elements to consider #3 and #4} . Along with project and work scope identification/descriptions, we need summarized job cost reports that provide labor categories and hours expended, job duration, out of time service, material and services costs, and any other information or metrics pertaining to the jobs, that will allow us to compare the performances and results of the projects.

4) **TB / MLaC:** Please provide a concise report (or series of reports) and/or email containing the following information: (Knowledgeable approximations would also work for some of the questions below.)

   a. Typical (annual) total engine operating hours, fuel burned, engine load factors per route and per vessel.

   b. (Typical) One way trip durations per route (we will assume for the vessel's primarily assigned to those routes only.)

(We could attempt to pull both (b) & (c) from published sailing schedules, but we're thinking more accurate and readily available data might exist somewhere at WSF.)

c. Total (daily) in service times per vessel.

d. Engine starts/stops & Time at idle or slow speed maneuvers per route.

e. Operating speeds of each vessel.

f. Terminal draft, pier, ramp, and community infrastructure limitations for all WSF routes. (NOTE: The intent and reason for all of Question #4 relates to the RFP "elements to consider" #s 11 and 13 – "Route Impact Matrix". With question 4f we are really just looking for known and accepted **terminal infrastructure limitations** that will either (a) exclude a particular vessel (or vessel class) from being placed on the route, or (b) is possible, but should only be used as an emergency or when there are no other options.)

5) **RL / MLaC:** Please provide budgeted **or anticipated** maintenance expenditures for all vessels, for all years starting in 2011 and running through 2027.

Questions for EH:

1) Based on the "preservation" work scope items identified in the LCCM data base, what *"preservation items*" does EH think they could accomplish - that they are not currently accomplishing – both in outside SY's, at EH, and/or while vessel's are on routes? (Please provide a "list of items" and the location for where these items would and/or could be accomplished.)

2) Same basic question for #1 above, except for non-LCCM "maintenance items". Specifically, we'd like to know the following:
    a. Which maintenance items currently being performed by EH personnel obviously contribute positively to reducing vessel out of service time.
    b. What additional maintenance tasks does EH staff think they could be doing – while the vessel's are in outside SY's, at EH, and/or while the vessels are on routes - and are not currently doing - that will contribute positively to reducing out of vessel service time.

3) Please provide detailed accounting of EH's cost allocations of the fully burdened labor rate (currently) charged to the state for vessel maintenance and capital projects.

4) What is your opinion about the time that has historically been charged by outside contractors to accomplish (preservation) top side painting and/or interior passenger space renovations? (a) Extremely high, (b) Slightly high, (c) About right, (d) A very efficient operation.

5) What Key Performance Indicators (KPI) or other "performance benchmarks" does EH routinely track and monitor, in order to evaluate the efficiency of your production and/or related SY operations? Also, please provide current values for any KPIs EH may currently be tracking. A small set of example KPIs might be as follows:
    a. % Overtime = (OT hrs worked / Total hours worked)
    b. Work Orders (WOs) waiting parts = (# of Maint. WOs waiting for parts / Total# of Maint. WOs)
    c. WO distribution by type of WO = Emergency WOs / Total WOs; PM WOs/ Total WOs; Corrective WOs / Total WOs.
    d. % Projects (Tasks) accomplished on schedule and/or under budget vs. Over budget and/or beyond schedule.
    e. Rush Purchase Orders = (Total # of rush POs / Total # of POs)
    f. Customer satisfaction questionnaires
    g. Other?

6) Please provide EH's standard project cost breakdown charged to WSF projects for labor (rates for all crafts and services), overhead, and materials. Related to overhead costs, please also provide a breakdown of the various cost allocations (% or other basis).

7) Based over time and on historical precedent , generally describe any change (if any) the EH staff may be seeing in both the range of maintenance activities and quantity of maintenance work order requisitions, that might have previously been handled by the on-vessel engineering and/or deck personnel.

8) Please provide a list (headings or general topics only) of WSF maintenance or preservation work scope standards (detailed written & descriptive work scopes) currently in use by EH personnel. {We are trying to determine the extent to which EH production staff utilizes standard written work scopes and for which specific types of tasks – i.e.: Top end overhauls; Full ME overhauls, generator bearing and meggar reading inspections; coating system refurbishments; pump inspections and overhauls, etc…}

9) Related to #8 above - What additional maintenance or preservation written work scope standards (topic headings only) would EH like to see, and what specific or direct problem would they address, or how and to what degree do you think these standards could improve EH's productive efficiency?

10) Please provide information or representative costs (adders) for having EH personnel (a) travel to various PS shipyards and (b) perform work while the vessel's are away from EH. {We realize these costs are likely to be all over the place depending upon where the vessel is, who the individual EH employees are, and the temporary living arrangements of those employees. What we are looking for are "rule of thumb" metrics that will allow us to determine the complete and total costs of EH personnel traveling to outside SY's to accomplish work. These figures may be buried inside job cost or other expense reports associated with specific projects.}

Questions for other public ferry and commercial fleet operators who also opwerate vessel maintenance facilities:

1) Please provide several examples of what your organization considers to be a "Best Practice" , that has been embraced and incorporated into your operations.

2) Please share what Key Performance Indictors (KPIs) or other metrics your organization uses to monitopr and track vessel out of eservice time and/or the efficicnecy of your maintenance organization, in general.

3) Please provide fully burdened labor rates (ranges) for all vessel maintenance disciplines; Please provide a breakdown of your maintenance organization's fully burdened cost allocations for their vessel maintenance organization.

4) Please provide a sample (4-6; medium to large tasks or projects – these could be anything related to maintenance or preservation work - pump rebuilds, painting, engine overhauls, etc….) of defined work scopes, complete with job cost metrics (labor hours expended, material & services costs, duration to complete, vessel time out of service, overall task/project costs, etc…)

Questions for commercial shipyards (only):

EBDG is reviewing Washington State Ferry (WSF) maintenance and preservation practices. Part of this review seeks to compare cost structures, manning levels and capabilities, production efficiency, and other aspects of SY operations, between a collective average of various Puget Sound shipyards, and WSF's Eagle Harbor facility.

We are requesting your professional input, in order to help us conduct this review. We are sending these same basic questions out to seven Puget Sound shipyards, and your quick response would be much appreciated. I personally assure you that anything you share with us will be held in strict confidence. As you read the questions below, please keep in mind that this report is not a compilation or comparison of issues between Puget Sound Shipyards. None of this information is intended – nor will it be formatted or presented - in any way for WSF's use in evaluating shipyards, bids, or awarding work. The information you provide will be used in our report, but your shipyard will not be identified. WSF is required by the Washington State legislature to demonstrate progress toward improving efficiencies in their planning and execution of fleet maintenance and preservation activities – and toward reducing vessel out of service time. These are the two (2) central themes of our current project with WSF.

{Question 1 Introductory Premise:} A past consultative study has suggested that one means by which WSF might be able to reduce vessel out of service time, is to expedite work at commercial shipyards, when and where appropriate. The recommendation calls for shipyards to work more than one 8 hour shift per day as a norm.

Question 1: If requested to do so by the customer, are there any environmental restrictions (e.g. noise or light pollution restrictions), shipyard property/facility use permits or other arrangement restrictions, production efficiencies, labor agreements, or other considerations that constrain you from expediting work using 2 hours overtime for a 10 hour day, using a second shift, or working weekends?

If yes, please be specific for each example.

Question 2:

(a) Based on your typical workforce, historical ability to *ramp up*, or ability to obtain adequate subcontractor support, is there any skill set that presents a constraint in your expediting work, stepping up to either……

i. 2, 8 hour shifts?
ii. 2 hours overtime for a single 10 hour shift?
iii. Initiating a second (10 hour) shift?
iv. Working weekends?

(b) If yes, which skill sets present constraints - and please be specific in your explanations why, and which expediting options apply.

(c) Please also identify the normal/typical time (measured in days we presume) from the initial phone call to the hiring hall, until the new employee is on site at your facility, working.

Skill Sets:

- Management or foreman level
- Metal/Steel Fabricators
- Mechanical/Machinists
- Pipe Fitters
- Machine Shop (inside or outside)
- Electricians
- Electronics Technicians
- Painters/ Blasters
- Crane Operators
- Other skills or services

Question 3. 100% topside painting is one of the WSF shipyard work items that take the longest time to complete. {Specifically - The curtain plate and superstructure in drydock, and the interior car deck areas in dockside or drydock.}

(a) When you normally bid these work items do you assume a normal 8 hour workday? If no, please explain why not.
(b) If yes, is either of these work items conducive to 10 hour work days, conducive to second shifts, or overtime on weekends?
(c) If yes, which would be the most efficient (a) in terms of reducing vessel out of service time for the WSF fleet?, and (b) in terms of cost to WSF?

Question 4. Based on your company's technical expertise and experience with painting ships in the PNW , are you aware of any onerous or unusually strict requirements (that might drive costs and /or schedule) contained in WSF's standard technical paint specifications? In other words, is there anything in the typical paint work scope for a WSF vessel, that specifically drives either the cost and/or the amount of time the vessel is out of service – that could be eliminated and still result in a perfectly satisfactory job ? (For example, WSF's "Marine Coating Specifications" Revision 1/07 stipulates (page 3, line #26) "Painting and Inspections shall be scheduled for daylight hours only". To your knowledge and based on your experience:

(a) Is this restriction in current practice & strictly followed?
(b) Is it necessary? If yes, please explain why.

Question 5. (SY Cost Structure / Fully Burdened Billing Rate Percentages) We are starting with the following breakdown, for average/typical fully burdened cost structures (expressed as a percentage of billing rates) for commercial yards in Puget Sound:

(a) Billable (Hourly) Employee Wages - 36%

(b) Employee Benefits - 14%

(c) Overhead - 40%

(d) Profit - 10%

Please look these percentages over and adjust as appropriate, to more accurately reflect what the breakdown is for your shipyard.

Question 6. (SY Key Performance Indicators – Production Efficiency)

Do you track any production efficiency indicators for your facility? These might include metrics such as:

- % of billable labor hours to total labor hours
- G&A hours (or $s) as a percentage of total labor hours (or $s)
- Typical breakdown of employees' total hours spent on site
- % of Work Order tasks competed to Work Order tasks scheduled
- % of WOs that are delayed by waiting on materials, & Average WO material wait time.
- % of Rush purchase orders.

If yes, please share with us typical values of these metrics.

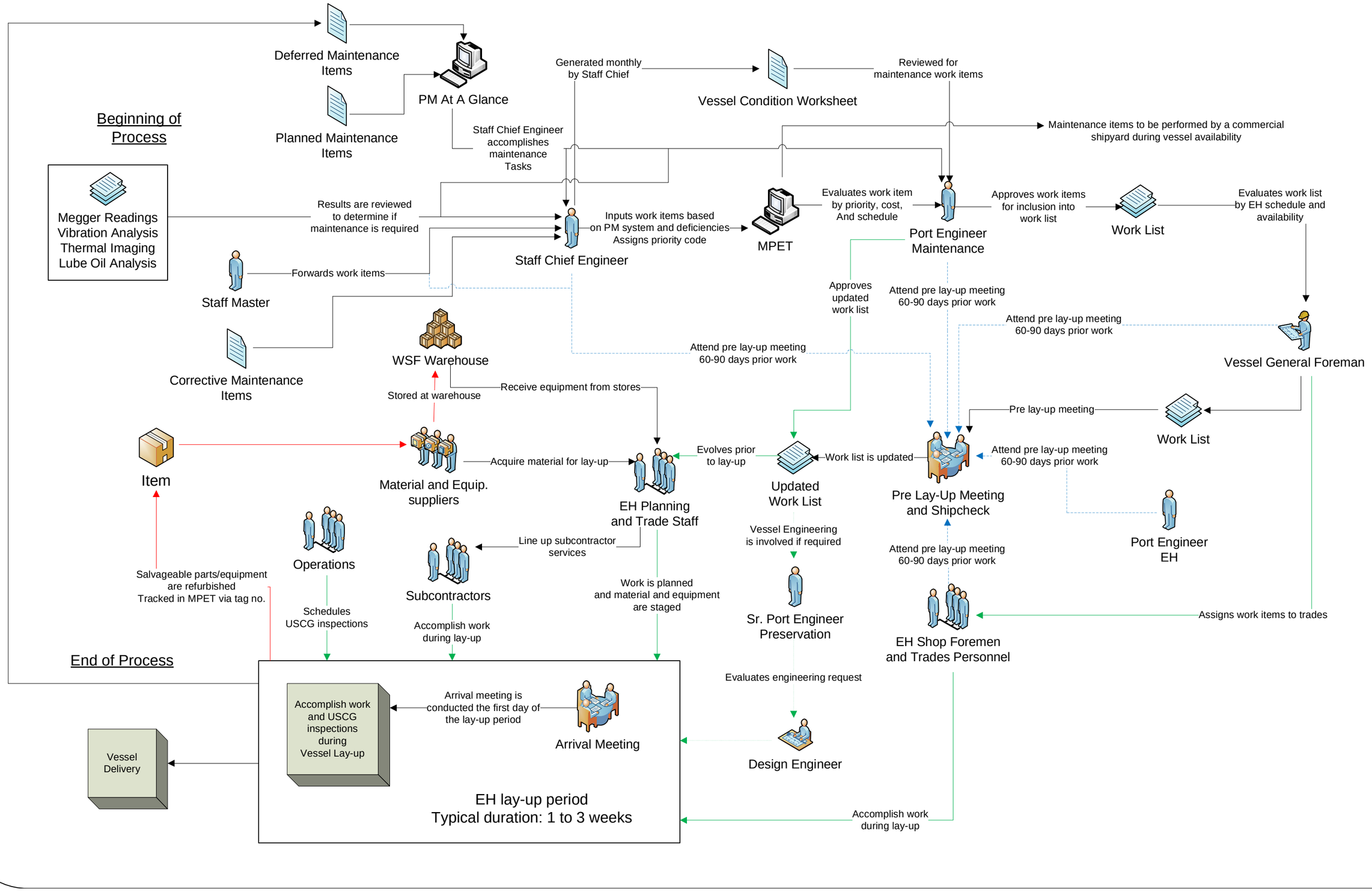
Question 7.

a) Within certain parameters and provided all arrangements and work scopes are agreed and accepted up front, does your shipyard allow WSF crews to perform certain work scopes alongside your SY employees?
b) Where do you draw the line on these work scopes?

Appendix B

Planning Process Schematics

Eagle Harbor (EH) Lay-up Maintenance Period Process Schematic



Commercial Availability Preservation/Improvement Process Schematic

Beginning of Process

Extended and Deferred Preservation Items

LCCM

If system or equipment condition does not validate the need for replacement the work item is extended

LCCM identifies preservation work items by biennium

USCG Inspection Reports
Dry Docking Reports
Vessel Condition Worksheet
Steel Maintenance Program
Preservation Notebook
Megger Readings
Vibration Analysis
Thermal Imaging

Evaluates condition reports and Inspects the material condition of upcoming preservation work items to validate the need for accomplishment

Staff Chief Engineer

If time does not allow for inspection prior to budget submission

Receives, reviews, investigates, and recommends for action preservation items

Vessel Business Staff

Sr. Port Engineer Preservation

Approved plan and budget sent to Sr. Port Engineer

Approves and forwards 16 year plan/biennium budget

Generates work order based on estimate

Change orders modify work orders

Work Order Process

Forwards to PDO and head of WSF

Program Development Office

Provides review of preservation work items and plan

16 Year Plan/ Biennium budget

Provides review of preservation work items and plan

Incorporated into 16 Year Plan

Lay-up Schedule

Approves work order

Reviews and comments on 16 year plan/ biennium budget

WSDOT

Reviews and forwards 16 year plan/biennium budget

WSF Capital Committee

Approves and forwards 16 year plan/ biennium budget

Gov. signs budget

Governor/OFM

Approved budget forwarded to Gov.

Approves and forwards plan to legislature for approval and appropriation for next biennium

Legislature

Planning and Budgeting

Engineering Estimate

Develops engineering estimate based on specifications

Budgets and scopes preservation work items and incorporates into the 16 year plan and schedule

Work items can be deferred due to cost and/or time constraints

Once funding is in place, work items are consolidated for upcoming vessel availability

Work Items

Discuss work items

Kick-off Meeting
SCE
Vessel Const. Project Eng.
Preservation Project Eng.
Preservation Port Eng.

Defines scope of work

Preservation Project Engineer

If required, WSF engineering is involved

Chief Naval Architect

If required, outside engineering firms are involved

Engineering Firms

Operations Security Concessions

Request work items

Specific maintenance items from MPET

MPET

Scope of Work

Arranges OFE

Estimator

Attend availability meeting

Preservation Project Engineer

Project Change Request Forms are developed and submitted if change order costs are too high

Change orders are negotiated by Vessel Construction Project Engineer

Change Orders

Attend availability meeting

Issues contract number

Eng. drawings are incorporated into the specifications

Eng. Drawings

Work items can be deferred due to cost and/or time constraints

Execution

Develops specifications based on scope of work

Vessel Construction Project Engineer

Item

Forwarded to legal

Specifications

Develops contract based on specifications

Legal/Contracts

Contract awarded

Contract/IFB

Contract/IFB

Submit proposals

Provide equipment and materials to winning shipyard

Material and Equipment suppliers

OFE provided to winning shipyard

Shipyards

Contracted work scope accomplished in availability

Winning shipyard accomplishes work

End of Process

Vessel Delivery

Vessel acceptance process

Accomplish work

Pre-arrival meeting is conducted one week before the availability

Pre-arrival Meeting

Commercial yard period
Typical duration: 1 to 3 months

LCCM is updated based on work accomplished

Attend availability meeting

Appendix C

Schedule of Vessel Maintenance, Preservation, and Improvement Activities

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
All Vessels	Maintenance	Maintenance USCG annual inspections	NA	NA	$43,558,000	$0	$43,558,000	Maintenance USCG annual inspections	NA	NA	$46,390,315	$0	$46,390,315	Maintenance USCG annual inspections	NA	NA	$49,406,799	$0	$49,406,799
Salish	Preservation																		
	Improvement	Targeted Improvements Kennewick Construction Cost	$10,132,500	NA	$10,132,500	$506,625	$10,639,125	Targeted Improvements Salish Improvement Future Funds	$169,000	$169,000	$169,000	$0	$169,000	Targeted Improvements Salish Improvement Future Funds	$311,056	$311,056	$311,056	$0	$311,056
	Subtotal						$10,639,125	Subtotal					$169,000	Subtotal					$311,056
Kennewick	Preservation																		
	Improvement	Targeted Improvements Kennewick Construction Cost	$67,550,000	NA	$67,550,000	$3,377,500	$70,927,500							Targeted Improvements - Kennewick Improvement Future Funds	$180,000	$180,000	$180,000	$0	$180,000
	Subtotal						$70,927,500							Subtotal					$180,000

Vessel	Activity	Biennium End	2019					Biennium End	2021					Biennium End	2023				
		Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
All Vessels	Maintenance	Maintenance USCG annual inspections	NA	NA	$52,619,427	$0	$52,619,427	Maintenance USCG annual inspections	NA	NA	$56,040,953	$0	$56,040,953	Maintenance USCG annual inspections	NA	NA	$59,684,959	$0	$59,684,959
Salish	Preservation	Sewage Tanks #1 - Structural Preservation (Paint)	$131,056	$103,245	$132,833	$13,283	$146,117	Topside - Structural Preservation (Paint)	$1,382,425	$1,805,785	$2,474,361	$247,436	$2,721,797	Bilges - Structural Preservation (Paint)	$376,256	$500,664	$730,639	$73,064	$803,703
		Sewage Tanks #2 - Structural Preservation (Paint)	$109,120	$103,245	$132,833	$13,283	$146,117	Hull (Paint) -Structural Preservation (Paint)	$1,875,305	$1,315,304	$1,802,284	$180,228	$1,982,512	Voids - Structural Preservation (Paint)	$370,972	$493,876	$720,733	$72,073	$792,806
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$21,060	$18,000	$23,158	$2,316	$25,474							Potable Water Tanks #1 - Structural Preservation (Paint)	$126,828	$168,302	$245,610	$24,561	$270,171
		All Cameras - Security	$37,674	$32,200	$41,428	$4,143	$45,571							Auto Deck - Steel Replacement	$1,561,041	$869,466	$1,268,846	$126,885	$1,395,731
		Electronic Door Locks - Security	$11,056	$9,450	$12,158	$1,216	$13,374							Wet Spaces - Steel Replacement	$416,419	$402,229	$586,989	$58,699	$645,688
														Radar 1A - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$70,048	$7,005	$77,053
														Radio System - Comm/Nav/Lifesaving Equip	$26,423	$37,000	$53,996	$5,400	$59,395
														Radar 1B - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$70,048	$7,005	$77,053
														Radar 2A - Comm/Nav/Lifesaving Equip	$77,154	$45,562	$66,490	$6,649	$73,139
														Radar 2B - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$70,048	$7,005	$77,053
														Potable Water Tanks #2 - Structural Preservation (Paint)	$126,828	$168,302	$245,610	$24,561	$270,171
														Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,138	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$10,569	$10,000	$14,593	$1,459	$16,053
														Sensors and Alarms - Security	$10,883	$7,425	$10,836	$1,084	$11,919
														AC Unit datacenter - Security	$12,587	$8,500	$12,404	$1,240	$13,645
		Subtotal					$376,652	Subtotal					$4,704,309	Subtotal					$4,615,685
	Improvement	Targeted Improvements Salish Improvement Future Funds	$193,000	$193,000	$193,000	$0	$193,000	Targeted Improvements Salish Improvement Future Funds	$206,000	$206,000	$206,000	$0	$206,000	Targeted Improvements Salish Improvement Future Funds	$221,000	$221,000	$221,000	$0	$221,000
	Subtotal	Subtotal					$193,000	Subtotal					$206,000	Subtotal					$221,000
Kennewick	Preservation							Sewage Tanks #1 - Structural Preservation (Paint)	$131,056	$103,245	$141,471	$14,147	$155,618	Topside - Structural Preservation (Paint)	$1,382,425	$1,805,785	$2,635,254	$263,525	$2,898,779
								Sewage Tanks #2 - Structural Preservation (Paint)	$109,120	$103,245	$141,471	$14,147	$155,618	Hull (Paint) -Structural Preservation (Paint)	$1,875,305	$1,315,304	$1,919,475	$191,948	$2,111,423
								Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$21,060	$18,000	$24,664	$2,466	$27,131						
								All Cameras - Security	$37,674	$32,200	$44,122	$4,412	$48,534						
								Electronic Door Locks - Security	$11,056	$9,450	$12,949	$1,295	$14,244						
								Subtotal					$401,144	Subtotal					$5,010,202
	Improvement	Targeted Improvements - Kennewick Improvement Future Funds	$537,568	$537,568	$537,568	$0	$537,568	Targeted Improvements - Kennewick Improvement Future Funds	$206,000	$206,000	$206,000	$0	$206,000	Targeted Improvements - Kennewick Improvement Future Funds	$221,000	$221,000	$221,000	$0	$221,000
	Subtotal	Subtotal					$537,568	Subtotal					$206,000	Subtotal					$221,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
All Vessels	Maintenance	Maintenance USCG annual inspections	NA	NA	$63,565,914	$0	$63,565,914	Maintenance USCG annual inspections	NA	NA	$67,699,224	$0	$67,699,224
Salish	Preservation	Sewage Tanks #1 - Structural Preservation (Paint)	$109,120	$103,245	$160,467	$16,047	$176,513	Machinery Spaces - Structural Preservation (Paint)	$1,240,801	$1,646,252	$2,725,031	$272,503	$2,997,534
		Passenger spaces - Passenger and Crew Spaces	$4,775,074	$5,923,113	$9,205,890	$920,589	$10,126,479	Heating System Piping - Piping Replacement	$85,609	$169,717	$280,932	$28,093	$309,025
		Crew's quarters - Passenger and Crew Spaces	$647,880	$826,521	$1,284,605	$128,461	$1,413,066	Sewage / Soil System Piping - Piping Replacement	$407,963	$402,229	$665,807	$66,581	$732,388
		Galley - Passenger and Crew Spaces	$924,788	$1,181,228	$1,835,902	$183,590	$2,019,492	Potable Water Piping - Piping Replacement	$566,498	$594,008	$983,258	$98,326	$1,081,584
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$89,837	$568,550	$883,658	$88,366	$972,024	Gyrocompass - Comm/Nav/Lifesaving Equip	$52,845	$50,000	$82,765	$8,276	$91,041
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$63,414	$148,502	$230,807	$23,081	$253,887	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$210,323	$82,000	$135,734	$13,573	$149,308
		PA system - Comm/Nav/Lifesaving Equip	$103,576	$156,000	$242,460	$24,246	$266,706	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$61,246	$6,125	$67,370
		Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$33,821	$79,201	$123,097	$12,310	$135,406	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$61,246	$6,125	$67,370
		Sewage Tanks #2 - Structural Preservation (Paint)	$109,120	$103,245	$160,467	$16,047	$176,513	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$61,246	$6,125	$67,370
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,024	$18,000	$27,976	$2,798	$30,774	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$61,246	$6,125	$67,370
		Electronic Door Locks - Security	$12,984	$9,450	$14,687	$1,469	$16,156	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$210,323	$82,000	$135,734	$13,573	$149,308
		Hirsch Hardware - Security	$20,761	$13,500	$20,982	$2,098	$23,080	All Cameras - Security	$44,242	$32,200			
		Subtotal					$15,610,098	Subtotal					$5,779,669
	Improvement	Targeted Improvements Salish Improvement Future Funds	$236,000	$236,000	$236,000	$0	$236,000	Targeted Improvements Salish Improvement Future Funds	$236,000	$236,000	$236,000	$0	$236,000
	Subtotal	Subtotal					$236,000	Subtotal					$236,000
Kennewick	Preservation	Bilges - Structural Preservation (Paint)	$376,256	$500,664	$778,148	$77,815	$855,963	Sewage Tanks #1 - Structural Preservation (Paint)	$109,120	$103,245	$170,901	$17,090	$187,991
		Voids - Structural Preservation (Paint)	$370,972	$493,876	$767,598	$76,760	$844,358	Passenger spaces - Passenger and Crew Spaces	$4,775,074	$5,923,113	$9,804,494	$980,449	$10,784,943
		Potable Water Tanks #1 - Structural Preservation (Paint)	$126,828	$168,302	$261,580	$26,158	$287,738	Crew's quarters - Passenger and Crew Spaces	$647,880	$826,521	$1,368,135	$136,814	$1,504,949
		Auto Deck - Steel Replacement	$1,561,041	$869,466	$1,351,352	$135,135	$1,486,487	Galley - Passenger and Crew Spaces	$924,788	$1,181,228	$1,955,280	$195,528	$2,150,808
		Wet Spaces - Steel Replacement	$416,419	$402,229	$625,157	$62,516	$687,673	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$89,837	$568,550	$941,117	$94,112	$1,035,229
		Radar 1A - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$74,603	$7,460	$82,063	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$63,414	$148,502	$245,814	$24,581	$270,396
		Radio System - Comm/Nav/Lifesaving Equip	$26,423	$37,000	$57,507	$5,751	$63,257	PA system - Comm/Nav/Lifesaving Equip	$103,576	$156,000	$258,226	$25,823	$284,048
		Radar 1B - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$74,603	$7,460	$82,063	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$33,821	$79,201	$131,101	$13,110	$144,211
		Radar 2A - Comm/Nav/Lifesaving Equip	$77,154	$45,562	$70,814	$7,081	$77,895	Sewage Tanks #2 - Structural Preservation (Paint)	$109,120	$103,245	$170,901	$17,090	$187,991
		Radar 2B - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$74,603	$7,460	$82,063	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,024	$18,000	$29,795	$2,980	$32,775
		Potable Water Tanks #2 - Structural Preservation (Paint)	$126,828	$168,302	$261,580	$26,158	$287,738	Electronic Door Locks - Security	$12,984	$9,450	$15,643	$1,564	$17,207
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,138	$20,000	$31,085	$3,108	$34,193	Hirsch Hardware - Security	$20,761	$13,500	$22,346	$2,235	$24,581
		Landing Radars - Comm/Nav/Lifesaving Equip	$10,569	$10,000	$15,542	$1,554	$17,097						
		Sensors and Alarms - Security	$10,883	$7,425	$11,540	$1,154	$12,694						
		AC Unit datacenter - Security	$12,587	$8,500	$13,211	$1,321	$14,532						
		Subtotal					$4,915,815	Subtotal					$16,625,129
	Improvement	Targeted Improvements - Kennewick Improvement Future Funds	$236,000	$236,000	$236,000	$0	$236,000	Targeted Improvements - Kennewick Improvement Future Funds	$536,000	$536,000	$536,000	$0	$536,000
	Subtotal	Subtotal					$236,000	Subtotal					$536,000

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Chetzemoka	Preservation													Sewage Tanks #1 - Structural Preservation (Paint)	$131,056	$103,245	$124,723	$12,472	$137,196
														Sewage Tanks #2 - Structural Preservation (Paint)	$109,120	$103,245	$124,723	$12,472	$137,196
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$21,060	$18,000	$21,745	$2,174	$23,919
														All Cameras - Security	$37,674	$32,200	$38,899	$3,890	$42,788
														Electronic Door Locks - Security	$11,056	$9,450	$11,416	$1,142	$12,557
	Subtotal													Subtotal					$353,656
	Improvement	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement (11-13)	$650,000	$650,000	$650,000	$0	$650,000	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement Future Funds	$169,000	$169,000	$169,000	$0	$169,000	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement Future Funds	$180,000	$180,000	$180,000	$0	$180,000
	Subtotal	Subtotal					$650,000	Subtotal					$169,000	Subtotal					$180,000
Cathlamet	Preservation	Hull (Paint) - Structural Preservation (Paint)	$353,000	$475,000	$505,886	$25,294	$531,181	Potable Water Tanks #1 - Structural Preservation (Paint)	$80,000	$169,717	$192,506	$19,251	$211,757	CPP Hubs/Blades Number One End - Propulsion System	$555,744	$456,000	$550,862	$55,086	$605,948
		Bilges - Structural Preservation (Paint)	$258,000	$493,876	$525,990	$26,299	$552,289	Sewage Tanks #1 - Structural Preservation (Paint)	$69,000	$103,245	$117,108	$11,711	$128,819	CPP Hubs/Blades Number Two End - Propulsion System	$555,744	$456,000	$550,862	$55,086	$605,948
		Voids - Structural Preservation (Paint)	$258,000	$493,876	$525,990	$26,299	$552,289	Auto Deck - MV Cathlamet Future Placeholder	$444,000	$1,582,000	$1,794,425	$179,442	$1,973,867	Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$140,568	$190,083	$229,626	$22,963	$252,589
		Hull - Steel Replacement	$155,000	$1,595,000	$1,698,713	$84,936	$1,783,649	Sewage / Soil System Piping - Piping Replacement	$275,000	$402,229	$456,239	$45,624	$501,863	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$54,989	$37,000	$44,697	$4,470	$49,167
		Elevators - Major Mechanical/Electrical Systems	$95,000	$1,018,300	$1,084,514	$54,226	$1,138,740	PA system - Comm/Nav/Lifesaving Equip	$174,000	$156,000	$176,947	$17,695	$194,642	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$54,989	$37,000	$44,697	$4,470	$49,167
		Interior Communications - Comm/Nav/Lifesaving Equip	$247,000	$237,000	$252,411	$12,621	$265,031	Radar 2A - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$54,989	$37,000	$44,697	$4,470	$49,167
		Radio System - Comm/Nav/Lifesaving Equip	$38,000	$37,000	$39,406	$1,970	$41,376	Radar 2B - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$54,989	$37,000	$44,697	$4,470	$49,167
		Gyrocompass - Comm/Nav/Lifesaving Equip	$52,000	$50,000	$53,251	$2,663	$55,914	Potable Water Tanks #2 - Structural Preservation (Paint)	$80,000	$169,717	$192,506	$19,251	$211,757	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$93,007	$79,201	$95,677	$9,568	$105,245
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Sewage Tanks #2 - Structural Preservation (Paint)	$69,000	$103,245	$117,108	$11,711	$128,819	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$124,019	$84,000	$101,475	$10,147	$111,622
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716						
								Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$20,000	$18,000	$20,417	$2,042	$22,459						
								Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,000	$20,000	$22,686	$2,269	$24,954						
								All Cameras - Security	$33,800	$33,800	$38,339	$3,834	$42,172						
								Electronic Door Locks - Security	$11,500	$11,500	$13,044	$1,304	$14,349						
	Subtotal						$4,954,017	Subtotal					$3,593,952	Subtotal					$1,878,020
	Improvement	Targeted Improvements Cathlamet - MV Cathlamet Impr Dockside (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Cathlamet - MV Cathlamet Impr Future Placeholder	$266,818	$266,818	$266,818	$0	$266,818	Targeted Improvements Cathlamet - MV Cathlamet Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$266,818	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Chetzemoka	Preservation	Topside - Structural Preservation (Paint)	$1,382,425	$1,805,785	$2,323,291	$232,329	$2,555,620	Bilges - Structural Preservation (Paint)	$376,256	$500,664	$686,030	$68,603	$754,633	Sewage Tanks #1 - Structural Preservation (Paint)	$109,120	$103,245	$150,670	$15,067	$165,736
		Hull (Paint) -Structural Preservation (Paint)	$1,875,305	$1,315,304	$1,692,247	$169,225	$1,861,472	Voids - Structural Preservation (Paint)	$370,972	$493,876	$676,729	$67,673	$744,402	Passenger spaces - Passenger and Crew Spaces	$4,775,074	$5,923,113	$8,643,833	$864,383	$9,508,217
								Potable Water Tanks #1 - Structural Preservation (Paint)	$126,828	$168,302	$230,614	$23,061	$253,676	Crew's quarters - Passenger and Crew Spaces	$647,880	$826,521	$1,206,175	$120,617	$1,326,792
								Auto Deck - Steel Replacement	$1,561,041	$869,466	$1,191,378	$119,138	$1,310,516	Galley - Passenger and Crew Spaces	$924,788	$1,181,228	$1,723,813	$172,381	$1,896,194
								Wet Spaces - Steel Replacement	$416,419	$402,229	$551,151	$55,115	$606,266	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$89,837	$568,550	$829,708	$82,971	$912,678
								Radar 1A - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$65,772	$6,577	$72,349	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$63,414	$148,502	$216,715	$21,671	$238,386
								Radio System - Comm/Nav/Lifesaving Equip	$26,423	$37,000	$50,699	$5,070	$55,769	PA system - Comm/Nav/Lifesaving Equip	$103,576	$156,000	$227,657	$22,766	$250,423
								Radar 1B - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$65,772	$6,577	$72,349	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$33,821	$79,201	$115,581	$11,558	$127,139
								Radar 2A - Comm/Nav/Lifesaving Equip	$77,154	$45,562	$62,431	$6,243	$68,674	Sewage Tanks #2 - Structural Preservation (Paint)	$109,120	$103,245	$150,670	$15,067	$165,736
								Radar 2B - Comm/Nav/Lifesaving Equip	$77,154	$48,000	$65,772	$6,577	$72,349	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,024	$18,000	$26,268	$2,627	$28,895
								Potable Water Tanks #2 - Structural Preservation (Paint)	$126,828	$168,302	$230,614	$23,061	$253,676	Electronic Door Locks - Security	$12,984	$9,450	$13,791	$1,379	$15,170
								Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,138	$20,000	$27,405	$2,740	$30,145	Hirsch Hardware - Security	$20,761	$13,500	$19,701	$1,970	$21,671
								Landing Radars - Comm/Nav/Lifesaving Equip	$10,569	$10,000	$13,702	$1,370	$15,073						
								Sensors and Alarms - Security	$10,883	$7,425	$10,174	$1,017	$11,191						
								AC Unit datacenter - Security	$12,587	$8,500	$11,647	$1,165	$12,812						
	Subtotal	Subtotal					$4,417,092	Subtotal					$4,333,879	Subtotal					$14,657,039
	Improvement	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement Future Funds	$193,000	$193,000	$193,000	$0	$193,000	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement Future Funds	$206,000	$206,000	$206,000	$0	$206,000	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement Future Funds	$221,000	$221,000	$221,000	$0	$221,000
	Subtotal	Subtotal					$193,000	Subtotal					$206,000	Subtotal					$221,000
Cathlamet	Preservation	Topside - Structural Preservation (Paint)	$3,020,620	$1,975,502	$2,541,646	$254,165	$2,795,811	Hull (Paint) - Structural Preservation (Paint)	$488,288	$475,000	$650,864	$65,086	$715,951	Bilges - Structural Preservation (Paint)	$769,423	$500,664	$730,639	$73,064	$803,703
		Machinery Spaces - Structural Preservation (Paint)	$547,474	$1,646,252	$2,118,039	$211,804	$2,329,843	Sewage Tanks #1 - Structural Preservation (Paint)	$115,202	$103,245	$141,471	$14,147	$155,618	Passenger spaces - Passenger and Crew Spaces	$6,350,912	$6,092,829	$8,891,507	$889,151	$9,780,657
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$112,031	$84,000	$108,073	$10,807	$118,880	Reduction Gears #1 - Propulsion System	$628,856	$437,000	$598,795	$59,880	$658,675	Crew's quarters - Passenger and Crew Spaces	$497,800	$826,521	$1,206,175	$120,617	$1,326,792
		Sensors and Alarms - Security	$8,555	$6,000	$7,719	$772	$8,491	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$430,158	$568,550	$779,051	$77,905	$856,956	Galley - Passenger and Crew Spaces	$655,278	$1,181,228	$1,723,813	$172,381	$1,896,194
		AC Unit datacenter - Security	$12,119	$8,500	$10,936	$1,094	$12,030	Radar 1A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Solariums - Steel Replacement	$412,191	$1,980,594	$2,890,359	$289,036	$3,179,395
								Reduction Gears #2 - Propulsion System	$628,856	$437,000	$598,795	$59,880	$658,675	Wet Spaces - Steel Replacement	$420,646	$425,000	$620,219	$62,022	$682,241
								Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Sewage Tanks #1 - Steel Replacement	$369,915	$366,588	$534,976	$53,498	$588,474
								Sewage Tanks #2 - Structural Preservation (Paint)	$115,202	$103,245	$141,471	$14,147	$155,618	Sprinkler System - Piping Replacement	$289,591	$188,000	$274,356	$27,436	$301,791
								Heating Boilers #2 - Major Mechanical/Electrical Systems	$63,414	$46,672	$63,952	$6,395	$70,347	Rudder Number One End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
								Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$25,366	$18,000	$24,664	$2,466	$27,131	Rudder Number Two End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
								Electronic Door Locks - Security	$15,801	$11,500	$15,758	$1,576	$17,334	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$159,592	$148,502	$216,715	$21,671	$238,386
								Hirsch Hardware - Security	$26,653	$18,000	$24,664	$2,466	$27,131	Heating Boilers #1 - Major Mechanical/Electrical Systems	$65,528	$46,672	$68,110	$6,811	$74,921
														Radio System - Comm/Nav/Lifesaving Equip	$57,073	$37,000	$53,996	$5,400	$59,395
														Potable Water Tanks #1 - Steel Replacement	$128,942	$366,588	$534,976	$53,498	$588,474
														Potable Water Tanks #2 - MV Cathlamet Future Placeholder	$128,942	$366,588	$534,976	$53,498	$588,474
														Sewage Tanks #2 - Steel Replacement	$369,915	$366,588	$534,976	$53,498	$588,474
														AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														All Cameras - Security	$46,440	$33,800	$49,326	$4,933	$54,258
	Subtotal	Subtotal					$5,265,054	Subtotal					$3,488,131	Subtotal					$21,798,270
	Improvement	Targeted Improvements Cathlamet - MV Cathlamet Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Cathlamet - MV Cathlamet Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Cathlamet - MV Cathlamet Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Chetzemoka	Preservation	Machinery Spaces - Structural Preservation (Paint)	$1,240,801	$1,646,252	$2,558,657	$255,866	$2,814,523	Hull (Paint) - Structural Preservation (Paint)	$2,374,781	$1,315,304	$2,177,215	$217,721	$2,394,936
		Heating System Piping - Piping Replacement	$85,609	$169,717	$263,780	$26,378	$290,157						
		Sewage / Soil System Piping - Piping Replacement	$407,963	$402,229	$625,157	$62,516	$687,673						
		Potable Water Piping - Piping Replacement	$566,498	$594,008	$923,226	$92,323	$1,015,549						
		Gyrocompass - Comm/Nav/Lifesaving Equip	$52,845	$50,000	$77,712	$7,771	$85,483						
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$210,323	$82,000	$127,447	$12,745	$140,192						
		Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$57,507	$5,751	$63,257						
		Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$57,507	$5,751	$63,257						
		Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$57,507	$5,751	$63,257						
		Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$39,105	$37,000	$57,507	$5,751	$63,257						
		Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$210,323	$82,000	$127,447	$12,745	$140,192						
		All Cameras - Security	$44,242	$32,200	$50,046	$5,005	$55,051						
	Subtotal	Subtotal					$5,481,848	Subtotal					$2,394,936
	Improvement	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement Future Funds	$236,000	$236,000	$236,000	$0	$236,000	Targeted Improvements Chetzamoka - 64 Auto Ferry #1 Improvement Future	$236,000	$236,000	$236,000	$0	$236,000
	Subtotal	Subtotal					$236,000	Subtotal					$236,000
Cathlamet	Preservation	Topside - Structural Preservation (Paint)	$3,950,692	$1,975,502	$3,070,388	$307,039	$3,377,427	Sewage Tanks #1 - Structural Preservation (Paint)	$125,350	$103,245	$170,901	$17,090	$187,991
		Voids - Structural Preservation (Paint)	$813,813	$493,876	$767,598	$76,760	$844,358	Bilge Piping - Piping Replacement	$563,316	$312,000	$516,452	$51,645	$568,097
		Potable Water Tanks #1 - Structural Preservation (Paint)	$84,552	$169,717	$263,780	$26,378	$290,157	Sewage Tanks #2 - Structural Preservation (Paint)	$125,350	$103,245	$170,901	$17,090	$187,991
		Auto Deck - Steel Replacement	$633,037	$1,582,000	$2,458,795	$245,879	$2,704,674	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$32,499	$18,000	$29,795	$2,980	$32,775
		Firemain Piping/Manifolds - Piping Replacement	$281,135	$209,000	$324,834	$32,483	$357,318	Electronic Door Locks - Security	$20,763	$11,500	$19,036	$1,904	$20,939
		Heating System Piping - Piping Replacement	$214,551	$169,717	$263,780	$26,378	$290,157						
		Potable Water Piping - Piping Replacement	$615,116	$594,008	$923,226	$92,323	$1,015,549						
		CPP Hubs/Blades Number One End - Propulsion System	$749,342	$456,000	$708,730	$70,873	$779,603						
		CPP Hubs/Blades Number Two End - Propulsion System	$749,342	$456,000	$708,730	$70,873	$779,603						
		Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$639,425	$389,000	$604,596	$60,460	$665,056						
		Steering #1 - Major Mechanical/Electrical Systems	$886,739	$540,000	$839,285	$83,929	$923,214						
		Steering #2 - Major Mechanical/Electrical Systems	$887,796	$540,000	$839,285	$83,929	$923,214						
		Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Auxiliary Diesel Generator Vital - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Radar 2A - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Radar 2B - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Potable Water Tanks #2 - Structural Preservation (Paint)	$84,552	$169,717	$263,780	$26,378	$290,157						
		GPS System - Comm/Nav/Lifesaving Equip	$24,309	$15,000	$23,313	$2,331	$25,645						
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$32,764	$20,000	$31,085	$3,108	$34,193						
	Subtotal	Subtotal					$15,259,588	Subtotal					$997,793
	Improvement	Targeted Improvements Cathlamet - MV Cathlamet Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Cathlamet - MV Cathlamet Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Chelan	Preservation	Hull (Paint) - Structural Preservation (Paint)	$352,000	$475,000	$505,886	$25,294	$531,181	Voids - Structural Preservation (Paint)	$355,000	$1,595,000	$1,809,170	$180,917	$1,990,087	Topside - Structural Preservation (Paint)	$1,908,534	$1,975,502	$2,386,468	$238,647	$2,625,115
		Sewage Tanks #1 - Structural Preservation (Paint)	$78,000	$103,245	$109,958	$5,498	$115,456	Hull - Steel Replacement	$355,000	$1,595,000	$1,809,170	$180,917	$1,990,087	Machinery Spaces - Structural Preservation (Paint)	$338,208	$1,646,252	$1,988,724	$198,872	$2,187,596
		Gyrocompass - Comm/Nav/Lifesaving Equip	$52,000	$50,000	$53,251	$2,663	$55,914	Auto Deck - Steel Replacement	$266,000	$1,582,000	$1,794,425	$179,442	$1,973,867	Bilges - Structural Preservation (Paint)	$308,615	$500,664	$604,818	$60,482	$665,300
		Sewage Tanks #2 - Structural Preservation (Paint)	$78,000	$103,245	$109,958	$5,498	$115,456	Elevators - Major Mechanical/Electrical Systems	$125,000	$1,018,300	$1,155,033	$115,503	$1,270,537	Sewage Tanks #1 - Steel Replacement	$461,865	$366,588	$442,850	$44,285	$487,135
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Interior Communications - Comm/Nav/Lifesaving Equip	$345,000	$237,000	$268,823	$26,882	$295,706	Sprinkler System - Piping Replacement	$208,258	$188,000	$227,110	$22,711	$249,821
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Radar 1A - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	CPP Hubs/Blades Number One End - Propulsion System	$593,184	$456,000	$550,862	$55,086	$605,948
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Radar 1B - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	CPP Hubs/Blades Number Two End -	$594,354	$456,000	$550,862	$55,086	$605,948
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$115,829	$84,000	$101,475	$10,147	$111,622
		Electronic Doors - Security	$11,500	$11,500	$12,248	$612	$12,860	All Cameras - Security	$33,800	$33,800	$38,339	$3,834	$42,172	Potable Water Tanks #1 - Steel Replacement	$461,865	$366,588	$442,850	$44,285	$487,135
														Potable Water Tanks #2 - Steel Replacement	$461,865	$366,588	$442,850	$44,285	$487,135
														Sewage Tanks #2 - Steel Replacement	$461,865	$366,588	$442,850	$44,285	$487,135
														Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$106,747	$79,201	$95,677	$9,568	$105,245
														Sensors and Alarms - Security	$9,097	$7,775	$9,392	$939	$10,332
														AC Unit datacenter - Security	$9,945	$8,500	$10,268	$1,027	$11,295
														Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$115,829	$84,000	$101,475	$10,147	$111,622
	Subtotal						$897,964	Subtotal					$7,700,952	Subtotal					$9,435,051
	Improvement	Targeted Improvements Chelan - MV Chelan Improvement Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Chelan - MV Chelan Improvement Future Placeholder	$266,818	$266,818	$266,818	$0	$266,818	Targeted Improvements Chelan - MV Chelan Improvement Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$266,818	Subtotal					$301,000
Elwha	Preservation	Passenger spaces - Passenger and Crew Spaces	$2,072,150	$9,275,017	$9,878,116	$493,906	$10,372,021	Hull (Paint) - Structural Preservation (Paint)	$567,000	$650,000	$737,279	$73,728	$811,007	Topside - Structural Preservation (Paint)	$3,747,767	$2,292,873	$2,769,862	$276,986	$3,046,849
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$172,545	$172,545	$183,765	$9,188	$192,953	Voids - Structural Preservation (Paint)	$640,000	$573,642	$650,668	$65,067	$715,735	Sewage Tanks #1 - Structural Preservation (Paint)	$105,690	$120,217	$145,226	$14,523	$159,748
		Gyrocompass - Comm/Nav/Lifesaving Equip	$57,000	$54,000	$57,511	$2,876	$60,387	Sewage Tanks #1 - Steel Replacement	$125,000	$425,989	$483,189	$48,319	$531,508	Steering #1 - Major Mechanical/Electrical Systems	$724,223	$520,000	$628,176	$62,818	$690,994
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$88,000	$84,000	$89,462	$4,473	$93,935	Saltwater Piping - Piping Replacement	$275,000	$327,553	$371,536	$37,154	$408,689	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$386,825	$700,000	$845,622	$84,562	$930,184
		Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$88,000	$84,000	$89,462	$4,473	$93,935	Heating System Piping - Piping Replacement	$204,000	$183,293	$207,905	$20,790	$228,695	Heating Boilers #1 - Major Mechanical/Electrical Systems	$67,642	$53,743	$64,923	$6,492	$71,416
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$501,000	$450,000	$510,424	$51,042	$561,467	Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$188,128	$220,632	$266,530	$26,653	$293,183
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$2,373,000	$2,132,000	$2,418,277	$241,828	$2,660,104	Radar 1A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Potable Water Tanks #1 - Steel Replacement	$125,000	$425,989	$483,189	$48,319	$531,508	Steering #2 - Major Mechanical/Electrical Systems	$724,223	$520,000	$628,176	$62,818	$690,994
		Electronic Door Locks - Security	$7,350	$7,350	$7,828	$391	$8,219	Potable Water Tanks #2 - Steel Replacement	$125,000	$425,989	$483,189	$48,319	$531,508	Radar 1B - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
								Sewage Tanks #2 - Steel Replacement	$125,000	$425,989	$483,189	$48,319	$531,508	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
								GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
								All cameras - Security	$51,916	$41,400	$46,959	$4,696	$51,655	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Heating Boilers #2 - Major Mechanical/Electrical Systems	$67,642	$53,743	$64,923	$6,492	$71,416
														Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$116,259	$91,930	$111,054	$11,105	$122,160
														Sewage Tanks #2 - Structural Preservation (Paint)	$105,690	$120,217	$145,226	$14,523	$159,748
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,570	$18,000	$21,745	$2,174	$23,919
														All Sensors and Alarms - Security	$7,693	$6,575	$7,943	$794	$8,737
														AC Units - Security	$9,945	$8,500	$10,268	$1,027	$11,295
	Subtotal						$10,877,364	Subtotal					$7,582,101	Subtotal					$6,604,878
	Improvement	Targeted Improvements Elwha - MV Elwha Improvement Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Elwha - MV Elwha Improvement Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Elwha - MV Elwha Improvement Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
		EPA-COMPLIANT MAIN ENGINE RETROFIT COMPONENTS - MV Elwha	$800,000	$800,000	$800,000	$0	$800,000												
	Subtotal						$1,063,000	Subtotal					$282,000	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Chelan	Preservation	Sewage Tanks #1 - Structural Preservation (Paint)	$124,714	$103,245	$132,833	$13,283	$146,117	Hull (Paint) - Structural Preservation (Paint)	$489,345	$475,000	$650,864	$65,086	$715,951	Passenger spaces - Passenger and Crew Spaces	$6,595,056	$5,923,113	$8,643,833	$864,383	$9,508,217
		Sewage Tanks #2 - Structural Preservation (Paint)	$124,714	$103,245	$132,833	$13,283	$146,117	Potable Water Tanks #1 - Structural Preservation (Paint)	$113,088	$168,302	$230,614	$23,061	$253,676	Crew's quarters - Passenger and Crew Spaces	$423,817	$826,521	$1,206,175	$120,617	$1,326,792
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$23,158	$2,316	$25,474	Bilge Piping - Piping Replacement	$217,721	$312,000	$427,515	$42,752	$470,267	Galley - Passenger and Crew Spaces	$696,497	$1,181,228	$1,723,813	$172,381	$1,896,194
		Electronic Doors - Security	$16,397	$11,500	$14,796	$1,480	$16,275	Firemain Piping/Manifolds - Piping Replacement	$202,925	$209,000	$286,380	$28,638	$315,018	Hull - Steel Replacement	$713,408	$1,595,000	$2,327,647	$232,765	$2,560,411
		Hirsch Hardware - Security	$25,664	$18,000	$23,158	$2,316	$25,474	Heating System Piping - Piping Replacement	$169,104	$169,717	$232,553	$23,255	$255,809	Solariums - Steel Replacement	$438,614	$1,980,594	$2,890,359	$289,036	$3,179,395
								Sewage / Soil System Piping - Piping Replacement	$487,231	$402,229	$551,151	$55,115	$606,266	Auto Deck - Steel Replacement	$554,873	$425,000	$620,219	$62,022	$682,241
								Reduction Gears #1 - Propulsion System	$627,799	$437,000	$598,795	$59,880	$658,675	Wet Spaces - Steel Replacement	$554,873	$425,000	$620,219	$62,022	$682,241
								Heating Boilers #1 - Major Mechanical/Electrical Systems	$63,414	$46,672	$63,952	$6,395	$70,347	Potable Water Piping - Piping Replacement	$477,719	$594,008	$866,859	$86,686	$953,545
								Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$178,616	$190,083	$260,460	$26,046	$286,505	Rudder Number One End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
								Radio System - Comm/Nav/Lifesaving Equip	$53,902	$37,000	$50,699	$5,070	$55,769	Rudder Number Two End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
								Reduction Gears #2 - Propulsion System	$628,856	$437,000	$598,795	$59,880	$658,675	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$305,444	$568,550	$829,708	$82,971	$912,678
								Radar 2A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$228,290	$148,502	$216,715	$21,671	$238,386
								Radar 2B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	PA system - Comm/Nav/Lifesaving Equip	$239,916	$156,000	$227,657	$22,766	$250,423
								Heating Boilers #2 - Major Mechanical/Electrical Systems	$65,528	$46,672	$63,952	$6,395	$70,347	AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
								Potable Water Tanks #2 - Structural Preservation (Paint)	$113,088	$168,302	$230,614	$23,061	$253,676	Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														All Cameras - Security	$51,977	$33,800	$49,326	$4,933	$54,258
	Subtotal	Subtotal					$359,457	Subtotal					$4,815,677	Subtotal					$23,323,527
	Improvement	Targeted Improvements Chelan - MV Chelan Improvement Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Chelan - MV Chelan Improvement Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Chelan - MV Chelan Improvement Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
Elwha	Preservation	Machinery Spaces - Structural Preservation (Paint)	$1,614,943	$1,911,011	$2,458,673	$245,867	$2,704,540	Auto Deck - Steel Replacement	$370,972	$1,624,000	$2,225,271	$222,527	$2,447,799	Hull (Paint) - Structural Preservation (Paint)	$599,262	$650,000	$948,571	$94,857	$1,043,428
		Bilges - Structural Preservation (Paint)	$783,163	$582,128	$748,956	$74,896	$823,851	Bilge Piping - Piping Replacement	$512,597	$357,000	$489,176	$48,918	$538,094	Sewage Tanks #1 - Structural Preservation (Paint)	$153,779	$120,217	$175,437	$17,544	$192,981
		Potable Water Tanks - Structural Preservation (Paint)	$264,225	$392,045	$504,398	$50,440	$554,838	Sprinkler System - Piping Replacement	$249,428	$236,000	$323,377	$32,338	$355,715	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$93,007	$84,000	$122,585	$12,258	$134,843
		Superstructure - Steel Replacement	$338,208	$3,316,263	$4,266,645	$426,665	$4,693,310	Firemain Piping/Manifolds - Piping Replacement	$212,437	$201,000	$275,418	$27,542	$302,960	Sewage Tanks #2 - Structural Preservation (Paint)	$153,779	$120,217	$175,437	$17,544	$192,981
		PA system - Comm/Nav/Lifesaving Equip	$300,160	$255,000	$328,078	$32,808	$360,886	Potable Water Piping - Piping Replacement	$679,587	$643,225	$881,373	$88,137	$969,511	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$135,325	$84,000	$122,585	$12,258	$134,843
		Radio System - Comm/Nav/Lifesaving Equip	$52,753	$37,000	$47,604	$4,760	$52,364	Diesel Engines #1 - Propulsion System	$1,107,576	$748,000	$1,024,940	$102,494	$1,127,434	Davits #2 - Comm/Nav/Lifesaving Equip	$199,754	$189,000	$275,815	$27,582	$303,397
		Radar 2A - Comm/Nav/Lifesaving Equip	$50,731	$48,000	$61,756	$6,176	$67,932	Motors #1 - Propulsion System	$1,326,722	$896,000	$1,227,736	$122,774	$1,350,510	Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$30,756	$20,000	$29,187	$2,919	$32,105
		Radar 2B - Comm/Nav/Lifesaving Equip	$50,731	$48,000	$61,756	$6,176	$67,932	Switchboards - Propulsion System	$1,782,167	$1,203,584	$1,649,200	$164,920	$1,814,120	Landing Radars - Comm/Nav/Lifesaving Equip	$29,218	$10,000	$14,593	$1,459	$16,053
		Electronic Door Locks - Security	$10,479	$7,350	$9,456	$946	$10,402	Rudder Number One End - Propulsion System	$540,462	$365,000	$500,138	$50,014	$550,152	All cameras - Security	$63,664	$41,400	$60,417	$6,042	$66,458
		Hirsch Hardware - Security	$19,248	$13,500	$17,369	$1,737	$19,106	Rudder Number Two End - Propulsion System	$540,462	$365,000	$500,138	$50,014	$550,152						
								Elevators - Major Mechanical/Electrical Systems	$438,614	$594,008	$813,934	$81,393	$895,328						
								Davits #1 - Comm/Nav/Lifesaving Equip	$199,754	$189,000	$258,976	$25,898	$284,873						
								Generators/Alternators #2 - Propulsion System	$614,498	$415,000	$568,650	$56,865	$625,515						
								Motors #4 - Propulsion System	$1,326,722	$896,000	$1,227,736	$122,774	$1,350,510						
								Diesel Engines #2 - Propulsion System	$1,107,576	$748,000	$1,024,940	$102,494	$1,127,434						
								Diesel Engines #3 - Propulsion System	$1,107,576	$748,000	$1,024,940	$102,494	$1,127,434						
								Generators/Alternators #3 - Propulsion System	$614,498	$415,000	$568,650	$56,865	$625,515						
								Generators/Alternators #4 - Propulsion System	$614,498	$415,000	$568,650	$56,865	$625,515						
								AIS System - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$27,405	$2,740	$30,145						
	Subtotal	Subtotal					$9,355,160	Subtotal					$16,698,715	Subtotal					$2,117,089
	Improvement	Targeted Improvements Elwha - MV Elwha Improvement Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Elwha - MV Elwha Improvement Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Elwha - MV Elwha Improvement Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Chelan	Preservation	Topside - Structural Preservation (Paint)	$2,481,095	$1,975,502	$3,070,388	$307,039	$3,377,427	Sensors and Alarms - Security	$14,038	$7,775	$12,870	$1,287	$14,157
		Sewage Tanks #1 - Structural Preservation (Paint)	$124,714	$103,245	$160,467	$16,047	$176,513	AC Unit datacenter - Security	$15,347	$8,500	$14,070	$1,407	$15,477
		CPP Hubs/Blades Number One End - Propulsion System	$655,278	$456,000	$708,730	$70,873	$779,603						
		CPP Hubs/Blades Number Two End - Propulsion System	$655,278	$456,000	$708,730	$70,873	$779,603						
		Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$639,425	$389,000	$604,596	$60,460	$665,056						
		Steering #1 - Major Mechanical/Electrical Systems	$886,739	$540,000	$839,285	$83,929	$923,214						
		Radar 1A - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Steering #2 - Major Mechanical/Electrical Systems	$887,796	$540,000	$839,285	$83,929	$923,214						
		Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Auxiliary Diesel Generator Vital - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Radar 1B - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Sewage Tanks #2 - Structural Preservation (Paint)	$124,714	$103,245	$160,467	$16,047	$176,513						
		GPS System - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$27,976	$2,798	$30,774						
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$29,593	$18,000	$27,976	$2,798	$30,774						
		Electronic Doors - Security	$19,082	$11,500	$17,874	$1,787	$19,661						
	Subtotal	Subtotal					$9,841,615	Subtotal					$29,634
	Improvement	Targeted Improvements Chelan - MV Chelan Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Chelan - MV Chelan Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000
Elwha	Preservation	Topside - Structural Preservation (Paint)	$3,747,767	$2,292,873	$3,563,656	$356,366	$3,920,021	Radar 1A - Comm/Nav/Lifesaving Equip	$105,492	$48,000	$79,454	$7,945	$87,400
		Saltwater Piping - Piping Replacement	$290,648	$327,553	$509,093	$50,909	$560,003	All Sensors and Alarms - Security	$11,871	$6,575	$10,884	$1,088	$11,972
		Sewage / Soil System Piping - Piping Replacement	$244,144	$434,475	$675,275	$67,527	$742,802	AC Units - Security	$15,347	$8,500	$14,070	$1,407	$15,477
		Radar 1B - Comm/Nav/Lifesaving Equip	$71,869	$48,000	$74,603	$7,460	$82,063						
		GPS System - Comm/Nav/Lifesaving Equip	$16,910	$15,000	$23,313	$2,331	$25,645						
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$22,195	$18,000	$27,976	$2,798	$30,774						
		Electronic Door Locks - Security	$12,771	$7,350	$11,424	$1,142	$12,566						
	Subtotal	Subtotal					$5,373,874	Subtotal					$114,848
	Improvement												
	Subtotal	Subtotal					$0	Subtotal					$0

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Evergreen State	Preservation							**RETIRED**											
	Improvement							**RETIRED**											
	Subtotal																		
Hiyu	Preservation							**RETIRED**											
	Improvement	Targeted Improvements Hiyu - MV Hiyu Improvement Drydock (11-13)	$100,000	$100,000	$100,000	$0	$100,000	**RETIRED**											
	Subtotal						$100,000												
Hyak	Preservation	Hull (Paint) - Structural Preservation (Paint)	$567,000	$650,000	$692,266	$34,613	$726,879	Topside - Structural Preservation (Paint)	$3,440,000	$2,292,873	$2,600,751	$260,075	$2,860,826	Passenger spaces - Passenger and Crew Spaces	$2,998,425	$8,399,561	$10,146,933	$1,014,693	$11,161,626
		Bilges - Structural Preservation (Paint)	$575,000	$582,128	$619,980	$30,999	$650,979	Machinery Spaces - Structural Preservation (Paint)	$710,000	$1,911,011	$2,167,614	$216,761	$2,384,376	Galley - Passenger and Crew Spaces	$386,825	$1,371,311	$1,656,587	$165,659	$1,822,245
		Voids - Structural Preservation (Paint)	$568,000	$573,642	$610,942	$30,547	$641,490	Potable Water Tanks #1 - Structural Preservation (Paint)	$89,000	$196,588	$222,985	$22,299	$245,284	Auto Deck - Steel Replacement	$1,605,224	$1,624,000	$1,961,843	$196,184	$2,158,027
		Crew's quarters - Passenger and Crew Spaces	$510,000	$1,060,730	$1,129,703	$56,485	$1,186,188	Sewage Tanks #1 - Structural Preservation (Paint)	$84,000	$120,217	$136,359	$13,636	$149,995	Sprinkler System - Piping Replacement	$327,597	$236,000	$285,095	$28,510	$313,605
		Wet Spaces - Steel Replacement	$553,000	$500,000	$532,512	$26,626	$559,138	Temp Emergency Power System - Comm/Nav/Lifesaving Equip	$312,000	$280,000	$317,597	$31,760	$349,357	Sewage / Soil System Piping - Piping Replacement	$367,801	$434,475	$524,859	$52,486	$577,345
		Saltwater Piping - Piping Replacement	$324,000	$327,553	$348,852	$17,443	$366,294	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$110,000	$91,930	$104,274	$10,427	$114,701	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$232,518	$172,545	$208,440	$20,844	$229,284
		Bilge Piping - Piping Replacement	$170,000	$357,000	$380,214	$19,011	$399,224	Sewage Tanks #2 - Structural Preservation (Paint)	$84,000	$120,217	$136,359	$13,636	$149,995	Heating Boilers #1 - Major Mechanical/Electrical Systems	$67,642	$53,743	$64,923	$6,492	$71,416
		Heating System Piping - Piping Replacement	$181,000	$183,293	$195,211	$9,761	$204,972	Potable Water Tanks #2 - Structural Preservation (Paint)	$89,000	$196,588	$222,985	$22,299	$245,284	Radar 2A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Potable Water Piping - Piping Replacement	$366,000	$643,225	$685,050	$34,253	$719,303	GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Radar 2B - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$637,000	$700,000	$745,517	$37,276	$782,793	Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,000	$20,000	$22,686	$2,269	$24,954	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		PA system - Comm/Nav/Lifesaving Equip	$252,000	$255,000	$271,581	$13,579	$285,160	All Cameras - Security	$48,404	$38,600	$43,783	$4,378	$48,161	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		General Alarm System - Comm/Nav/Lifesaving Equip	$104,000	$105,000	$111,828	$5,591	$117,419	Electronic Door Locks - Security	$9,217	$7,350	$8,337	$834	$9,171	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Interior Communications - Comm/Nav/Lifesaving Equip	$232,000	$235,000	$250,281	$12,514	$262,795							Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Gyrocompass - Comm/Nav/Lifesaving Equip	$57,000	$54,000	$57,511	$2,876	$60,387							Heating Boilers #2 - Major Mechanical/Electrical Systems	$67,642	$53,743	$64,923	$6,492	$71,416
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366							Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,570	$18,000	$21,745	$2,174	$23,919
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183												
	Subtotal						$6,996,568	Subtotal					$6,600,819	Subtotal					$16,753,118
	Improvement	Targeted Improvements Hyak - MV Hyak Improvement Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Hyak - MV Hyak Improvement Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Hyak - MV Hyak Improvement Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Evergreen State	Preservation																		
	Improvement																		
	Subtotal																		
Hiyu	Preservation																		
	Improvement																		
	Subtotal																		
Hyak	Preservation	Hull - Steel Replacement	$657,392	$1,990,000	$2,560,299	$256,030	$2,816,329	Hull (Paint) - Structural Preservation (Paint)	$753,907	$650,000	$890,657	$89,066	$979,722	Topside - Structural Preservation (Paint)	$4,726,457	$2,292,873	$3,346,080	$334,608	$3,680,688
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$109,918	$84,000	$108,073	$10,807	$118,880	Sewage Tanks #1 - Structural Preservation (Paint)	$133,169	$120,217	$164,726	$16,473	$181,199	Sewage Tanks #1 - Steel Replacement	$213,494	$425,989	$621,663	$62,166	$683,829
		Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$109,918	$84,000	$108,073	$10,807	$118,880	Wet Spaces - Steel Replacement	$430,158	$500,000	$685,121	$68,512	$753,633	Saltwater Piping - Piping Replacement	$470,321	$327,553	$478,011	$47,801	$525,812
		Sensors and Alarms - Security	$9,089	$6,375	$8,202	$820	$9,022	Radar 1A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Generators/Alternators #1 - Propulsion System	$595,035	$415,000	$605,626	$60,563	$666,189
		AC Unit Datacenter - Security	$12,119	$8,500	$10,936	$1,094	$12,030	Radio System - Comm/Nav/Lifesaving Equip	$53,902	$37,000	$50,699	$5,070	$55,769	Rudder Number One End - Propulsion System	$560,157	$365,000	$532,659	$53,266	$585,925
								Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Rudder Number Two End - Propulsion System	$560,157	$365,000	$532,659	$53,266	$585,925
								Sewage Tanks #2 - Structural Preservation (Paint)	$133,169	$120,217	$164,726	$16,473	$181,199	Steering #1 - Major Mechanical/Electrical Systems	$433,329	$520,000	$758,857	$75,886	$834,742
								Electronic Door Locks - Security	$10,883	$7,350	$10,071	$1,007	$11,078	Potable Water Tanks #1 - Steel Replacement	$194,470	$425,989	$621,663	$62,166	$683,829
								Hirsch Hardware - Security	$19,990	$13,500	$18,498	$1,850	$20,348	Sewage Tanks #2 - Steel Replacement	$213,494	$425,989	$621,663	$62,166	$683,829
														Steering #2 - Major Mechanical/Electrical Systems	$433,329	$520,000	$758,857	$75,886	$834,742
														Generators/Alternators #2 - Propulsion System	$595,035	$415,000	$605,626	$60,563	$666,189
														Generators/Alternators #3 - Propulsion System	$595,035	$415,000	$605,626	$60,563	$666,189
														AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
	Subtotal	Subtotal					$3,075,141	Subtotal					$2,327,645	Subtotal					$11,162,098
	Improvement	Targeted Improvements Hyak - MV Hyak Improvement Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Hyak - MV Hyak Improvement Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Hyak - MV Hyak Improvement Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Evergreen State	Preservation												
	Improvement												
	Subtotal												
Hiyu	Preservation												
	Improvement												
	Subtotal												
Hyak	Preservation	Potable Water Tanks #1 - Structural Preservation (Paint)	$368,000	$7,350	$11,424	$1,142	$12,566	Radar 2A - Comm/Nav/Lifesaving Equip	$105,492	$48,000	$79,454	$7,945	$87,400
		Potable Water Tanks #2 - Structural Preservation (Paint)	$94,064	$196,588	$305,543	$30,554	$336,098	Radar 2B - Comm/Nav/Lifesaving Equip	$105,492	$48,000	$79,454	$7,945	$87,400
		GPS System - Comm/Nav/Lifesaving Equip	$24,309	$15,000	$23,313	$2,331	$25,645	Electronic Door Locks - Security	$13,271	$7,350	$12,166	$1,217	$13,383
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$32,764	$20,000	$31,085	$3,108	$34,193						
	Subtotal	Subtotal					$408,502	Subtotal					$188,182
	Improvement	Targeted Improvements Hyak - MV Hyak Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Hyak - MV Hyak Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Issaquah		Machinery Spaces - Structural Preservation (Paint)	$175,000	$1,646,252	$1,753,298	$87,665	$1,840,963	Hull (Paint) - Steel Replacement	$377,000	$475,000	$538,781	$53,878	$592,659	Bilges - Structural Preservation (Paint)	$288,534	$500,664	$604,818	$60,482	$665,300
		Potable Water Tanks #1 - Structural Preservation (Paint)	$78,000	$169,717	$180,753	$9,038	$189,790	Voids - Steel Replacement	$355,000	$493,876	$560,192	$56,019	$616,211	Solariums - Steel Replacement	$124,714	$1,980,594	$2,392,620	$239,262	$2,631,881
		Sewage Tanks #1 - Structural Preservation (Paint)	$82,000	$103,245	$109,958	$5,498	$115,456	Hull - Steel Replacement	$120,000	$1,595,000	$1,809,170	$180,917	$1,990,087	Heating System Piping - Piping Replacement	$91,950	$169,717	$205,023	$20,502	$225,526
		Gyrocompass - Comm/Nav/Lifesaving Equip	$52,000	$50,000	$53,251	$2,663	$55,914	Auto Deck - Steel Replacement	$177,000	$366,588	$415,812	$41,581	$457,393	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$115,829	$84,000	$101,475	$10,147	$111,622
		Sewage Tanks #2 - Structural Preservation (Paint)	$108,000	$103,245	$109,958	$5,498	$115,456	CPP Hubs/Blades Number One End - Propulsion System	$474,000	$456,000	$517,230	$51,723	$568,953	Radar 2A - Comm/Nav/Lifesaving Equip	$79,559	$45,562	$55,040	$5,504	$60,544
		Potable Water Tanks #2 - Structural Preservation (Paint)	$78,000	$169,717	$180,753	$9,038	$189,790	CPP Hubs/Blades Number Two End - Propulsion System	$474,000	$456,000	$517,230	$51,723	$568,953	Radar 2B - Comm/Nav/Lifesaving Equip	$79,559	$45,562	$55,040	$5,504	$60,544
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Potable Water Tanks #1 - Steel Replacement	$177,000	$366,588	$415,812	$41,581	$457,393	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Potable Water Tanks #2 - Steel Replacement	$177,000	$366,588	$415,812	$41,581	$457,393	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
	Preservation	Electronic Door Locks - Security	$11,550	$11,550	$12,301	$615	$12,916	GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
								Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$20,000	$18,000	$20,417	$2,042	$22,459	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
								Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,000	$20,000	$22,686	$2,269	$24,954	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$106,747	$79,201	$95,677	$9,568	$105,245
								All Cameras - Security	$33,800	$33,800	$38,339	$3,834	$42,172	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$115,829	$84,000	$101,475	$10,147	$111,622
														Alarms and Sensors - Security	$10,533	$6,925	$8,366	$837	$9,202
														AC Units Datacenter - Security	$12,928	$8,500	$10,268	$1,027	$11,295
	Subtotal						$2,553,834	Subtotal					$5,817,344	Subtotal					$4,189,449
	Improvement	Targeted Improvements Issaquah - MV Issaquah Impr Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Issaquah - MV Issaquah Impr Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Issaquah - MV Issaquah Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000
Kaleetan		Machinery Spaces - Structural Preservation (Paint)	$560,000	$1,911,011	$2,035,273	$101,764	$2,137,036	Hull (Paint) - Structural Preservation (Paint)	$441,000	$650,000	$737,279	$73,728	$811,007	Topside - Structural Preservation (Paint)	$3,748,824	$2,292,873	$2,769,862	$276,986	$3,046,849
		Potable Water Tanks #1 - Structural Preservation (Paint)	$82,000	$196,588	$209,371	$10,469	$219,839	Voids - Structural Preservation (Paint)	$639,000	$573,642	$650,668	$65,067	$715,735	Bilges - Structural Preservation (Paint)	$581,295	$582,128	$703,229	$70,323	$773,552
		Sewage Tanks #1 - Structural Preservation (Paint)	$78,000	$120,217	$128,034	$6,402	$134,436	Saltwater Piping - Piping Replacement	$187,000	$327,553	$371,536	$37,154	$408,689	Passenger spaces - Passenger and Crew Spaces	$4,952,633	$7,989,678	$9,651,781	$965,178	$10,616,959
		Auto Deck - Steel Replacement	$431,000	$1,624,000	$1,729,599	$86,480	$1,816,079	Heating System Piping - Piping Replacement	$190,000	$169,717	$192,506	$19,251	$211,757	Crew's quarters - Passenger and Crew Spaces	$386,825	$958,899	$1,158,380	$115,838	$1,274,218
		Radio System - Comm/Nav/Lifesaving Equip	$38,000	$37,000	$39,406	$1,970	$41,376	Sewage / Soil System Piping - Piping Replacement	$250,000	$407,321	$462,014	$46,201	$508,216	Galley - Passenger and Crew Spaces	$338,208	$1,340,761	$1,619,681	$161,968	$1,781,649
		Gyrocompass - Comm/Nav/Lifesaving Equip	$57,000	$54,000	$57,511	$2,876	$60,387	Potable Water Piping - Piping Replacement	$443,000	$594,008	$673,769	$67,377	$741,146	Wet Spaces - Steel Replacement	$484,060	$700,000	$845,622	$84,562	$930,184
		Potable Water Tanks #2 - Structural Preservation (Paint)	$82,000	$196,588	$209,371	$10,469	$219,839	PA system - Comm/Nav/Lifesaving Equip	$294,000	$255,000	$289,240	$28,924	$318,164	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$484,060	$700,000	$845,622	$84,562	$930,184
	Preservation	Sewage Tanks #2 - Structural Preservation (Paint)	$78,000	$120,217	$128,034	$6,402	$134,436	Radar 1A - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$143,738	$172,545	$208,440	$20,844	$229,284
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Radar 1B - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$114,659	$84,000	$101,475	$10,147	$111,622
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,000	$20,000	$22,686	$2,269	$24,954	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		All Cameras - Security	$39,000	$39,200	$41,749	$2,087	$43,836							Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$47,970	$37,000	$44,697	$4,470	$49,167
		Electronic Door Locks - Security	$7,350	$7,350	$7,828	$391	$8,219							Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$108,861	$91,930	$111,054	$11,105	$122,160
														Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$114,659	$84,000	$101,475	$10,147	$111,622
	Subtotal						$4,860,215	Subtotal					$3,878,164	Subtotal					$20,124,950
	Improvement	Targeted Improvements Kaleetan - MV Kaleetan Impr Drydock (11-13)	$4,103,000	$4,103,000	$4,103,000	$0	$4,103,000	Targeted Improvements Kaleetan - MV Kaleetan Improvement Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Kaleetan - MV Kaleetan Improvement Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$4,103,000	Subtotal					$282,000	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
		Topside - Structural Preservation (Paint)	$3,227,773	$1,975,502	$2,541,646	$254,165	$2,795,811	Wet Spaces - Steel Replacement	$323,411	$425,000	$582,352	$58,235	$640,588	Hull (Paint) - Structural Preservation (Paint)	$820,154	$475,000	$693,186	$69,319	$762,505
Issaquah	Preservation	Sewage Tanks #1 - Structural Preservation (Paint)	$138,454	$169,717	$218,355	$21,835	$240,190	Heating System Piping - Piping Replacement	$195,527	$169,717	$232,553	$23,255	$255,809	Machinery Spaces - Structural Preservation (Paint)	$338,208	$1,646,252	$2,402,441	$240,244	$2,642,685
		Reduction Gears #1 - Propulsion System	$461,865	$437,000	$562,236	$56,224	$618,460	Sewage / Soil System Piping - Piping Replacement	$318,127	$402,229	$551,151	$55,115	$606,266	Potable Water Tanks #1 - Structural Preservation (Paint)	$138,454	$169,717	$247,675	$24,767	$272,442
		Reduction Gears #2 - Propulsion System	$461,865	$437,000	$562,236	$56,224	$618,460	CPP Hubs/Blades Number One End - Propulsion System	$655,278	$456,000	$624,830	$62,483	$687,313	Sprinkler System - Piping Replacement	$289,591	$188,000	$274,356	$27,436	$301,791
		Sewage Tanks #2 - Structural Preservation (Paint)	$138,454	$169,717	$218,355	$21,835	$240,190	CPP Hubs/Blades Number Two End - Propulsion System	$655,278	$456,000	$624,830	$62,483	$687,313	Firemain Piping/Manifolds - Piping Replacement	$281,135	$209,000	$305,002	$30,500	$335,502
		Electronic Door Locks - Security	$16,397	$11,550	$14,860	$1,486	$16,346	Elevators - Major Mechanical/Electrical Systems	$359,346	$1,018,300	$1,395,316	$139,532	$1,534,848	Rudder Number One End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
		Hirsch Hardware - Security	$25,664	$18,000	$23,158	$2,316	$25,474	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$235,689	$568,550	$779,051	$77,905	$856,956	Rudder Number Two End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
								Heating Boilers - Major Mechanical/Electrical Systems	$131,056	$91,647	$125,578	$12,558	$138,136	Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$574,954	$350,000	$510,769	$51,077	$561,846
								PA system - Comm/Nav/Lifesaving Equip	$224,063	$156,000	$213,758	$21,376	$235,133	Steering #1 - Major Mechanical/Electrical Systems	$830,723	$540,000	$788,043	$78,804	$866,848
								Radar 1A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$228,290	$148,502	$216,715	$21,671	$238,386
								Radio System - Comm/Nav/Lifesaving Equip	$53,902	$37,000	$50,699	$5,070	$55,769	Steering #2 - Major Mechanical/Electrical Systems	$830,723	$540,000	$788,043	$78,804	$866,848
								Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$574,954	$350,000	$510,769	$51,077	$561,846
								Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$25,366	$18,000	$24,664	$2,466	$27,131	Auxiliary Generator Vital - Major Mechanical/Electrical Systems	$574,954	$350,000	$510,769	$51,077	$561,846
														Potable Water Tanks #2 - Structural Preservation (Paint)	$138,454	$169,717	$247,675	$24,767	$272,442
														AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														All Cameras - Security	$46,440	$33,800	$49,326	$4,933	$54,258
	Subtotal	Subtotal					$4,554,932	Subtotal					$5,869,958	Subtotal					$9,345,883
	Improvement	Targeted Improvements Issaquah - MV Issaquah Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Issaquah - MV Issaquah Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Issaquah - MV Issaquah Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
Kaleetan	Preservation	Hull - Steel Replacement	$919,503	$1,990,000	$2,560,299	$256,030	$2,816,329	Sewage Tanks #1 - Structural Preservation (Paint)	$152,194	$120,217	$164,726	$16,473	$181,199	Hull (Paint) - Structural Preservation (Paint)	$609,831	$650,000	$948,571	$94,857	$1,043,428
		Shelter Deck - Steel Replacement	$323,411	$3,146,547	$4,048,292	$404,829	$4,453,121	Bilge Piping - Piping Replacement	$307,558	$357,000	$489,176	$48,918	$538,094	Potable Water Tanks #1 - Structural Preservation (Paint)	$126,099	$196,588	$286,889	$28,689	$315,578
		Sewage Tanks #1 - Steel Replacement	$159,592	$425,989	$548,070	$54,807	$602,877	Sprinkler System - Piping Replacement	$339,265	$236,000	$323,377	$32,338	$355,715	Auto Deck - Steel Replacement	$923,731	$1,624,000	$2,369,968	$236,997	$2,606,964
		Steering #1 - Major Mechanical/Electrical Systems	$698,611	$520,000	$669,023	$66,902	$735,925	Firemain Piping/Manifolds - Piping Replacement	$289,591	$201,000	$275,418	$27,542	$302,960	Generators/Alternators #1 - Propulsion System	$638,183	$415,000	$605,626	$60,563	$666,189
		Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$164,876	$220,632	$283,861	$28,386	$312,247	Rudder Number One End - Propulsion System	$385,769	$365,000	$500,138	$50,014	$550,152	Radio System - Comm/Nav/Lifesaving Equip	$40,162	$37,000	$53,996	$5,400	$59,395
		Potable Water Tanks #1 - Steel Replacement	$269,510	$425,989	$548,070	$54,807	$602,877	Radar 2A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Generators/Alternators #2 - Propulsion System	$638,183	$415,000	$605,626	$60,563	$666,189
		Sewage Tanks #2 - Steel Replacement	$159,592	$425,989	$548,070	$54,807	$602,877	Radar 2B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Generators/Alternators #3 - Propulsion System	$638,183	$415,000	$605,626	$60,563	$666,189
		Steering #2 - Major Mechanical/Electrical Systems	$698,611	$520,000	$669,023	$66,902	$735,925	Sewage Tanks #2 - Structural Preservation (Paint)	$152,194	$120,217	$164,726	$16,473	$181,199	Generators/Alternators #4 - Propulsion System	$638,183	$415,000	$605,626	$60,563	$666,189
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$23,158	$2,316	$25,474	All Cameras - Security	$58,044	$39,200	$53,713	$5,371	$59,085	Potable Water Tanks #2 - Structural Preservation (Paint)	$126,099	$196,588	$286,889	$28,689	$315,578
		Electronic Door Locks - Security	$10,479	$7,350	$9,456	$946	$10,402							AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
	Subtotal	Subtotal					$10,898,054	Subtotal					$2,313,100	Subtotal					$7,053,855
	Improvement	Targeted Improvements Kaleetan - MV Kaleetan Improvement Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Kaleetan - MV Kaleetan Improvement Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Kaleetan - MV Kaleetan Improvement Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
		Topside - Structural Preservation (Paint)	$4,196,104	$1,975,502	$3,070,388	$307,039	$3,377,427	Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$702,340	$389,000	$643,909	$64,391	$708,300
Issaquah	Preservation	Voids - Structural Preservation (Paint)	$813,813	$493,876	$767,598	$76,760	$844,358	Radar 2A - Comm/Nav/Lifesaving Equip	$105,492	$45,562	$75,419	$7,542	$82,960
		Sewage Tanks #1 - Structural Preservation (Paint)	$170,161	$103,245	$160,467	$16,047	$176,513	Radar 2B - Comm/Nav/Lifesaving Equip	$105,492	$45,562	$75,419	$7,542	$82,960
		Auto Deck - Steel Replacement	$364,631	$1,582,000	$2,458,795	$245,879	$2,704,674	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$35,880	$18,000	$29,795	$2,980	$32,775
		Sewage Tanks #1 - Steel Replacement	$369,915	$366,588	$569,763	$56,976	$626,739	Alarms and Sensors - Security	$12,503	$6,925	$11,463	$1,146	$12,609
		Sewage Tanks #2 - Steel Replacement	$369,915	$366,588	$569,763	$56,976	$626,739	AC Units Datacenter - Security	$15,347	$8,500	$14,070	$1,407	$15,477
		Sewage Tanks #2 - Structural Preservation (Paint)	$170,161	$103,245	$160,467	$16,047	$176,513						
		GPS System - Comm/Nav/Lifesaving Equip	$26,423	$15,000	$23,313	$2,331	$25,645						
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$32,764	$20,000	$31,085	$3,108	$34,193						
		Electronic Door Locks - Security	$19,982	$11,550	$17,951	$1,795	$19,747						
	Subtotal	Subtotal					$8,612,547	Subtotal					$935,082
	Improvement	Targeted Improvements Issaquah - MV Issaquah Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Issaquah - MV Issaquah Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000
Kaleetan	Preservation	Topside - Structural Preservation (Paint)	$4,873,472	$2,292,873	$3,563,656	$356,366	$3,920,021	Sewage Tanks #1 - Structural Preservation (Paint)	$207,662	$120,217	$198,994	$19,899	$218,894
		Rudder Number Two End - Propulsion System	$385,769	$365,000	$567,295	$56,729	$624,024	Sewage Tanks #2 - Structural Preservation (Paint)	$207,662	$120,217	$198,994	$19,899	$218,894
		Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$703,705	$450,000	$699,404	$69,940	$769,345						
		Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$3,704,443	$2,132,000	$3,313,622	$331,362	$3,644,984						
		Radar 1A - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$781,895	$450,000	$699,404	$69,940	$769,345						
		Radar 1B - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Auxiliary Diesel Generator Vital - Major Mechanical/Electrical Systems	$781,895	$450,000	$699,404	$69,940	$769,345						
		GPS System - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$27,976	$2,798	$30,774						
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$29,593	$18,000	$27,976	$2,798	$30,774						
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$32,764	$20,000	$31,085	$3,108	$34,193						
		Electronic Door Locks - Security	$12,771	$7,350	$11,424	$1,142	$12,566						
	Subtotal	Subtotal					$10,769,497	Subtotal					$437,788
	Improvement	Targeted Improvements Kaleetan - MV Kaleetan Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Kaleetan - MV Kaleetan Improvement Future	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Vessel	Activity	Biennium End	2013					Biennium End	2015					Biennium End	2017				
		Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Kitsap	Preservation	Machinery Spaces - Structural Preservation (Paint)	$310,000	$1,646,252	$1,753,298	$87,665	$1,840,963	Topside - Structural Preservation (Paint)	$3,269,000	$1,975,502	$2,240,765	$224,076	$2,464,841	Passenger spaces - Passenger and Crew Spaces	$4,093,374	$6,092,829	$7,360,328	$736,033	$8,096,361
		Voids - Structural Preservation (Paint)	$275,000	$493,876	$525,990	$26,299	$552,289	Potable Water Tanks #1 - Structural Preservation (Paint)	$89,000	$169,717	$192,506	$19,251	$211,757	Crew's quarters - Passenger and Crew Spaces	$398,451	$826,521	$998,463	$99,846	$1,098,310
		PA system - Comm/Nav/Lifesaving Equip	$156,000	$156,000	$166,144	$8,307	$174,451	Sewage Tanks #1 - Structural Preservation (Paint)	$123,000	$103,245	$117,108	$11,711	$128,819	Galley - Passenger and Crew Spaces	$600,319	$1,181,228	$1,426,960	$142,696	$1,569,656
		Gyrocompass - Comm/Nav/Lifesaving Equip	$52,000	$50,000	$53,251	$2,663	$55,914	CPP Hubs/Blades Number One End - Propulsion System	$507,000	$456,000	$517,230	$51,723	$568,953	Hull - Steel Replacement	$428,216	$1,595,000	$1,926,810	$192,681	$2,119,491
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	CPP Hubs/Blades Number Two End - Propulsion System	$507,000	$456,000	$517,230	$51,723	$568,953	Solariums - Steel Replacement	$774,708	$1,980,594	$2,392,620	$239,262	$2,631,881
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Elevators - Major Mechanical/Electrical Systems	$105,000	$1,018,300	$1,155,033	$115,503	$1,270,537	Auto Deck - Steel Replacement	$535,855	$1,582,000	$1,911,106	$191,111	$2,102,216
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Temp Emergency Power System - Comm/Nav/Lifesaving Equip	$247,000	$221,480	$251,219	$25,122	$276,341	Wet Spaces - Steel Replacement	$386,825	$594,008	$717,580	$71,758	$789,338
		Electronic Door Locks - Security	$11,550	$11,550	$12,301	$615	$12,916	Radar 1A - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	Sprinkler System - Piping Replacement	$279,627	$188,000	$227,110	$22,711	$249,821
								Radar 2A - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	Sewage / Soil System Piping - Piping Replacement	$338,208	$402,229	$485,905	$48,591	$534,496
								Potable Water Tanks #2 - Structural Preservation (Paint)	$89,000	$169,717	$192,506	$19,251	$211,757	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$187,071	$148,502	$179,395	$17,940	$197,335
								Sewage Tanks #2 - Structural Preservation (Paint)	$123,000	$103,245	$117,108	$11,711	$128,819	PA system - Comm/Nav/Lifesaving Equip	$237,274	$156,000	$188,453	$18,845	$207,298
								GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,570	$18,000	$21,745	$2,174	$23,919
								All Cameras - Security	$42,385	$33,800	$38,339	$3,834	$42,172	Sensors and Alarms - Security	$10,533	$6,925	$8,366	$837	$9,202
														AC Units - Security	$12,928	$8,500	$10,268	$1,027	$11,295
	Subtotal						$2,692,447	Subtotal					$6,011,444	Subtotal					$19,640,619
	Improvement	Targeted Improvements Kitsap - MV Kitsap Impr Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Kitsap - MV Kitsap Impr Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Kitsap - MV Kitsap Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000
Kittitas	Preservation	Sewage Tanks #1 - Structural Preservation (Paint)	$108,000	$103,245	$109,958	$5,498	$115,456	Hull (Paint) - Structural Preservation (Paint)	$364,000	$475,000	$538,781	$53,878	$592,659	Potable Water Tanks #1 - Structural Preservation (Paint)	$105,690	$169,717	$205,023	$20,502	$225,526
		Gyrocompass - Comm/Nav/Lifesaving Equip	$52,000	$50,000	$53,251	$2,663	$55,914	Auto Deck - Steel Replacement	$443,000	$1,582,000	$1,794,425	$179,442	$1,973,867	Solariums - Steel Replacement	$774,708	$1,980,594	$2,392,620	$239,262	$2,631,881
		Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$80,000	$79,201	$84,351	$4,218	$88,569	PA system - Comm/Nav/Lifesaving Equip	$174,000	$156,000	$176,947	$17,695	$194,642	CPP Hubs/Blades Number One End - Propulsion System	$593,184	$456,000	$550,862	$55,086	$605,948
		Sewage Tanks #2 - Structural Preservation (Paint)	$108,000	$103,245	$109,958	$5,498	$115,456	Radar 1A - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	CPP Hubs/Blades Number Two End - Propulsion System	$593,184	$456,000	$550,862	$55,086	$605,948
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Potable Water Tanks #1 - Steel Replacement	$204,000	$366,588	$415,812	$41,581	$457,393	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$115,202	$568,550	$686,826	$68,683	$755,509
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Potable Water Tanks #2 - Steel Replacement	$204,000	$366,588	$415,812	$41,581	$457,393	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$187,071	$148,502	$179,395	$17,940	$197,335
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Radar 1B - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Electronic Door Locks - Security	$11,550	$11,550	$12,301	$615	$12,916	GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
								All Cameras - Security	$42,385	$33,800	$38,339	$3,834	$42,172	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Potable Water Tanks #2 - Structural Preservation (Paint)	$105,690	$169,717	$205,023	$20,502	$225,526
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$21,060	$18,000	$21,745	$2,174	$23,919
														Sensors and Alarms - Security	$10,533	$6,925	$8,366	$837	$9,202
														AC Unit Datacenter - Security	$12,928	$8,500	$10,268	$1,027	$11,295
	Subtotal						$444,225	Subtotal					$3,856,622	Subtotal					$5,488,757
	Improvement	Targeted Improvements Kittitas - MV Kittitas Impr Dockside (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Kittitas - MV Kittitas Impr Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Kittitas - MV Kittitas Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
		Heating System Piping - Piping Replacement	$194,470	$169,717	$218,355	$21,835	$240,190	Bilges - Structural Preservation (Paint)	$420,646	$500,664	$686,030	$68,603	$754,633	Topside - Structural Preservation (Paint)	$4,491,508	$1,975,502	$2,882,928	$288,293	$3,171,221
Kitsap	Preservation	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$104,633	$84,000	$108,073	$10,807	$118,880	Bilge Piping - Piping Replacement	$194,470	$169,717	$232,553	$23,255	$255,809	Hull (Paint) - Structural Preservation (Paint)	$836,008	$475,000	$693,186	$69,319	$762,505
		Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$49,674	$37,000	$47,604	$4,760	$52,364	Reduction Gears #1 - Propulsion System	$627,799	$437,000	$598,795	$59,880	$658,675	Machinery Spaces - Structural Preservation (Paint)	$476,715	$1,646,252	$2,402,441	$240,244	$2,642,685
		Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$49,674	$37,000	$47,604	$4,760	$52,364	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$255,770	$568,550	$779,051	$77,905	$856,956	Voids - Structural Preservation (Paint)	$422,892	$493,876	$720,733	$72,073	$792,806
		Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$49,674	$37,000	$47,604	$4,760	$52,364	Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$149,023	$190,083	$260,460	$26,046	$286,505	Sewage Tanks #1 - Structural Preservation (Paint)	$159,592	$103,245	$150,670	$15,067	$165,736
		Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$49,674	$37,000	$47,604	$4,760	$52,364	Interior Communications - Comm/Nav/Lifesaving Equip	$205,039	$237,000	$324,747	$32,475	$357,222	Sewage Tanks #1 - Steel Replacement	$121,544	$79,201	$115,581	$11,558	$127,139
		Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$104,633	$84,000	$108,073	$10,807	$118,880	Radio System - Comm/Nav/Lifesaving Equip	$53,902	$37,000	$50,699	$5,070	$55,769	Potable Water Piping - Piping Replacement	$386,825	$594,008	$866,859	$86,686	$953,545
		Electronic Door Locks - Security	$16,397	$11,550	$14,860	$1,486	$16,346	Reduction Gears #2 - Propulsion System	$627,799	$437,000	$598,795	$59,880	$658,675	CPP Hubs/Blades Number One End - Propulsion System	$700,725	$456,000	$665,459	$66,546	$732,005
		Hirsch Hardware - Security	$19,024	$18,000	$23,158	$2,316	$25,474	Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	CPP Hubs/Blades Number Two End - Propulsion System	$700,725	$456,000	$665,459	$66,546	$732,005
								Radar 2B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$574,954	$350,000	$510,769	$51,077	$561,846
														Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$598,205	$389,000	$567,683	$56,768	$624,451
														Steering #1 - Major Mechanical/Electrical Systems	$886,739	$540,000	$788,043	$78,804	$866,848
														Heating Boilers - Major Mechanical/Electrical Systems	$140,568	$91,647	$133,744	$13,374	$147,119
														Potable Water Tanks #1 - Steel Replacement	$94,064	$48,000	$70,048	$7,005	$77,053
														Potable Water Tanks #2 - Steel Replacement	$94,064	$48,000	$70,048	$7,005	$77,053
														Steering #2 - Major Mechanical/Electrical Systems	$886,739	$540,000	$788,043	$78,804	$866,848
														Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$574,954	$350,000	$510,769	$51,077	$561,846
														Auxiliary Generator Vital - Major Mechanical/Electrical Systems	$574,954	$350,000	$510,769	$51,077	$561,846
														Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$121,544	$79,201	$115,581	$11,558	$127,139
														Sewage Tanks #2 - Structural Preservation (Paint)	$159,592	$103,245	$150,670	$15,067	$165,736
														AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														All Cameras - Security	$51,977	$33,800	$49,326	$4,933	$54,258
	Subtotal	Subtotal					$729,227	Subtotal					$4,028,941	Subtotal					$14,868,007
	Improvement	Targeted Improvements Kitsap - MV Kitsap Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Kitsap - MV Kitsap Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Kitsap - MV Kitsap Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
Kittitas	Preservation	Sewage Tanks #1 - Structural Preservation (Paint)	$128,942	$103,245	$132,833	$13,283	$146,117	Topside - Structural Preservation (Paint)	$2,925,159	$1,975,502	$2,706,914	$270,691	$2,977,605	Hull (Paint) - Structural Preservation (Paint)	$760,968	$475,000	$693,186	$69,319	$762,505
		Sewage / Soil System Piping - Piping Replacement	$187,071	$148,502	$191,060	$19,106	$210,166	Machinery Spaces - Structural Preservation (Paint)	$770,480	$1,646,252	$2,255,762	$225,576	$2,481,338	Hull - Steel Replacement	$591,864	$1,595,000	$2,327,647	$232,765	$2,560,411
		Elevators - Major Mechanical/Electrical Systems	$498,857	$1,018,300	$1,310,127	$131,013	$1,441,139	Bilges - Structural Preservation (Paint)	$451,296	$500,664	$686,030	$68,603	$754,633	Wet Spaces - Steel Replacement	$338,208	$425,000	$620,219	$62,022	$682,241
		Temp Emergency Power System - Comm/Nav/Lifesaving Equip	$298,046	$221,480	$284,952	$28,495	$313,447	Voids - Structural Preservation (Paint)	$460,808	$493,876	$676,729	$67,673	$744,402	Sprinkler System - Piping Replacement	$289,591	$188,000	$274,356	$27,436	$301,791
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$104,633	$84,000	$108,073	$10,807	$118,880	Passenger spaces - Passenger and Crew Spaces	$4,756,050	$6,092,829	$8,348,644	$834,864	$9,183,509	Firemain Piping/Manifolds - Piping Replacement	$321,298	$209,000	$305,002	$30,500	$335,502
		Sewage Tanks #2 - Structural Preservation (Paint)	$128,942	$103,245	$132,833	$13,283	$146,117	Crew's quarters - Passenger and Crew Spaces	$1,357,060	$826,521	$1,132,533	$113,253	$1,245,786	Heating System Piping - Piping Replacement	$187,071	$148,502	$216,715	$21,671	$238,386
		Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$104,633	$84,000	$108,073	$10,807	$118,880	Reduction Gears #1 - Propulsion System	$628,856	$437,000	$598,795	$59,880	$658,675	Rudder Number One End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
		Electronic Door Locks - Security	$16,397	$11,550	$14,860	$1,486	$16,346	Interior Communications - Comm/Nav/Lifesaving Equip	$339,265	$237,000	$324,747	$32,475	$357,222	Rudder Number Two End - Propulsion System	$478,776	$311,000	$453,855	$45,385	$499,240
		Hirsch Hardware - Security	$25,664	$18,000	$23,158	$2,316	$25,474	Radio System - Comm/Nav/Lifesaving Equip	$53,902	$37,000	$50,699	$5,070	$55,769	Steering #1 - Major Mechanical/Electrical Systems	$830,723	$540,000	$788,043	$78,804	$866,848
								Reduction Gears #2 - Propulsion System	$627,799	$437,000	$598,795	$59,880	$658,675	Heating Boilers #1 - Major Mechanical/Electrical Systems	$69,755	$46,672	$68,110	$6,811	$74,921
								Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	General Alarm System - Comm/Nav/Lifesaving Equip	$184,958	$120,000	$175,121	$17,512	$192,633
								Radar 2B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Sewage Tanks #2 - Steel Replacement	$306,501	$366,588	$534,976	$53,498	$588,474
														Steering #2 - Major Mechanical/Electrical Systems	$830,723	$540,000	$788,043	$78,804	$866,848
														Heating Boilers #2 - Major Mechanical/Electrical Systems	$69,755	$46,672	$68,110	$6,811	$74,921
														AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$25,366	$18,000	$26,268	$2,627	$28,895
														Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														All Cameras - Security	$51,977	$33,800	$49,326	$4,933	$54,258
	Subtotal	Subtotal					$2,536,567	Subtotal					$19,262,312	Subtotal					$8,707,379
	Improvement	Targeted Improvements Kittitas - MV Kittitas Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Kittitas - MV Kittitas Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Kittitas - MV Kittitas Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
		Potable Water Tanks #1 - Structural Preservation (Paint)	$279,022	$169,717	$263,780	$26,378	$290,157	Sensors and Alarms - Security	$12,503	$6,925	$11,463	$1,146	$12,609
Kitsap	Preservation	Firemain Piping/Manifolds - Piping Replacement	$220,892	$209,000	$324,834	$32,483	$357,318	AC Units - Security	$15,347	$8,500	$14,070	$1,407	$15,477
		Rudder Number One End - Propulsion System	$512,597	$311,000	$483,366	$48,337	$531,703						
		Rudder Number Two End - Propulsion System	$512,597	$311,000	$483,366	$48,337	$531,703						
		Radar 1A - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Radar 2A - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Potable Water Tanks #2 - Structural Preservation (Paint)	$279,022	$169,717	$263,780	$26,378	$290,157						
		GPS System - Comm/Nav/Lifesaving Equip	$24,309	$15,000	$23,313	$2,331	$25,645						
		Electronic Door Locks - Security	$19,982	$11,550	$17,951	$1,795	$19,747						
	Subtotal	Subtotal					$2,210,556	Subtotal					$28,086
	Improvement	Targeted Improvements Kitsap - MV Kitsap Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Kitsap - MV Kitsap Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000
Kittitas	Preservation	Sewage Tanks #1 - Structural Preservation (Paint)	$170,161	$103,245	$160,467	$16,047	$176,513	Potable Water Tanks #1 - Structural Preservation (Paint)	$155,135	$169,717	$280,932	$28,093	$309,025
		Auto Deck - Steel Replacement	$615,116	$1,582,000	$2,458,795	$245,879	$2,704,674	Sewage Tanks #1 - Steel Replacement	$356,500	$366,588	$606,811	$60,681	$667,492
		CPP Hubs/Blades Number One End - Propulsion System	$700,725	$456,000	$708,730	$70,873	$779,603	Bilge Piping - Piping Replacement	$358,800	$312,000	$516,452	$51,645	$568,097
		CPP Hubs/Blades Number Two End - Propulsion System	$701,782	$456,000	$708,730	$70,873	$779,603	Potable Water Tanks #2 - Structural Preservation (Paint)	$155,135	$169,717	$280,932	$28,093	$309,025
		Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$639,425	$389,000	$604,596	$60,460	$665,056						
		Radar 1A - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Auxiliary Diesel Generator Vital - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Radar 1B - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Sewage Tanks #2 - Structural Preservation (Paint)	$170,161	$103,245	$160,467	$16,047	$176,513						
		GPS System - Comm/Nav/Lifesaving Equip	$26,423	$15,000	$23,313	$2,331	$25,645						
		Electronic Door Locks - Security	$19,982	$11,550	$17,951	$1,795	$19,747						
	Subtotal	Subtotal					$7,286,617	Subtotal					$1,853,638
	Improvement	Targeted Improvements Kittitas - MV Kittitas Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Kittitas - MV Kittitas Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Klahowya	Preservation	Machinery Spaces - Structural Preservation (Paint)	$647,000	$1,495,204	$1,592,428	$79,621	$1,672,050	Topside - Structural Preservation (Paint)	$2,601,000	$1,795,602	$2,036,708	$203,671	$2,240,379	Radar 2B - Comm/Nav/Lifesaving Equip	$79,559	$52,000	$62,818	$6,282	$69,099
		Bilges - Structural Preservation (Paint)	$345,000	$454,840	$484,416	$24,221	$508,636	Hull (Paint) - Structural Preservation (Paint)	$284,000	$658,501	$746,922	$74,692	$821,614	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$115,829	$84,000	$101,475	$10,147	$111,622
		Voids - Structural Preservation (Paint)	$181,000	$448,052	$477,186	$23,859	$501,045	Potable Water Tanks - Structural Preservation (Paint)	$89,000	$218,000	$247,272	$24,727	$271,999	Davits #1 - Comm/Nav/Lifesaving Equip	$292,497	$189,000	$228,318	$22,832	$251,150
		Sewage Tanks #1 - Structural Preservation (Paint)	$95,000	$186,689	$198,828	$9,941	$208,770	Shelter Deck - Steel Replacement	$221,000	$2,474,468	$2,806,730	$280,673	$3,087,403	Potable Water Tanks #1 - Steel Replacement	$194,470	$456,538	$551,512	$55,151	$606,663
		Hull - Steel Replacement	$172,000	$1,789,000	$1,905,328	$95,266	$2,000,594	Auto Deck - Steel Replacement	$155,000	$1,833,000	$2,079,128	$207,913	$2,287,041	Potable Water Tanks #2 - Steel Replacement	$193,413	$456,538	$551,512	$55,151	$606,663
		Sewage / Soil System Piping - Piping Replacement	$258,000	$446,355	$475,379	$23,769	$499,148	Bilge Piping - Piping Replacement	$134,000	$327,000	$370,908	$37,091	$407,999	Radar 2A - Comm/Nav/Lifesaving Equip	$79,559	$52,000	$62,818	$6,282	$69,099
		VHF Radio System - Comm/Nav/Lifesaving Equip	$39,000	$38,000	$40,471	$2,024	$42,494	Sprinkler System - Piping Replacement	$89,000	$218,000	$247,272	$24,727	$271,999	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$115,829	$84,000	$101,475	$10,147	$111,622
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Firemain Piping/Manifolds - Piping Replacement	$89,000	$218,000	$247,272	$24,727	$271,999	Davits #2 - Comm/Nav/Lifesaving Equip	$292,497	$189,000	$228,318	$22,832	$251,150
		GPS System - Comm/Nav/Lifesaving Equip	$15,000	$15,000	$15,975	$799	$16,774	Heating System Piping - Piping Replacement	$105,000	$186,689	$211,757	$21,176	$232,933						
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Potable Water Piping - Piping Replacement	$284,000	$658,501	$746,922	$74,692	$821,614						
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$84,000	$140,864	$159,779	$15,978	$175,757						
								Gyrocompass - Comm/Nav/Lifesaving Equip	$75,000	$64,000	$72,594	$7,259	$79,853						
								Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$54,000	$59,401	$67,377	$6,738	$74,115						
								Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$20,000	$18,000	$20,417	$2,042	$22,459						
								All Cameras - Security	$22,000	$22,400	$25,408	$2,541	$27,949						
	Subtotal						$5,505,425	Subtotal					$11,095,113	Subtotal					$2,077,069
	Improvement	Targeted Improvements Klahowya - MV Klahowya Impr Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Klahowya - Targeted Vessel Improvements	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Klahowa - MV Klahowya Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000
New 144 Auto Passenger Ferry #1	Preservation																		
	Subtotal																		
	Improvement	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #1 Construction Cost	$143,500,000	NA	$144,500,000	$7,225,000	$151,725,000												
	Subtotal						$151,725,000												

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
		Sewage Tanks #1 - Structural Preservation (Paint)	$135,447	$186,689	$240,191	$24,019	$264,210	Hull - Steel Replacement	$264,225	$1,789,000	$2,451,361	$245,136	$2,696,497	Hull (Paint) - Structural Preservation (Paint)	$404,915	$410,000	$598,329	$59,833	$658,162
Klahowya	Preservation	Steering #1 - Major Mechanical/Electrical Systems	$545,360	$516,000	$663,876	$66,388	$730,264	Radar 1B - Comm/Nav/Lifesaving Equip	$54,959	$48,000	$65,772	$6,577	$72,349	VHF Radio System - Comm/Nav/Lifesaving Equip	$59,974	$38,000	$55,455	$5,545	$61,000
		Elevators - Major Mechanical/Electrical Systems	$280,079	$1,188,017	$1,528,482	$152,848	$1,681,330	Radar 1A - Comm/Nav/Lifesaving Equip	$54,959	$48,000	$65,772	$6,577	$72,349	AIS System - Comm/Nav/Lifesaving Equip	$21,138	$20,000	$29,187	$2,919	$32,105
		Steering #2 - Major Mechanical/Electrical Systems	$545,360	$516,000	$663,876	$66,388	$730,264	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$29,614	$18,000	$24,664	$2,466	$27,131	GPS System - Comm/Nav/Lifesaving Equip	$15,854	$15,000	$21,890	$2,189	$24,079
		Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$53,902	$39,000	$50,177	$5,018	$55,194							Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,195	$20,000	$29,187	$2,919	$32,105
		Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$53,902	$39,000	$50,177	$5,018	$55,194							Landing Radars - Comm/Nav/Lifesaving Equip	$20,081	$10,000	$14,593	$1,459	$16,053
		Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$53,902	$39,000	$50,177	$5,018	$55,194							All Cameras - Security	$33,831	$22,400	$32,689	$3,269	$35,958
		Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$53,902	$39,000	$50,177	$5,018	$55,194												
		Electronic Door Locks - Security	$10,479	$7,350	$9,456	$946	$10,402												
	Subtotal	Subtotal					$3,637,247	Subtotal					$2,868,326	Subtotal					$859,463
	Improvement	Targeted Improvements Klahowya - MV Klahowya Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Klahowya - MV Klahowya Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Klahowya - MV Klahowya Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
New 144 Auto Passenger Ferry #1	Preservation	Sewage Tanks #1 - Steel Replacement	$162,354	$273,369	$351,712	$35,171	$386,883	Topside - Structural Preservation (Paint)	$3,220,463	$1,473,156	$2,018,579	$201,858	$2,220,437	Hull (Paint) - Structural Preservation (Paint)	$574,202	$980,838	$1,431,376	$143,138	$1,574,513
		Sewage Tanks #2 - Steel Replacement	$162,354	$273,369	$351,712	$35,171	$386,883	CPP Hubs/Blades Number One End - Propulsion System	$743,371	$569,519	$780,378	$78,038	$858,416						
								CPP Hubs/Blades Number Two End - Propulsion System	$743,371	$569,519	$780,378	$78,038	$858,416						
	Subtotal	Subtotal					$773,766	Subtotal					$3,937,269	Subtotal					$1,574,513
	Improvement	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #1 Improvement	$221,000	$221,000	$221,000	$0	$221,000	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #1 Improvement	$236,000	$236,000	$236,000	$0	$236,000	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #1 Improvement	$254,000	$254,000	$254,000	$0	$254,000
	Subtotal	Subtotal					$221,000	Subtotal					$236,000	Subtotal					$254,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
		Topside - Structural Preservation (Paint)	$3,119,937	$1,795,602	$2,790,782	$279,078	$3,069,860	Radar 2A - Comm/Nav/Lifesaving Equip	$105,492	$52,000	$86,075	$8,608	$94,683
Klahowya	Preservation	Potable Water Tanks - Structural Preservation (Paint)	$117,956	$305,491	$474,804	$47,480	$522,284	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$36,110	$18,000	$29,795	$2,980	$32,775
		Sewage Tanks #1 - Structural Preservation (Paint)	$165,067	$186,689	$290,158	$29,016	$319,174						
		Auto Deck - Steel Replacement	$237,803	$1,833,000	$2,848,907	$284,891	$3,133,797						
	Subtotal	Subtotal					$7,045,115	Subtotal					$127,458
	Improvement	Targeted Improvements Klahowya - MV Klahowya Pres Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Klahowya - MV Klahowya Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000
New 144 Auto Passenger Ferry #1	Preservation	Machinery Spaces - Structural Preservation (Paint)	$2,892,224	$1,227,630	$1,908,021	$190,802	$2,098,824	Wet Spaces - Steel Replacement	$733,895	$299,947	$496,500	$49,650	$546,151
		Bilges - Structural Preservation (Paint)	$879,594	$373,351	$580,274	$58,027	$638,301	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$1,037,359	$423,975	$701,803	$70,180	$771,984
		Voids - Structural Preservation (Paint)	$867,668	$368,289	$572,406	$57,241	$629,647	Lighting Fixtures - Major Mechanical/Electrical Systems	$415,459	$169,590	$280,721	$28,072	$308,793
		Potable Water Tanks - Structural Preservation (Paint)	$591,364	$251,854	$391,439	$39,144	$430,583	PA system - Comm/Nav/Lifesaving Equip	$284,633	$94,920	$157,121	$15,712	$172,833
		Auto Deck - Steel Replacement	$2,779,343	$1,122,586	$1,744,759	$174,476	$1,919,235						
		Sewage Tanks #1 - Steel Replacement	$181,386	$273,369	$424,879	$42,488	$467,367						
		Radar 1A - Comm/Nav/Lifesaving Equip	$84,329	$35,436	$55,076	$5,508	$60,583						
		Radio System - Comm/Nav/Lifesaving Equip	$65,004	$34,172	$53,111	$5,311	$58,422						
		Sewage Tanks #2 - Steel Replacement	$181,386	$273,369	$424,879	$42,488	$467,367						
	Subtotal	Subtotal					$6,770,329	Subtotal					$1,799,760
	Improvement	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #1 Improvement	$300,000	$300,000	$300,000	$0	$300,000	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #1 Improvement	$300,000	$300,000	$300,000	$0	$300,000
	Subtotal	Subtotal					$300,000	Subtotal					$300,000

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
New 144 Auto Passenger Ferry #2	Preservation																		
	Subtotal																		
	Improvement	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #2 Construction Cost	$143,500,000	NA	$144,500,000	$7,225,000	$151,725,000												
	Subtotal						$151,725,000												
New 144 Auto Passenger Ferry #3	Improvement																		
	Subtotal																		
New 144 Auto Passenger Ferry #4	Improvement																		
	Subtotal																		
New 144 Auto Passenger Ferry #5	Improvement																		
	Subtotal																		

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
								Sewage Tanks #1 - Steel Replacement	$162,354	$273,369	$374,581	$37,458	$412,040	Topside - Structural Preservation (Paint)	$3,220,463	$1,473,156	$2,149,835	$214,983	$2,364,818
New 144 Auto Passenger Ferry #2	Preservation							Sewage Tanks #2 - Steel Replacement	$162,354	$273,369	$374,581	$37,458	$412,040	CPP Hubs/Blades Number One End - Propulsion System	$743,371	$569,519	$831,122	$83,112	$914,234
														CPP Hubs/Blades Number Two End - Propulsion System	$743,371	$569,519	$831,122	$83,112	$914,234
	Subtotal							Subtotal					$824,079	Subtotal					$4,193,286
	Improvement							Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #2 Improvement	$221,000	$221,000	$221,000	$0	$221,000	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #2 Improvement	$236,000	$236,000	$236,000	$0	$236,000
	Subtotal							Subtotal					$221,000	Subtotal					$236,000
New 144 Auto Passenger Ferry #3	Improvement																		
	Subtotal																		
New 144 Auto Passenger Ferry #4	Improvement																		
	Subtotal																		
New 144 Auto Passenger Ferry #5	Improvement																		
	Subtotal																		

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
		Radar 2A - Comm/Nav/Lifesaving Equip	$164,375	$45,562	$70,814	$7,081	$77,895	Radar 1B - Comm/Nav/Lifesaving Equip	$84,329	$35,436	$58,657	$5,866	$64,523
New 144 Auto Passenger Ferry #2	Preservation	Radar 2B - Comm/Nav/Lifesaving Equip	$80,046	$45,562	$70,814	$7,081	$77,895	Radar 2A - Comm/Nav/Lifesaving Equip	$80,046	$45,562	$75,419	$7,542	$82,960
		Hull (Paint) - Structural Preservation (Paint)	$574,202	$980,838	$1,524,450	$152,445	$1,676,894	Radar 2B - Comm/Nav/Lifesaving Equip	$80,046	$45,562	$75,419	$7,542	$82,960
								Machinery Spaces - Structural Preservation (Paint)	$2,892,224	$1,227,630	$2,032,089	$203,209	$2,235,298
								Bilges - Structural Preservation (Paint)	$879,594	$373,351	$618,006	$61,801	$679,806
								Voids - Structural Preservation (Paint)	$867,668	$368,289	$609,627	$60,963	$670,589
								Auto Deck - Steel Replacement	$2,779,343	$1,122,586	$1,858,210	$185,821	$2,044,031
								Wet Spaces - Steel Replacement	$733,895	$299,947	$496,500	$49,650	$546,151
								Sewage Tanks #1 - Steel Replacement	$181,386	$273,369	$452,506	$45,251	$497,757
								Elevators - Major Mechanical/Electrical Systems	$415,460	$759,359	$1,256,962	$125,696	$1,382,659
								HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$1,037,359	$423,975	$701,803	$70,180	$771,984
								PA system - Comm/Nav/Lifesaving Equip	$284,633	$94,920	$157,121	$15,712	$172,833
								Radar 1A - Comm/Nav/Lifesaving Equip	$84,329	$35,436	$58,657	$5,866	$64,523
								Radio System - Comm/Nav/Lifesaving Equip	$65,004	$34,172	$56,565	$5,656	$62,221
								Potable Water Tanks #1 - Steel Replacement	$295,682	$273,369	$452,506	$45,251	$497,757
								Potable Water Tanks #2 - Steel Replacement	$298,168	$273,369	$452,506	$45,251	$497,757
								Sewage Tanks #2 - Steel Replacement	$181,386	$273,369	$452,506	$45,251	$497,757
	Subtotal	Subtotal					$1,832,685	Subtotal					$10,851,563
	Improvement	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #2 Improvement	$254,000	$254,000	$254,000	$0	$254,000	Targeted Improvements New 144 Auto Passenger Ferry 2 - 144 Auto Ferry #2 Improvement	$300,000	$300,000	$300,000	$0	$300,000
	Subtotal	Subtotal					$254,000	Subtotal					$300,000
New 144 Auto Passenger Ferry #3	Improvement							Targeted Improvements New 144 Auto Passenger Ferry 3 - 144 Auto Ferry #2	$163,925,000	NA	$218,195,000	$10,909,750	$229,104,750
	Subtotal												$229,104,750
New 144 Auto Passenger Ferry #4	Improvement							Targeted Improvements New 144 Auto Passenger Ferry 4 - 144 Auto Ferry #2	$163,925,000	NA	$218,195,000	$10,909,750	$229,104,750
	Subtotal												$229,104,750
New 144 Auto Passenger Ferry #5	Improvement							Targeted Improvements New 144 Auto Passenger Ferry 5 - 144 Auto Ferry #2	$163,925,000	NA	$109,097,500	$5,454,875	$114,552,375
	Subtotal												$114,552,375

Vessel	Activity	Biennium End	2013					Biennium End	2015					Biennium End	2017				
		Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Puyallup	Preservation	Hull (Paint) - Structural Preservation (Paint)	$530,000	$765,000	$814,743	$40,737	$855,481	Auto Deck - Steel Replacement	$1,331,000	$1,599,716	$1,814,520	$181,452	$1,995,972	Propulsion Controls - Propulsion System	$8,810,012	$6,327,990	$7,644,410	$764,441	$8,408,851
		Radio System - Comm/Nav/Lifesaving Equip	$42,000	$40,000	$42,601	$2,130	$44,731	Temp Emergency Power System - Comm/Nav/Lifesaving Equip	$170,000	$318,000	$360,700	$36,070	$396,770	Radar 1A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Radar 1B - Comm/Nav/Lifesaving Equip	$48,000	$45,562	$48,525	$2,426	$50,951	Gyrocompass - Comm/Nav/Lifesaving Equip	$55,000	$49,000	$55,580	$5,558	$61,137	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$170,818	$84,000	$101,475	$10,147	$111,622
		Radar 2B - Comm/Nav/Lifesaving Equip	$59,000	$48,000	$51,121	$2,556	$53,677	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404	Radar 1B - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404	GPS System - Comm/Nav/Lifesaving Equip	$19,890	$15,000	$18,120	$1,812	$19,933
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,000	$18,000	$19,170	$959	$20,129	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$54,959	$123,045	$148,642	$14,864	$163,506
		AIS System - Comm/Nav/Lifesaving Equip	$20,000	$20,000	$21,300	$1,065	$22,366	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404	All Cameras - Security	$66,774	$46,400	$56,053	$5,605	$61,658
		Landing Radars - Comm/Nav/Lifesaving Equip	$25,000	$10,000	$10,650	$533	$11,183	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$146,000	$84,000	$95,279	$9,528	$104,807	Electronic Door Locks - Security	$25,553	$16,800	$20,295	$2,029	$22,324
		Landing Radars - Comm/Nav/Lifesaving Equip	$25,000	$10,000	$10,650	$533	$11,183												
		EPA-COMPLIANT MAIN ENGINE RETROFIT COMPONENTS - Targeted	$400,000	$20,000	$21,300	$1,065	$22,366												
	Subtotal						$1,114,431	Subtotal					$2,768,300	Subtotal					$8,915,462
	Improvement	Targeted Improvements Puyallup - Targeted Vessel Improvements	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Puyallup - Targeted Vessel Improvements	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Puyallup - MV Puyallup Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000
Rhododendron	Preservation	**RETIRED**																	
	Improvement	**RETIRED**																	
	Subtotal																		

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Puyallup	Preservation	Topside - Structural Preservation (Paint)	$4,661,000	$2,818,994	$3,626,868	$362,687	$3,989,555	Hull (Paint) - Structural Preservation (Paint)	$732,432	$765,000	$1,048,234	$104,823	$1,153,058	Radio System - Comm/Nav/Lifesaving Equip	$62,357	$40,000	$58,374	$5,837	$64,211
		Voids - Structural Preservation (Paint)	$300,160	$706,022	$908,355	$90,836	$999,191	Satellite Compass System 2 - Comm/Nav/Lifesaving Equip	$28,536	$20,000	$27,405	$2,740	$30,145	Radar 1B - Comm/Nav/Lifesaving Equip	$87,723	$48,000	$70,048	$7,005	$77,053
		Potable Water Tanks #1 - Structural Preservation (Paint)	$159,592	$240,432	$309,336	$30,934	$340,269	Hirsch Hardware - Security	$26,653	$18,000	$24,664	$2,466	$27,131	Radar 2B - Comm/Nav/Lifesaving Equip	$87,723	$48,000	$70,048	$7,005	$77,053
		Sewage Tanks #1 - Structural Preservation (Paint)	$109,918	$147,088	$189,241	$18,924	$208,165							Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$29,187	$2,919	$32,105
		Passenger spaces - Passenger and Crew Spaces	$9,342,996	$9,079,843	$11,681,965	$1,168,197	$12,850,162							AIS System - Comm/Nav/Lifesaving Equip	$30,756	$20,000	$29,187	$2,919	$32,105
		Crew's quarters - Passenger and Crew Spaces	$306,501	$1,279,664	$1,646,393	$164,639	$1,811,032							Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$20,000	$29,187	$2,919	$32,105
		Galley - Passenger and Crew Spaces	$405,850	$1,831,243	$2,356,045	$235,604	$2,591,649							Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$20,000	$29,187	$2,919	$32,105
		Hull - Steel Replacement	$2,193,068	$2,515,000	$3,235,755	$323,575	$3,559,330							Electronic Door Locks - Security	$25,835	$16,800	$24,517	$2,452	$26,969
		Wet Spaces - Steel Replacement	$258,941	$571,946	$735,856	$73,586	$809,441												
		Saltwater Piping - Piping Replacement	$455,610	$431,081	$554,621	$55,462	$610,083												
		Firemain Piping/Manifolds - Piping Replacement	$230,404	$195,000	$250,884	$25,088	$275,972												
		Sewage / Soil System Piping - Piping Replacement	$200,811	$571,946	$735,856	$73,586	$809,441												
		Steering #1 - Major Mechanical/Electrical Systems	$737,716	$549,000	$706,334	$70,633	$776,967												
		Elevators Passenger - Major Mechanical/Electrical Systems	$768,317	$726,953	$935,285	$93,528	$1,028,813												
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$934,537	$884,225	$1,137,628	$113,763	$1,251,391												
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$132,113	$230,531	$296,597	$29,660	$326,257												
		Oil Fired Hot Water Heaters #1 - Major Mechanical/Electrical Systems	$96,178	$70,715	$90,981	$9,098	$100,079												
		PA system - Comm/Nav/Lifesaving Equip	$227,234	$249,000	$320,359	$32,036	$352,395												
		Steering #2 - Major Mechanical/Electrical Systems	$737,716	$549,000	$706,334	$70,633	$776,967												
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$23,158	$2,316	$25,474												
		Oil Fired Hot Water Heaters #2 - Major Mechanical/Electrical Systems	$96,178	$70,715	$90,981	$9,098	$100,079												
		Potable Water Tanks #2 - Structural Preservation (Paint)	$159,592	$240,432	$309,336	$30,934	$340,269												
		Sewage Tanks #2 - Structural Preservation (Paint)	$109,918	$147,088	$189,241	$18,924	$208,165												
		Sensors and Alarms - Security	$14,686	$10,300	$13,252	$1,325	$14,577												
		AC unit datacenter - Security	$12,119	$8,500	$10,936	$1,094	$12,030												
	Subtotal	Subtotal					$34,167,753	Subtotal					$1,210,334	Subtotal					$373,708
	Improvement	Targeted Improvements Puyallup - MV Puyallup Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Puyallup - Targeted Vessel Improvements	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Puyallup - MV Puyallup Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
Rhododendron	Preservation																		
	Improvement																		
	Subtotal																		

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Puyallup	Preservation	Auto Deck - Steel Replacement	$2,633,795	$1,599,716	$2,486,329	$248,633	$2,734,962	Topside - Structural Preservation (Paint)	$8,415,436	$2,818,994	$4,666,264	$466,626	$5,132,890
		Rudder Number One End - Propulsion System	$619,343	$377,000	$585,945	$58,595	$644,540	Sewage Tanks #1 - Structural Preservation (Paint)	$149,978	$147,088	$243,474	$24,347	$267,821
		Rudder Number Two End - Propulsion System	$619,343	$377,000	$585,945	$58,595	$644,540	Radar 1A - Comm/Nav/Lifesaving Equip	$122,774	$48,000	$79,454	$7,945	$87,400
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$29,593	$18,000	$27,976	$2,798	$30,774	Radar 1B - Comm/Nav/Lifesaving Equip	$126,385	$48,000	$79,454	$7,945	$87,400
		All Cameras - Security	$80,622	$46,400	$72,116	$7,212	$79,328	GPS System - Comm/Nav/Lifesaving Equip	$35,137	$15,000	$24,829	$2,483	$27,312
								GPS System - Comm/Nav/Lifesaving Equip	$26,450	$15,000	$24,829	$2,483	$27,312
								Sewage Tanks #2 - Structural Preservation (Paint)	$149,978	$147,088	$243,474	$24,347	$267,821
	Subtotal	Subtotal					$4,134,144	Subtotal					$5,897,957
	Improvement	Targeted Improvements Puyallup - Targeted Vessel Improvements	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Puyallup - MV Puyallup Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000
Rhododendron	Preservation												
	Improvement												
	Subtotal												

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Sealth	Preservation	Potable Water Tanks #1 - Structural Preservation (Paint)	$78,000	$168,302	$179,246	$8,962	$188,208	Hull (Paint) - Structural Preservation (Paint)	$364,000	$475,000	$538,781	$53,878	$592,659	Topside - Structural Preservation (Paint)	$2,950,865	$1,975,502	$2,386,468	$238,647	$2,625,115
		Elevators - Major Mechanical/Electrical Systems	$74,000	$1,018,300	$1,084,514	$54,226	$1,138,740	Sewage Tanks #1 - Structural Preservation (Paint)	$108,000	$103,245	$117,108	$11,711	$128,819	Voids - Structural Preservation (Paint)	$532,678	$493,876	$596,618	$59,662	$656,279
		Radio System - Comm/Nav/Lifesaving Equip	$38,000	$37,000	$39,406	$1,970	$41,376	Auto Deck - Steel Replacement	$443,000	$869,466	$986,215	$98,621	$1,084,836	Hull - Steel Replacement	$643,494	$1,530,108	$1,848,418	$184,842	$2,033,260
		Gyrocompass - Comm/Nav/Lifesaving Equip	$52,000	$50,000	$53,251	$2,663	$55,914	Radar 1B - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	CPP Hubs/Blades Number One End - Propulsion System	$635,304	$456,000	$550,862	$55,086	$605,948
		Potable Water Tanks #2 - Structural Preservation (Paint)	$78,000	$168,302	$179,246	$8,962	$188,208	Radar 2B - Comm/Nav/Lifesaving Equip	$64,000	$48,000	$54,445	$5,445	$59,890	CPP Hubs/Blades Number Two End - Propulsion System	$635,304	$456,000	$550,862	$55,086	$605,948
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Sewage Tanks #2 - Structural Preservation (Paint)	$108,000	$103,245	$117,108	$11,711	$128,819	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$20,000	$18,000	$20,417	$2,042	$22,459	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
		Electronic Door Locks - Security	$9,450	$9,450	$10,064	$503	$10,568	All Cameras - Security	$40,379	$32,200	$36,524	$3,652	$40,176	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$113,088	$79,201	$95,677	$9,568	$105,245
														Sensors and Alarms - Security	$11,294	$7,425	$8,970	$897	$9,867
														AC Unit datacenter - Security	$12,928	$8,500	$10,268	$1,027	$11,295
	Subtotal						$1,678,927	Subtotal					$2,136,263	Subtotal					$6,849,626
	Improvement	Targeted Improvements Sealth - MV Sealth Improvement Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Sealth - MV Sealth Improvement Dockside (09-11)	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Sealth - MV Sealth Improvement Dockside (09-11)	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000
Spokane	Preservation	Radio System - Comm/Nav/Lifesaving Equip	$39,000	$37,000	$39,406	$1,970	$41,376	Potable Water Piping - Piping Replacement	$125,000	$736,570	$835,474	$83,547	$919,021	Heating System Piping - Piping Replacement	$183,901	$210,448	$254,228	$25,423	$279,651
		Gyrocompass - Comm/Nav/Lifesaving Equip	$55,000	$53,000	$56,446	$2,822	$59,269	Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$182,446	$182,446	$206,944	$20,694	$227,639	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$170,818	$84,000	$101,475	$10,147	$111,622
		Sewage Tanks #1 - Structural Preservation (Paint)	$52,000	$128,702	$137,071	$6,854	$143,924	Heating Boilers #1 - Major Mechanical/Electrical Systems	$64,000	$56,573	$64,169	$6,417	$70,586	Topside - Structural Preservation (Paint)	$4,285,730	$2,450,708	$2,960,532	$296,053	$3,256,585
		Firemain Piping/Manifolds - Piping Replacement	$254,000	$244,000	$259,866	$12,993	$272,859	Bilges - Structural Preservation (Paint)	$691,000	$619,466	$702,645	$70,265	$772,910	Machinery Spaces - Structural Preservation (Paint)	$1,258,768	$2,039,995	$2,464,378	$246,438	$2,710,816
		Sewage Tanks #2 - Structural Preservation (Paint)	$52,000	$128,702	$137,071	$6,854	$143,924	Voids - Structural Preservation (Paint)	$366,000	$612,677	$694,945	$69,494	$764,439	Solariums - Steel Replacement	$1,064,298	$2,455,801	$2,966,684	$296,668	$3,263,353
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Potable Water Tanks #1 - Structural Preservation (Paint)	$127,000	$209,317	$237,423	$23,742	$261,166	Saltwater Piping - Piping Replacement	$367,801	$373,377	$451,051	$45,105	$496,156
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Passenger spaces - Passenger and Crew Spaces	$4,700,000	$6,848,069	$7,767,601	$776,760	$8,544,361	Radar 2A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Heating Boilers #2 - Major Mechanical/Electrical Systems	$64,000	$56,573	$64,169	$6,417	$70,586	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$56,159	$40,000	$48,321	$4,832	$53,153
								Potable Water Tanks #2 - Structural Preservation (Paint)	$127,000	$209,317	$237,423	$23,742	$261,166	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$56,159	$40,000	$48,321	$4,832	$53,153
								GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$56,159	$40,000	$48,321	$4,832	$53,153
								Electronic Door Locks - Security	$21,067	$16,800	$19,056	$1,906	$20,961	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$56,159	$40,000	$48,321	$4,832	$53,153
														Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$170,818	$84,000	$101,475	$10,147	$111,622
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,570	$18,000	$21,745	$2,174	$23,919
														All Cameras - Security	$70,574	$46,400	$56,053	$5,605	$61,658
	Subtotal						$717,266	Subtotal					$11,931,551	Subtotal					$10,591,779
	Improvement	Targeted Improvements Spokane - MV Spokane Improvement Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Spokane - MV Spokane Improvement Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Spokane - MV Spokane Improvement Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Sealth	Preservation	Bilges - Structural Preservation (Paint)	$581,295	$500,664	$644,145	$64,415	$708,560	Machinery Spaces - Structural Preservation (Paint)	$770,480	$1,646,252	$2,255,762	$225,576	$2,481,338	Hull (Paint) - Structural Preservation (Paint)	$759,911	$475,000	$693,186	$69,319	$762,505
		Sprinkler System - Piping Replacement	$252,599	$188,000	$241,877	$24,188	$266,065	Sewage Tanks #1 - Structural Preservation (Paint)	$138,454	$103,245	$141,471	$14,147	$155,618	Potable Water Tanks #1 - Structural Preservation (Paint)	$116,259	$168,302	$245,610	$24,561	$270,171
		Sewage / Soil System Piping - Piping Replacement	$398,451	$402,229	$517,501	$51,750	$569,251	Heating System Piping - Piping Replacement	$192,356	$169,717	$232,553	$23,255	$255,809	Solariums - Steel Replacement	$843,406	$1,980,594	$2,890,359	$289,036	$3,179,395
		Reduction Gears #1 - Propulsion System	$627,799	$437,000	$562,236	$56,224	$618,460	Interior Communications - Comm/Nav/Lifesaving Equip	$339,265	$237,000	$324,747	$32,475	$357,222	Potable Water Piping - Piping Replacement	$430,158	$594,008	$866,859	$86,686	$953,545
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$128,942	$568,550	$731,486	$73,149	$804,635	Radar 1A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$639,425	$389,000	$567,683	$56,768	$624,451
		Heating Boilers #1 - Major Mechanical/Electrical Systems	$61,300	$46,672	$60,047	$6,005	$66,052	Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Steering #1 - Major Mechanical/Electrical Systems	$830,723	$540,000	$788,043	$78,804	$866,848
		PA system - Comm/Nav/Lifesaving Equip	$209,266	$156,000	$200,707	$20,071	$220,778	Sewage Tanks #2 - Structural Preservation (Paint)	$138,454	$103,245	$141,471	$14,147	$155,618	Radio System - Comm/Nav/Lifesaving Equip	$57,073	$37,000	$53,996	$5,400	$59,395
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$104,633	$84,000	$108,073	$10,807	$118,880	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$25,366	$18,000	$24,664	$2,466	$27,131	Steering #2 - Major Mechanical/Electrical Systems	$830,723	$540,000	$788,043	$78,804	$866,848
		Potable Water Tanks #1 - Steel Replacement	$159,592	$366,588	$471,646	$47,165	$518,810							Potable Water Tanks #2 - Structural Preservation (Paint)	$116,259	$168,302	$245,610	$24,561	$270,171
		Potable Water Tanks #2 - Steel Replacement	$159,592	$366,588	$471,646	$47,165	$518,810							AIS System - Comm/Nav/Lifesaving Equip	$49,674	$20,000	$29,187	$2,919	$32,105
		Reduction Gears #2 - Propulsion System	$627,799	$437,000	$562,236	$56,224	$618,460							Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$29,187	$2,919	$32,105
		Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$104,633	$84,000	$108,073	$10,807	$118,880							Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
		Heating Boilers #2 - Major Mechanical/Electrical Systems	$61,300	$46,672	$60,047	$6,005	$66,052							All Cameras - Security	$49,517	$32,200	$46,991	$4,699	$51,690
		Electronic Door Locks - Security	$13,473	$9,450	$12,158	$1,216	$13,374												
		Hirsch Hardware - Structural Preservation (Paint)	$770,480	$1,646,252	$2,118,039	$211,804	$2,329,843												
	Subtotal	Subtotal					$7,556,910	Subtotal					$3,577,432	Subtotal					$7,985,282
	Improvement	Targeted Improvements Sealth - MV Sealth Improvement Dockside (09-11)	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Sealth - MV Sealth Improvement Dockside (09-11)	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Sealth - MV Sealth Improvement Dockside (09-11)	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
Spokane	Preservation	Hull (Paint) - Structural Preservation (Paint)	$1,097,062	$715,000	$919,906	$91,991	$1,011,897	Sewage / Soil System Piping - Piping Replacement	$409,020	$497,270	$681,380	$68,138	$749,518	Rudder Number One End - Propulsion System	$579,181	$377,000	$550,171	$55,017	$605,188
		Sewage Tanks #1 - Structural Preservation (Paint)	$89,837	$128,702	$165,586	$16,559	$182,144	Radar 1A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Rudder Number Two End - Propulsion System	$579,181	$377,000	$550,171	$55,017	$605,188
		Auto Deck - Steel Replacement	$2,171,930	$1,726,000	$2,220,641	$222,064	$2,442,705	Radio System - Comm/Nav/Lifesaving Equip	$53,902	$37,000	$50,699	$5,070	$55,769	Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$285,363	$234,208	$341,789	$34,179	$375,968
		Sprinkler System - Piping Replacement	$319,184	$237,000	$304,920	$30,492	$335,412	Galley - Passenger and Crew Spaces	$856,089	$1,464,655	$2,006,930	$200,693	$2,207,623	PA system - Comm/Nav/Lifesaving Equip	$180,730	$234,000	$341,485	$34,149	$375,634
		Sewage Tanks #2 - Structural Preservation (Paint)	$89,837	$128,702	$165,586	$16,559	$182,144	Bilge Piping - Piping Replacement	$332,924	$231,000	$316,526	$31,653	$348,178	Crew's quarters - Passenger and Crew Spaces	$398,451	$1,023,391	$1,493,475	$149,348	$1,642,823
		Sensors and Alarms - Security	$14,471	$10,150	$13,059	$1,306	$14,365	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$142,682	$99,002	$135,657	$13,566	$149,222	Hull - Steel Replacement	$3,702,321	$2,406,000	$3,511,171	$351,117	$3,862,288
		AC Unit Datacenter - Security	$12,119	$10,150	$13,059	$1,306	$14,365	Electronic Door Locks - Security	$24,876	$16,800	$23,020	$2,302	$25,322	Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$70,048	$7,005	$77,053
								Hirsch Hardware - Security	$26,653	$18,000	$24,664	$2,466	$27,131	AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
														GPS System - Comm/Nav/Lifesaving Equip	$22,195	$15,000	$21,890	$2,189	$24,079
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
														Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$29,187	$2,919	$32,105
														Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
	Subtotal	Subtotal					$4,183,032	Subtotal					$3,635,112	Subtotal					$7,664,538
	Improvement	Targeted Improvements Spokane - MV Spokane Improvement Future Placeholder	$322,000	$322,000	$322,000	$0	$7,354,167	Targeted Improvements Spokane - Targeted Vessel Improvements	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Spokane - MV Spokane Improvement Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$7,354,167	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Sealth	Preservation	Topside - Structural Preservation (Paint)	$4,851,222	$1,975,502	$3,070,388	$307,039	$3,377,427	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$32,499	$168,302	$278,589	$27,859	$306,448
		Passenger spaces - Passenger and Crew Spaces	$6,563,349	$5,923,113	$9,205,890	$920,589	$10,126,479	Sensors and Alarms - Security	$13,406	$7,425	$12,291	$1,229	$13,520
		Crew's quarters - Passenger and Crew Spaces	$475,605	$826,521	$1,284,605	$128,461	$1,413,066	AC Unit datacenter - Security	$15,347	$8,500	$14,070	$1,407	$15,477
		Galley - Passenger and Crew Spaces	$686,985	$1,181,228	$1,835,902	$183,590	$2,019,492						
		Auto Deck - Steel Replacement	$544,304	$869,466	$1,351,352	$135,135	$1,486,487						
		Wet Spaces - Steel Replacement	$661,619	$425,000	$660,548	$66,055	$726,603						
		Sewage Tanks #1 - Steel Replacement	$393,167	$366,588	$569,763	$56,976	$626,739						
		Bilge Piping - Piping Replacement	$513,653	$312,000	$484,920	$48,492	$533,412						
		Firemain Piping/Manifolds - Piping Replacement	$282,192	$209,000	$324,834	$32,483	$357,318						
		CPP Hubs/Blades Number One End - Propulsion System	$749,342	$456,000	$708,730	$70,873	$779,603						
		CPP Hubs/Blades Number Two End - Propulsion System	$749,342	$456,000	$708,730	$70,873	$779,603						
		Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$221,949	$148,502	$230,807	$23,081	$253,887						
		Sewage Tanks #2 - Steel Replacement	$604,547	$366,588	$569,763	$56,976	$626,739						
		Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$574,954	$350,000	$543,981	$54,398	$598,379						
		Radar 1B - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		Radar 2B - Comm/Nav/Lifesaving Equip	$94,064	$48,000	$74,603	$7,460	$82,063						
		GPS System - Comm/Nav/Lifesaving Equip	$26,423	$15,000	$23,313	$2,331	$25,645						
		Electronic Door Locks - Security	$16,420	$9,450	$14,687	$1,469	$16,156						
	Subtotal	Subtotal					$24,509,540	Subtotal					$335,445
	Improvement	Targeted Improvements Sealth - Targeted Vessel Improvements	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Sealth - MV Sealth Improvement Dockside (09-11)	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000
Spokane	Preservation	Steering #1 - Major Mechanical/Electrical Systems	$902,593	$549,000	$853,273	$85,327	$938,601	Hull (Paint) - Structural Preservation (Paint)	$1,551,810	$715,000	$1,183,535	$118,354	$1,301,889
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$227,234	$182,446	$283,563	$28,356	$311,920	Saltwater Piping - Piping Replacement	$539,870	$373,377	$618,049	$61,805	$679,854
		Topside - Structural Preservation (Paint)	$6,062,225	$2,450,708	$3,808,968	$380,897	$4,189,865	Radar 2A - Comm/Nav/Lifesaving Equip	$86,664	$48,000	$79,454	$7,945	$87,400
		Bilges - Structural Preservation (Paint)	$985,199	$619,466	$962,794	$96,279	$1,059,073	Radar 2B - Comm/Nav/Lifesaving Equip	$86,664	$48,000	$79,454	$7,945	$87,400
		Voids - Structural Preservation (Paint)	$521,827	$612,677	$952,242	$95,224	$1,047,466						
		Potable Water Tanks #1 - Structural Preservation (Paint)	$181,071	$209,317	$325,327	$32,533	$357,860						
		Sewage Tanks #1 - Steel Replacement	$250,000	$454,840	$706,927	$70,693	$777,619						
		Potable Water Tanks #1 - Steel Replacement	$264,225	$454,840	$706,927	$70,693	$777,619						
		Potable Water Tanks #2 - Steel Replacement	$264,225	$454,840	$706,927	$70,693	$777,619						
		Sewage Tanks #2 - Steel Replacement	$264,225	$454,840	$706,927	$70,693	$777,619						
		Auxiliary Diesel Generator Vital - Major Mechanical/Electrical Systems	$500,971	$303,000	$470,932	$47,093	$518,025						
		Steering #2 - Major Mechanical/Electrical Systems	$902,593	$549,000	$853,273	$85,327	$938,601						
		Sewage Tanks #2 - Structural Preservation (Paint)	$89,837	$128,702	$200,033	$20,003	$220,036						
		Potable Water Tanks #2 - Structural Preservation (Paint)	$134,226	$209,317	$325,327	$32,533	$357,860						
		All Cameras - Security	$80,622	$46,400	$72,116	$7,212	$79,328						
	Subtotal	Subtotal					$13,129,112	Subtotal					$2,156,541
	Improvement	Targeted Improvements Spokane - MV Spokane Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Spokane - MV Spokane Improvement Future	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Vessel	Activity	Biennium End	2013					Biennium End	2015					Biennium End	2017				
		Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Tacoma	Preservation	Hull (Paint) - Structural Preservation (Paint)	$531,000	$765,000	$814,743	$40,737	$855,481	Auto Deck - Steel Replacement	$1,331,000	$1,599,716	$1,814,520	$181,452	$1,995,972	Topside - Structural Preservation (Paint)	$4,609,141	$2,818,994	$3,405,433	$340,543	$3,745,976
		Temp Emergency Power System - Comm/Nav/Lifesaving Equip	$170,000	$318,000	$338,678	$16,934	$355,612	Propulsion Controls - Propulsion System	$7,045,000	$6,327,990	$7,177,688	$717,769	$7,895,457	Radar 1A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Gyrocompass - Comm/Nav/Lifesaving Equip	$51,000	$49,000	$52,186	$2,609	$54,795	All Cameras - Security	$58,186	$46,400	$52,630	$5,263	$57,893	Radar 1B - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$146,000	$84,000	$89,462	$4,473	$93,935							Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$137,397	$123,045	$148,642	$14,864	$163,506
		Radar 2A - Comm/Nav/Lifesaving Equip	$59,000	$48,000	$51,121	$2,556	$53,677							GPS System - Comm/Nav/Lifesaving Equip	$19,890	$15,000	$18,120	$1,812	$19,933
		Radar 2B - Comm/Nav/Lifesaving Equip	$59,000	$48,000	$51,121	$2,556	$53,677							Sensors and Alarms - Security	$12,051	$9,000	$10,872	$1,087	$11,960
		Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$44,000	$42,000	$44,731	$2,237	$46,968							Firemain Piping/Manifolds - Piping Replacement	$215,608	$195,000	$235,566	$23,557	$259,123
		Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$44,000	$42,000	$44,731	$2,237	$46,968												
		Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$44,000	$42,000	$44,731	$2,237	$46,968												
		Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$44,000	$42,000	$44,731	$2,237	$46,968												
		Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$146,000	$84,000	$89,462	$4,473	$93,935												
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366												
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183												
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$70,000	$20,000	$21,300	$1,065	$22,366												
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183												
		Electronic Door Locks - Security	$19,751	$7,350	$7,828	$391	$8,219												
	Subtotal						$1,824,298	Subtotal					$9,949,322	Subtotal					$4,328,066
	Improvement	Targeted Improvements Tacoma - MV Tacoma Impr Drydock (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Tacoma - MV Tacoma Impr Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Tacoma - MV Tacoma Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000
Tillikum	Preservation	Galley - Passenger and Crew Spaces	$102,000	$1,072,610	$1,142,355	$57,118	$1,199,473	Topside - Structural Preservation (Paint)	$2,600,000	$1,795,602	$2,036,708	$203,671	$2,240,379	Auto Deck - Steel Replacement	$187,198	$1,833,000	$2,214,321	$221,432	$2,435,753
		Sewage / Soil System Piping - Piping Replacement	$130,000	$446,355	$475,379	$23,769	$499,148	Crew's quarters - Passenger and Crew Spaces	$89,000	$751,845	$852,800	$85,280	$938,080	Steering #1 - Major Mechanical/Electrical Systems	$332,277	$516,000	$623,344	$62,334	$685,679
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$190,000	$424,292	$451,881	$22,594	$474,475	Hull - Steel Replacement	$196,000	$1,789,000	$2,029,220	$202,922	$2,232,142	Heating Boilers #1 - Major Mechanical/Electrical Systems	$63,414	$67,887	$82,010	$8,201	$90,211
		PA system - Comm/Nav/Lifesaving Equip	$94,000	$89,858	$95,701	$4,785	$100,486	Bilge Piping - Piping Replacement	$177,000	$327,000	$370,908	$37,091	$407,999	Radar 2B - Comm/Nav/Lifesaving Equip	$86,579	$52,000	$62,818	$6,282	$69,099
		VHF Radio System - Comm/Nav/Lifesaving Equip	$39,000	$38,000	$40,471	$2,024	$42,494	Sprinkler System - Piping Replacement	$142,000	$218,000	$247,272	$24,727	$271,999	Steering #2 - Major Mechanical/Electrical Systems	$333,447	$516,000	$623,344	$62,334	$685,679
		Gyrocompass - Comm/Nav/Lifesaving Equip	$64,000	$64,000	$68,162	$3,408	$71,570	Firemain Piping/Manifolds - Piping Replacement	$142,000	$218,000	$247,272	$24,727	$271,999	Radar 2A - Comm/Nav/Lifesaving Equip	$86,579	$52,000	$62,818	$6,282	$69,099
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Rudder Number One End - Propulsion System	$266,000	$360,000	$408,339	$40,834	$449,173	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$56,159	$39,000	$47,113	$4,711	$51,825
		GPS System - Comm/Nav/Lifesaving Equip	$15,000	$15,000	$15,975	$799	$16,774	Rudder Number Two End - Propulsion System	$266,000	$360,000	$408,339	$40,834	$449,173	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$56,159	$39,000	$47,113	$4,711	$51,825
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$21,000	$20,000	$21,300	$1,065	$22,366	Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$84,000	$140,864	$159,779	$15,978	$175,757	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$56,159	$39,000	$47,113	$4,711	$51,825
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$93,000	$84,000	$95,279	$9,528	$104,807	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$56,159	$39,000	$47,113	$4,711	$51,825
		Electronic Door Locks - Security	$7,350	$7,350	$7,828	$391	$8,219	Davits #1 - Comm/Nav/Lifesaving Equip	$250,000	$72,772	$82,544	$8,254	$90,798	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$108,809	$84,000	$101,475	$10,147	$111,622
								Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$54,000	$59,401	$67,377	$6,738	$74,115						
								Davits #2 - Comm/Nav/Lifesaving Equip	$250,000	$72,772	$82,544	$8,254	$90,798						
								Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$20,000	$18,000	$20,417	$2,042	$22,459						
								All Cameras - Security	$22,400	$22,400	$25,408	$2,541	$27,949						
	Subtotal						$2,468,553	Subtotal					$7,847,627	Subtotal					$4,354,440
	Improvement	Targeted Improvements Tillikum - Targeted Vessel Improvements	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Tillikum - MV Tillikum Impr Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Tillikum - MV Tillikum Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Tacoma	Preservation	Bilges - Structural Preservation (Paint)	$449,183	$712,810	$917,089	$91,709	$1,008,798	Hull (Paint) - Structural Preservation (Paint)	$733,489	$765,000	$1,048,234	$104,823	$1,153,058	Passenger spaces - Passenger and Crew Spaces	$9,596,486	$9,079,843	$13,250,574	$1,325,057	$14,575,632
		Voids - Structural Preservation (Paint)	$300,160	$706,022	$908,355	$90,836	$999,191	Radio System - Comm/Nav/Lifesaving Equip	$58,130	$40,000	$54,810	$5,481	$60,291	Crew's quarters - Passenger and Crew Spaces	$1,352,477	$1,279,664	$1,867,464	$186,746	$2,054,211
		Potable Water Tanks #1 - Structural Preservation (Paint)	$159,592	$240,432	$309,336	$30,934	$340,269	Satellite Compass System 2 - Comm/Nav/Lifesaving Equip	$28,536	$7,350	$10,071	$1,007	$11,078	Galley - Passenger and Crew Spaces	$1,935,441	$1,831,243	$2,672,405	$267,241	$2,939,646
		Sewage Tanks #1 - Structural Preservation (Paint)	$109,918	$148,502	$191,060	$19,106	$210,166							Wet Spaces - Steel Replacement	$424,874	$571,946	$834,663	$83,466	$918,130
		Hull - Steel Replacement	$2,193,068	$2,515,000	$3,235,755	$323,575	$3,559,330							Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$216,665	$230,531	$336,423	$33,642	$370,065
		Solariums - Steel Replacement	$1,903,477	$2,825,783	$3,635,602	$363,560	$3,999,163							Radar 2A - Comm/Nav/Lifesaving Equip	$87,723	$48,000	$70,048	$7,005	$77,053
		Saltwater Piping - Piping Replacement	$420,646	$431,081	$554,621	$55,462	$610,083							Radar 2B - Comm/Nav/Lifesaving Equip	$87,723	$48,000	$70,048	$7,005	$77,053
		Sewage / Soil System Piping - Piping Replacement	$503,084	$571,946	$735,856	$73,586	$809,441							AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
		Rudder Number One End - Propulsion System	$506,255	$377,000	$485,042	$48,504	$533,546							Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$99,803	$20,000	$29,187	$2,919	$32,105
		Rudder Number Two End - Propulsion System	$506,255	$377,000	$485,042	$48,504	$533,546							Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$7,350	$10,726	$1,073	$11,799
		Steering #1 - Major Mechanical/Electrical Systems	$737,716	$549,000	$706,334	$70,633	$776,967							All Cameras - Security	$71,353	$46,400	$67,713	$6,771	$74,485
		Elevators Passenger - Major Mechanical/Electrical Systems	$768,317	$726,953	$935,285	$93,528	$1,028,813												
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$934,537	$884,225	$1,137,628	$113,763	$1,251,391												
		Oil Fired Hot Water Heaters #1 - Major Mechanical/Electrical Systems	$96,178	$70,715	$90,981	$9,098	$100,079												
		PA system - Comm/Nav/Lifesaving Equip	$368,699	$249,000	$320,359	$32,036	$352,395												
		Steering #2 - Major Mechanical/Electrical Systems	$737,716	$549,000	$706,334	$70,633	$776,967												
		Potable Water Tanks #2 - Structural Preservation (Paint)	$159,592	$240,432	$309,336	$30,934	$340,269												
		Sewage Tanks #2 - Structural Preservation (Paint)	$109,918	$148,502	$191,060	$19,106	$210,166												
		Oil Fired Hot Water Heaters #2 - Major Mechanical/Electrical Systems	$96,178	$70,715	$90,981	$9,098	$100,079												
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$23,158	$2,316	$25,474												
		Electronic Door Locks - Security	$22,456	$7,350	$9,456	$946	$10,402												
		Hirsch Hardware - Security	$19,024	$9,000	$11,579	$1,158	$12,737												
		AC Datacenter - Security	$8,984	$9,000	$11,579	$1,158	$12,737												
	Subtotal	Subtotal					$17,602,009	Subtotal					$1,224,427	Subtotal					$21,162,284
	Improvement	Targeted Improvements Tacoma - MV Tacoma Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Tacoma - MV Tacoma Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Tacoma - MV Tacoma Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
Tillikum	Preservation	Hull (Paint) - Structural Preservation (Paint)	$422,760	$410,000	$527,499	$52,750	$580,249	Radar 1B - Comm/Nav/Lifesaving Equip	$54,959	$48,000	$65,772	$6,577	$72,349	VHF Radio System - Comm/Nav/Lifesaving Equip	$58,436	$38,000	$55,455	$5,545	$61,000
		Bilges - Structural Preservation (Paint)	$317,070	$454,840	$585,189	$58,519	$643,708	Radar 1A - Comm/Nav/Lifesaving Equip	$54,959	$48,000	$65,772	$6,577	$72,349	AIS System - Comm/Nav/Lifesaving Equip	$30,650	$20,000	$29,187	$2,919	$32,105
		Voids - Structural Preservation (Paint)	$264,225	$448,052	$576,456	$57,646	$634,101	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$21,138	$18,000	$24,664	$2,466	$27,131	GPS System - Comm/Nav/Lifesaving Equip	$15,854	$15,000	$21,890	$2,189	$24,079
		Potable Water Tanks - Structural Preservation (Paint)	$201,868	$305,491	$393,039	$39,304	$432,343							Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,195	$20,000	$29,187	$2,919	$32,105
		Sewage Tanks #1 - Structural Preservation (Paint)	$100,406	$186,689	$240,191	$24,019	$264,210							Landing Radars - Comm/Nav/Lifesaving Equip	$20,081	$10,000	$14,593	$1,459	$16,053
		Elevators - Major Mechanical/Electrical Systems	$280,079	$1,188,017	$1,528,482	$152,848	$1,681,330							All Cameras - Security	$33,831	$22,400	$32,689	$3,269	$35,958
		Electronic Door Locks - Security	$10,479	$7,350	$9,456	$946	$10,402												
	Subtotal	Subtotal					$4,246,343	Subtotal					$171,828	Subtotal					$201,301
	Improvement	Targeted Improvements Tillikum - MV Tillikum Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Tillikum - MV Tillikum Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Tillikum - MV Tillikum Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Tacoma	Preservation	Topside - Structural Preservation (Paint)	$6,029,615	$2,818,994	$4,381,370	$438,137	$4,819,507	Switchboards - Propulsion System	$3,000,254	$1,661,730	$2,750,652	$275,065	$3,025,717
		Sewage Tanks #1 - Structural Preservation (Paint)	$242,030	$147,088	$228,609	$22,861	$251,470	Auxiliary Switchboard / pwr dist - Major Mechanical/Electrical Systems	$1,868,693	$1,035,000	$1,713,229	$171,323	$1,884,552
		Sewage Tanks #2 - Structural Preservation (Paint)	$243,087	$148,502	$230,807	$23,081	$253,887	Radar 1A - Comm/Nav/Lifesaving Equip	$109,558	$48,000	$79,454	$7,945	$87,400
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$29,593	$18,000	$27,976	$2,798	$30,774	Radar 1B - Comm/Nav/Lifesaving Equip	$109,558	$48,000	$79,454	$7,945	$87,400
		Electronic Door Locks - Security	$27,366	$7,350	$11,424	$1,142	$12,566	GPS System - Comm/Nav/Lifesaving Equip	$27,083	$15,000	$24,829	$2,483	$27,312
								Sensors and Alarms - Security	$18,597	$9,000	$14,898	$1,490	$16,387
	Subtotal	Subtotal					$5,368,203	Subtotal					$5,128,768
	Improvement	Targeted Improvements Tacoma - MV Tacoma Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Tacoma - MV Tacoma Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000
Tillikum	Preservation	Topside - Structural Preservation (Paint)	$3,572,322	$1,795,602	$2,790,782	$279,078	$3,069,860	Hull (Paint) - Structural Preservation (Paint)	$620,540	$410,000	$678,671	$67,867	$746,538
		Sewage Tanks #1 - Structural Preservation (Paint)	$125,908	$186,689	$290,158	$29,016	$319,174						
		Electronic Door Locks - Security	$12,771	$7,350	$11,424	$1,142	$12,566						
	Subtotal	Subtotal					$3,401,599	Subtotal					$746,538
	Improvement	Targeted Improvements Tillikum - MV Tillikum Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Tillikum - MV Tillikum Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Walla Walla	Preservation	Topside - Structural Preservation (Paint)	$2,251,000	$2,450,708	$2,610,063	$130,503	$2,740,566	Hull (Paint) - Structural Preservation (Paint)	$844,000	$715,000	$811,007	$81,101	$892,108	Wet Spaces - Steel Replacement	$624,628	$497,270	$600,718	$60,072	$660,789
		Saltwater Piping - Piping Replacement	$100,000	$497,270	$529,604	$26,480	$556,085	Machinery Spaces - Structural Preservation (Paint)	$1,093,000	$2,039,995	$2,313,918	$231,392	$2,545,309	Rudder Number Two End - Propulsion System	$524,155	$377,000	$455,428	$45,543	$500,971
		Bilge Piping - Piping Replacement	$239,000	$231,000	$246,021	$12,301	$258,322	Bilges - Structural Preservation (Paint)	$690,000	$619,466	$702,645	$70,265	$772,910	Radar 2A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Sewage / Soil System Piping - Piping Replacement	$100,000	$497,270	$529,604	$26,480	$556,085	Voids - Structural Preservation (Paint)	$682,000	$612,677	$694,945	$69,494	$764,439	Radar 2B - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Potable Water Piping - Piping Replacement	$89,000	$736,570	$784,465	$39,223	$823,688	Potable Water Tanks #1 - Structural Preservation (Paint)	$62,000	$128,702	$145,984	$14,598	$160,582	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$196,558	$84,000	$101,475	$10,147	$111,622
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$450,000	$706,022	$751,930	$37,597	$789,527	Sewage Tanks #1 - Structural Preservation (Paint)	$62,000	$128,702	$145,984	$14,598	$160,582	Sensors and Alarms - Security	$9,697	$6,375	$7,701	$770	$8,471
		Gyrocompass - Comm/Nav/Lifesaving Equip	$55,000	$53,000	$56,446	$2,822	$59,269	Sprinkler System - Piping Replacement	$262,000	$237,000	$268,823	$26,882	$295,706	AC Unit Datacenter - Security	$12,928	$8,500	$10,268	$1,027	$11,295
		Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$80,000	$99,002	$105,440	$5,272	$110,711	Firemain Piping/Manifolds - Piping Replacement	$272,000	$244,000	$276,763	$27,676	$304,440						
		AIS System - Comm/Nav/Lifesaving Equip	$36,000	$20,000	$21,300	$1,065	$22,366	Heating System Piping - Piping Replacement	$235,000	$210,448	$238,706	$23,871	$262,577						
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Heating Boilers #1 - Major Mechanical/Electrical Systems	$64,000	$56,573	$64,169	$6,417	$70,586						
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Potable Water Tanks #1 - Steel Replacement	$105,000	$454,840	$515,914	$51,591	$567,506						
		Electronic Door Locks - Security	$13,904	$16,800	$17,892	$895	$18,787	Potable Water Tanks #2 - Steel Replacement	$105,000	$454,840	$515,914	$51,591	$567,506						
								Sewage Tanks #2 - Steel Replacement	$105,000	$454,840	$515,914	$51,591	$567,506						
								Heating Boilers #2 - Major Mechanical/Electrical Systems	$61,000	$56,573	$64,169	$6,417	$70,586						
								Potable Water Tanks #2 - Structural Preservation (Paint)	$98,000	$209,317	$237,423	$23,742	$261,166						
								Sewage Tanks #2 - Structural Preservation (Paint)	$62,000	$128,702	$145,984	$14,598	$160,582						
								GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716						
								Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,000	$20,000	$22,686	$2,269	$24,954						
								All Cameras - Security	$34,610	$27,600	$31,306	$3,131	$34,437						
	Subtotal						$5,957,770	Subtotal					$8,502,196	Subtotal					$1,420,717
	Improvement	Targeted Improvements Walla Walla - MV Walla Walla Impr Dockside (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Walla Walla - MV Walla Walla Impr Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Walla Walla - MV Walla Walla Impr Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$301,000
Wenatchee	Preservation	Passenger spaces - Passenger and Crew Spaces	$6,344,000	$9,079,843	$9,670,251	$483,513	$10,153,763	Auto Deck - Steel Replacement	$1,331,000	$1,599,716	$1,814,520	$181,452	$1,995,972	Radar 1A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Crew's quarters - Passenger and Crew Spaces	$390,000	$1,279,664	$1,362,873	$68,144	$1,431,017	Propulsion Controls - Propulsion System	$7,064,000	$6,327,990	$7,177,688	$717,769	$7,895,457	Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$170,818	$84,000	$101,475	$10,147	$111,622
		Galley - Passenger and Crew Spaces	$314,000	$1,831,243	$1,950,318	$97,516	$2,047,834	Temp Emergency Power System - Comm/Nav/Lifesaving Equip	$170,000	$318,000	$360,700	$36,070	$396,770	Radar 1B - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
		Wet Spaces - Steel Replacement	$95,000	$571,946	$609,136	$30,457	$639,593	Gyrocompass - Comm/Nav/Lifesaving Equip	$55,000	$49,000	$55,580	$5,558	$61,137	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$54,959	$123,045	$148,642	$14,864	$163,506
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$52,000	$230,531	$245,521	$12,276	$257,797	Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404	Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$170,818	$84,000	$101,475	$10,147	$111,622
		Radar 2A - Comm/Nav/Lifesaving Equip	$59,000	$48,000	$51,121	$2,556	$53,677	Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404	GPS System - Comm/Nav/Lifesaving Equip	$301,000	$16,800	$20,295	$2,029	$22,324
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404						
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$47,000	$42,000	$47,640	$4,764	$52,404						
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,000	$20,000	$22,686	$2,269	$24,954						
								All Cameras - Security	$46,400	$46,400	$52,630	$5,263	$57,893						
	Subtotal						$14,628,412	Subtotal					$10,641,797	Subtotal					$536,643
	Improvement	Targeted Improvements Wenatchee - MV Wenatchee Improvement Dockside (11-13)	$263,000	$263,000	$263,000	$0	$263,000	Targeted Improvements Wenatchee - MV Wenatchee Improvement Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Wenatchee - MV Wenatchee Improvement Future Placeholder		$0	$0	$0	$0
	Subtotal						$263,000	Subtotal					$282,000	Subtotal					$0

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Walla Walla	Preservation	Passenger spaces - Passenger and Crew Spaces	$7,506,104	$6,848,069	$8,810,604	$881,060	$9,691,665	Topside - Structural Preservation (Paint)	$4,578,491	$2,450,708	$3,358,061	$335,806	$3,693,867	Hull (Paint) - Structural Preservation (Paint)	$1,276,735	$715,000	$1,043,428	$104,343	$1,147,771
		Auto Deck - Steel Replacement	$1,004,055	$1,726,000	$2,220,641	$222,064	$2,442,705	Sewage Tanks #1 - Structural Preservation (Paint)	$100,406	$128,702	$176,353	$17,635	$193,988	PA System - Comm/Nav/Lifesaving Equip	$359,346	$234,000	$341,485	$34,149	$375,634
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$179,673	$182,446	$234,732	$23,473	$258,205	Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$219,835	$234,208	$320,921	$32,092	$353,014	Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$152,194	$99,002	$144,478	$14,448	$158,925
		Radar 1A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$61,756	$6,176	$67,932	Sewage Tanks #2 - Structural Preservation (Paint)	$100,406	$128,702	$176,353	$17,635	$193,988	AIS System - Comm/Nav/Lifesaving Equip	$35,935	$20,000	$29,187	$2,919	$32,105
		Radio System - Comm/Nav/Lifesaving Equip	$53,902	$40,000	$51,463	$5,146	$56,610							Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
		Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$177,559	$84,000	$108,073	$10,807	$118,880							All Cameras - Security	$42,443	$27,600	$40,278	$4,028	$44,306
		Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$61,756	$6,176	$67,932												
		Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$53,902	$40,000	$51,463	$5,146	$56,610												
		Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$53,902	$40,000	$51,463	$5,146	$56,610												
		Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$53,902	$40,000	$51,463	$5,146	$56,610												
		Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$53,902	$40,000	$51,463	$5,146	$56,610												
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$23,158	$2,316	$25,474												
		Electronic Door Locks - Security	$16,397	$16,800	$21,615	$2,161	$23,776												
		Hirsch Hardware - Security	$25,664	$18,000	$23,158	$2,316	$25,474												
	Subtotal	Subtotal					$13,005,091	Subtotal					$4,434,856	Subtotal					$1,774,794
	Improvement	Targeted Improvements Walla Walla - MV Walla Walla Impr Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Walla Walla - MV Walla Walla Impr Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Walla Walla - MV Walla Walla Impr Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000
Wenatchee	Preservation	Topside - Structural Preservation (Paint)	$4,609,141	$2,818,994	$3,626,868	$362,687	$3,989,555	Oil Fired Hot Water Heaters #1 - Major Mechanical/Electrical Systems	$102,519	$70,715	$96,897	$9,690	$106,586	Hull - Steel Replacement	$2,192,011	$2,515,000	$3,670,239	$367,024	$4,037,263
		Hull (Paint) - Structural Preservation (Paint)	$684,871	$765,000	$984,235	$98,424	$1,082,659	Radio System - Comm/Nav/Lifesaving Equip	$58,130	$40,000	$54,810	$5,481	$60,291	Rudder Number One End - Propulsion System	$619,343	$377,000	$550,171	$55,017	$605,188
		Bilges - Structural Preservation (Paint)	$959,665	$712,810	$917,089	$91,709	$1,008,798	Oil Fired Hot Water Heaters #2 - Major Mechanical/Electrical Systems	$102,519	$70,715	$96,897	$9,690	$106,586	Rudder Number Two End - Propulsion System	$619,343	$377,000	$550,171	$55,017	$605,188
		Voids - Structural Preservation (Paint)	$300,160	$706,022	$908,355	$90,836	$999,191	Electronic Door Locks - Security	$24,876	$16,800	$23,020	$2,302	$25,322	Radar 2A - Comm/Nav/Lifesaving Equip	$87,723	$48,000	$70,048	$7,005	$77,053
		Potable Water Tanks #1 - Structural Preservation (Paint)	$159,592	$240,432	$309,336	$30,934	$340,269	Satellite Compass System 2 - Comm/Nav/Lifesaving Equip	$28,536	$20,000	$27,405	$2,740	$30,145	Radar 2B - Comm/Nav/Lifesaving Equip	$87,723	$48,000	$70,048	$7,005	$77,053
		Sewage Tanks #1 - Structural Preservation (Paint)	$109,918	$148,502	$191,060	$19,106	$210,166	Hirsch Hardware - Security	$19,024	$18,000	$24,664	$2,466	$27,131	AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
		Saltwater Piping - Piping Replacement	$249,428	$431,081	$554,621	$55,462	$610,083							Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$20,000	$29,187	$2,919	$32,105
		Firemain Piping/Manifolds - Piping Replacement	$230,404	$195,000	$250,884	$25,088	$275,972							All Cameras - Security	$71,353	$46,400	$67,713	$6,771	$74,485
		Sewage / Soil System Piping - Piping Replacement	$200,811	$571,946	$735,856	$73,586	$809,441												
		Steering #1 - Major Mechanical/Electrical Systems	$788,447	$549,000	$706,334	$70,633	$776,967												
		Elevators - Major Mechanical/Electrical Systems	$768,317	$726,953	$935,285	$93,528	$1,028,813												
		HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$1,260,691	$884,225	$1,137,628	$113,763	$1,251,391												
		PA system - Comm/Nav/Lifesaving Equip	$272,680	$249,000	$320,359	$32,036	$352,395												
		Steering #2 - Major Mechanical/Electrical Systems	$788,447	$549,000	$706,334	$70,633	$776,967												
		Potable Water Tanks #2 - Structural Preservation (Paint)	$159,592	$240,432	$309,336	$30,934	$340,269												
		Sewage Tanks #2 - Structural Preservation (Paint)	$109,918	$148,502	$191,060	$19,106	$210,166												
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$23,158	$2,316	$25,474												
		Sensors and Alarms - Security	$10,886	$10,300	$13,252	$1,325	$14,577												
		AC Unit Datacenter - Security	$14,268	$8,500	$10,936	$1,094	$12,030												
		AC Unit Datacenter - Security	$8,984	$8,500	$10,936	$1,094	$12,030												
	Subtotal	Subtotal					$14,127,213	Subtotal					$356,061	Subtotal					$5,540,441
	Improvement	Targeted Improvements Wenatchee - MV Wenatchee Improvement Future	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Wenatchee - MV Wenatchee Improvement Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Wenatchee - MV Wenatchee Improvement Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Walla Walla	Preservation	Potable Water Tanks #1 - Structural Preservation (Paint)	$139,724	$209,317	$325,327	$32,533	$357,860	Sewage Tanks #1 - Structural Preservation (Paint)	$137,000	$128,702	$213,040	$21,304	$234,344
		Crew's quarters - Passenger and Crew Spaces	$398,451	$1,023,391	$1,590,587	$159,059	$1,749,645	Radar 2A - Comm/Nav/Lifesaving Equip	$74,465	$48,000	$79,454	$7,945	$87,400
		Solariums - Steel Replacement	$1,941,525	$2,455,801	$3,816,884	$381,688	$4,198,572	Radar 2B - Comm/Nav/Lifesaving Equip	$74,465	$48,000	$79,454	$7,945	$87,400
		Sewage Tanks #1 - Steel Replacement	$343,493	$454,840	$706,927	$70,693	$777,619	Sewage Tanks #2 - Structural Preservation (Paint)	$152,032	$128,702	$213,040	$21,304	$234,344
		Saltwater Piping - Piping Replacement	$614,059	$373,377	$580,314	$58,031	$638,346	Sensors and Alarms - Security	$11,510	$6,375	$10,552	$1,055	$11,608
		Bilge Piping - Piping Replacement	$380,484	$231,000	$359,028	$35,903	$394,930	AC Unit Datacenter - Security	$15,347	$8,500	$14,070	$1,407	$15,477
		Sewage / Soil System Piping - Piping Replacement	$818,041	$497,270	$772,873	$77,287	$850,160						
		Steering #1 - Major Mechanical/Electrical Systems	$902,593	$549,000	$853,273	$85,327	$938,601						
		Steering #2 - Major Mechanical/Electrical Systems	$902,593	$549,000	$853,273	$85,327	$938,601						
		Auxiliary Diesel Generator Vital - Major Mechanical/Electrical Systems	$500,971	$303,000	$470,932	$47,093	$518,025						
		Potable Water Tanks #2 - Structural Preservation (Paint)	$139,724	$209,317	$325,327	$32,533	$357,860						
		GPS System - Comm/Nav/Lifesaving Equip	$24,309	$18,000	$27,976	$2,798	$30,774						
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$29,593	$18,000	$27,976	$2,798	$30,774						
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$32,764	$20,000	$31,085	$3,108	$34,193						
		Electronic Door Locks - Security	$19,982	$16,800	$26,111	$2,611	$28,722						
	Subtotal	Subtotal					$11,844,682	Subtotal					$670,571
	Improvement	Targeted Improvements Walla Walla - MV Walla Walla Impr Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Walla Walla - MV Walla Walla Impr Future	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal						$394,000	Subtotal					$394,000
Wenatchee	Preservation	Topside - Structural Preservation (Paint)	$6,028,558	$2,818,994	$4,381,370	$438,137	$4,819,507	Hull (Paint) - Structural Preservation (Paint)	$919,271	$765,000	$1,266,300	$126,630	$1,392,930
		Sewage Tanks #1 - Structural Preservation (Paint)	$137,837	$148,502	$230,807	$23,081	$253,887	Crew's quarters - Passenger and Crew Spaces	$577,480	$1,279,664	$2,118,220	$211,822	$2,330,042
		Passenger spaces - Passenger and Crew Spaces	$9,393,668	$9,079,843	$14,112,180	$1,411,218	$15,523,398	Galley - Passenger and Crew Spaces	$464,945	$1,831,243	$3,031,246	$303,125	$3,334,370
		Wet Spaces - Steel Replacement	$437,557	$571,946	$888,937	$88,894	$977,830	Radar 1A - Comm/Nav/Lifesaving Equip	$86,664	$48,000	$79,454	$7,945	$87,400
		Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$377,313	$230,531	$358,299	$35,830	$394,128	Radar 1B - Comm/Nav/Lifesaving Equip	$86,664	$48,000	$79,454	$7,945	$87,400
		Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$202,925	$123,045	$191,240	$19,124	$210,364	GPS System - Comm/Nav/Lifesaving Equip	$27,083	$15,000	$24,829	$2,483	$27,312
		Sewage Tanks #2 - Structural Preservation (Paint)	$137,837	$148,502	$230,807	$23,081	$253,887						
		Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$29,593	$18,000	$27,976	$2,798	$30,774						
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equ	$32,764	$20,000	$31,085	$3,108	$34,193						
	Subtotal	Subtotal					$22,497,969	Subtotal					$7,259,454
	Improvement	Targeted Improvements Wenatchee - MV Wenatchee Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Wenatchee - MV Wenatchee Improvement Future	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Vessel		Biennium End	2013					Biennium End	2015					Biennium End	2017				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Yakima	Preservation	Radio System - Comm/Nav/Lifesaving Equip	$38,000	$37,000	$39,406	$1,970	$41,376	Machinery Spaces - Structural Preservation (Paint)	$1,094,000	$1,911,011	$2,167,614	$216,761	$2,384,376	Hull (Paint) - Structural Preservation (Paint)	$533,735	$650,000	$785,220	$78,522	$863,742
		Gyrocompass - Comm/Nav/Lifesaving Equip	$57,000	$54,000	$57,511	$2,876	$60,387	Voids - Structural Preservation (Paint)	$325,000	$573,642	$650,668	$65,067	$715,735	Sewage Tanks #1 - Structural Preservation (Paint)	$105,690	$120,217	$145,226	$14,523	$159,748
		AIS System - Comm/Nav/Lifesaving Equip	$29,000	$20,000	$21,300	$1,065	$22,366	Bilge Piping - Piping Replacement	$266,000	$357,000	$404,937	$40,494	$445,430	Passenger spaces - Passenger and Crew Spaces	$5,128,079	$8,426,434	$10,179,396	$1,017,940	$11,197,336
		Landing Radars - Comm/Nav/Lifesaving Equip	$19,000	$10,000	$10,650	$533	$11,183	HVAC Vent Systems / Controls - Major Mechanical/Electrical Systems	$444,000	$700,000	$793,993	$79,399	$873,393	Crew's quarters - Passenger and Crew Spaces	$443,898	$958,899	$1,158,380	$115,838	$1,274,218
								Heating Boilers #1 - Major Mechanical/Electrical Systems	$59,000	$53,743	$60,959	$6,096	$67,055	Galley - Passenger and Crew Spaces	$879,341	$1,340,761	$1,619,681	$161,968	$1,781,649
								Heating Boilers #2 - Major Mechanical/Electrical Systems	$59,000	$53,743	$60,959	$6,096	$67,055	Wet Spaces - Steel Replacement	$498,857	$594,008	$717,580	$71,758	$789,338
								GPS System - Comm/Nav/Lifesaving Equip	$16,000	$15,000	$17,014	$1,701	$18,716	Saltwater Piping - Piping Replacement	$217,721	$327,553	$395,694	$39,569	$435,264
								Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$22,000	$20,000	$22,686	$2,269	$24,954	Heating System Piping - Piping Replacement	$214,551	$169,717	$205,023	$20,502	$225,526
								Electronic Doors - Security	$7,350	$7,350	$8,337	$834	$9,171	Sewage / Soil System Piping - Piping Replacement	$295,932	$407,321	$492,057	$49,206	$541,262
														Potable Water Piping - Piping Replacement	$498,857	$594,008	$717,580	$71,758	$789,338
														Lighting Fixtures Interior - Major Mechanical/Electrical Systems	$110,975	$172,545	$208,440	$20,844	$229,284
														PA system - Comm/Nav/Lifesaving Equip	$355,676	$255,000	$308,048	$30,805	$338,853
														Rescue Boats #1 - Comm/Nav/Lifesaving Equip	$114,659	$84,000	$101,475	$10,147	$111,622
														Radar 2A - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
														Radar 2B - Comm/Nav/Lifesaving Equip	$79,559	$48,000	$57,986	$5,799	$63,784
														Marine Escape Slides #1 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #2 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #3 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Marine Escape Slides #4 - Comm/Nav/Lifesaving Equip	$51,479	$37,000	$44,697	$4,470	$49,167
														Sewage Tanks #2 - Structural Preservation (Paint)	$105,690	$120,217	$145,226	$14,523	$159,748
														Rescue Boats #2 - Comm/Nav/Lifesaving Equip	$114,659	$84,000	$101,475	$10,147	$111,622
														Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$24,570	$18,000	$21,745	$2,174	$23,919
														All Cameras - Security	$45,864	$39,200	$47,355	$4,735	$52,090
	Subtotal	Subtotal					$135,311	Subtotal					$4,605,885	Subtotal					$19,408,796
	Improvement	Targeted Improvements Yakima - MV Yakima Improvement Drydock (11-13)	$4,103,000	$4,103,000	$4,103,000	$0	$4,103,000	Targeted Improvements Yakima - MV Yakima Improvement Future Placeholder	$282,000	$282,000	$282,000	$0	$282,000	Targeted Improvements Yakima - MV Yakima Improvement Future Placeholder	$301,000	$301,000	$301,000	$0	$301,000
	Subtotal	Subtotal					$4,103,000	Subtotal					$282,000	Subtotal					$301,000

Vessel		Biennium End	2019					Biennium End	2021					Biennium End	2023				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Yakima	Preservation	Topside - Structural Preservation (Paint)	$4,280,445	$2,292,873	$2,949,970	$294,997	$3,244,967	Bilges - Structural Preservation (Paint)	$837,065	$582,128	$797,656	$79,766	$877,421	Sewage Tanks #1 - Structural Preservation (Paint)	$142,682	$120,217	$175,437	$17,544	$192,981
		Hull - Steel Replacement	$919,503	$1,990,000	$2,560,299	$256,030	$2,816,329	Potable Water Tanks #1 - Structural Preservation (Paint)	$200,811	$196,588	$269,373	$26,937	$296,310	Generators/Alternators #1 - Propulsion System	$595,035	$415,000	$605,626	$60,563	$666,189
		Auto Deck - Steel Replacement	$498,857	$594,008	$764,240	$76,424	$840,664	Shelter Deck - Steel Replacement	$347,720	$3,146,547	$4,311,528	$431,153	$4,742,681	Rudder Number Two End - Propulsion System	$561,214	$365,000	$532,659	$53,266	$585,925
		Sanitary Fresh Water Flushing - Major Mechanical/Electrical Systems	$164,876	$220,632	$283,861	$28,386	$312,247	Sewage Tanks #1 - Steel Replacement	$169,104	$425,989	$583,708	$58,371	$642,078	Radio System - Comm/Nav/Lifesaving Equip	$57,073	$37,000	$53,996	$5,400	$59,395
		Lighting Fixtures Exterior - Major Mechanical/Electrical Systems	$97,161	$91,930	$118,276	$11,828	$130,103	Sprinkler System - Piping Replacement	$339,265	$236,000	$323,377	$32,338	$355,715	Generators/Alternators #2 - Propulsion System	$595,035	$415,000	$605,626	$60,563	$666,189
		AC Unit Datacenter - Security	$11,548	$8,500	$10,936	$1,094	$12,030	Firemain Piping/Manifolds - Piping Replacement	$289,591	$201,000	$275,418	$27,542	$302,960	Generators/Alternators #3 - Propulsion System	$595,035	$415,000	$605,626	$60,563	$666,189
		Sensors and Alarms - Security	$9,089	$6,375	$8,202	$820	$9,022	Steering #1 - Major Mechanical/Electrical Systems	$748,285	$520,000	$712,525	$71,253	$783,778	Generators/Alternators #4 - Propulsion System	$595,035	$415,000	$605,626	$60,563	$666,189
								Radar 1A - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349	Sewage Tanks #2 - Structural Preservation (Paint)	$142,682	$120,217	$175,437	$17,544	$192,981
								Potable Water Tanks #1 - Steel Replacement	$269,510	$425,989	$583,708	$58,371	$642,078	AIS System - Comm/Nav/Lifesaving Equip	$43,333	$20,000	$29,187	$2,919	$32,105
								Potable Water Tanks #2 - Steel Replacement	$269,510	$425,989	$583,708	$58,371	$642,078	Draft Indicating Systems - Comm/Nav/Lifesaving Equip	$22,195	$18,000	$26,268	$2,627	$28,895
								Sewage Tanks #2 - Steel Replacement	$169,104	$425,989	$583,708	$58,371	$642,078	Landing Radars - Comm/Nav/Lifesaving Equip	$28,536	$10,000	$14,593	$1,459	$16,053
								Steering #2 - Major Mechanical/Electrical Systems	$748,285	$520,000	$712,525	$71,253	$783,778						
								Radar 1B - Comm/Nav/Lifesaving Equip	$81,381	$48,000	$65,772	$6,577	$72,349						
								Potable Water Tanks #2 - Structural Preservation (Paint)	$200,811	$196,588	$269,373	$26,937	$296,310						
								Electronic Doors - Security	$10,883	$7,350	$10,071	$1,007	$11,078						
								Hirsch Hardware - Security	$19,990	$13,500	$18,498	$1,850	$20,348						
	Subtotal	Subtotal					$7,365,362	Subtotal					$11,183,390	Subtotal					$3,773,090
	Improvement	Targeted Improvements Yakima - MV Yakima Improvement Future Placeholder	$322,000	$322,000	$322,000	$0	$322,000	Targeted Improvements Yakima - MV Yakima Improvement Future Placeholder	$344,000	$344,000	$344,000	$0	$344,000	Targeted Improvements Yakima - MV Yakima Improvement Future Placeholder	$368,000	$368,000	$368,000	$0	$368,000
	Subtotal	Subtotal					$322,000	Subtotal					$344,000	Subtotal					$368,000

Vessel		Biennium End	2025					Biennium End	2027				
	Activity	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal	Description	WSF 16 Year Plan Expenditure	LCCM Expenditure	Adjusted Expenditure	Contingency	Biennial Subtotal
Yakima	Preservation	Hull (Paint) - Structural Preservation (Paint)	$697,554	$650,000	$1,010,251	$101,025	$1,111,276	Radar 2A - Comm/Nav/Lifesaving Equip	$122,774	$48,000	$79,454	$7,945	$87,400
		Rudder Number One End - Propulsion System	$600,319	$365,000	$567,295	$56,729	$624,024	Radar 2B - Comm/Nav/Lifesaving Equip	$122,774	$48,000	$79,454	$7,945	$87,400
		Auxiliary Diesel Generator #1 - Major Mechanical/Electrical Systems	$781,895	$450,000	$699,404	$69,940	$769,345	Electronic Doors - Security	$13,271	$7,350	$12,166	$1,217	$13,383
		Temp Emergency Power System - Comm/Nav/Lifesaving Equip	$486,512	$280,000	$435,185	$43,518	$478,703						
		Auxiliary Diesel Generator #2 - Major Mechanical/Electrical Systems	$781,895	$450,000	$699,404	$69,940	$769,345						
		Auxiliary Diesel Generator Vital - Major Mechanical/Electrical Systems	$781,895	$450,000	$699,404	$69,940	$769,345						
		GPS System - Comm/Nav/Lifesaving Equip	$24,309	$15,000	$23,313	$2,331	$25,645						
		Satellite Compass System 1 - Comm/Nav/Lifesaving Equip	$32,764	$20,000	$31,085	$3,108	$34,193						
		All Cameras - Security	$53,860	$39,200	$60,926	$6,093	$67,018						
	Subtotal	Subtotal					$4,648,894	Subtotal					$188,182
	Improvement	Targeted Improvements Yakima - MV Yakima Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000	Targeted Improvements Yakima - MV Yakima Improvement Future Placeholder	$394,000	$394,000	$394,000	$0	$394,000
	Subtotal	Subtotal					$394,000	Subtotal					$394,000

Appendix D

Review and Assess the $120K Project Threshold
Established for Utilization of State Work Forces

Example of jobs estimated and refused because of price:

Quinault ADIS Install	$70,444
Anacortes EFS Mods (mod to terminal)	$100,295
Walla Walla Fan Room Abatement	$136,090
Klickitat Propulsion GenSet Replacement	$112,383
Pier 52 Ovhd Loading Preservation - Struct	$104,392

Example of jobs estimated close to threshold & awarded:

Job	Estimate	Actual
Anacortes Security Gates	$56,785	$38,110
JMII Video Display	$44,812	Tacoma - $50,159 Wenatchee - $40,956
Skagit Main Engine Replacement	$31,250 not including eng (& before change orders)	$57,399 not including engine
Flo Scan	$59,930	Hyak - $17,246 not complete Walla Walla - $44,791 Average of all - $43,069
Pier 52 Kiosk (cancelled prior to completion; awarded to vendor)	Structural – $43,472 Electrical – $13,288 Utilities - $74,204	$12,693 Labor $15,061 Labor $30,362 Labor $18,428 for all Material
Orcas Hoist Upgrade	$51,000	$34,869

Appendix E

Comparisons Between EH and Commercial SYs

Eagle Harbor Maintenance Facility Management Labor & Non-Labor Costs, FY 2010

LABOR

Activity	Org Code	Org Code Name	Object Code	Object Code Name	Expenses
X	367610	EAGLE HARBOR MAINTENANCE FAC.	TA10	WORK TIME CHARGES - OVERTIME	2,261
X	367610	EAGLE HARBOR MAINTENANCE FAC.	TA11	WORK TIME CHARGES - REGULAR	441,488
				FY 2010 Total--Labor	**443,748**

NON-LABOR

Activity	Org Code	Org Code Name	Object Code	Object Code Name	Expenses
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EA01	SUPPLIES & MATERIALS	82,959
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EA04	INFO TECH HARDWARE NON INVENTO	65
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EA08	TELEPHONES NON-INVENT/NON-CAP	1,718
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EA79	INVENTORY ISSUES-DEBIT	13,295
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EA80	INVENTORY ISSUES-CLEANING SUPP	191
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EA81	INVENTORY ISSUES-RESTROOM SUPP	32
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EA82	INVENTORY ISSUES-SAFETY SUPP	22
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EB01	COMMUNICATIONS - TELEPHONE	9,342
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EB02	COMMUNICATIONS - OTHER	7
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EB03	COMMUNICATIONS-CELLULAR PHONES	6,268
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EC01	UTILITIES - GENERAL	28,866
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EC05	UTILITIES-ELECTRICITY	190,385
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EC09	UTILITIES - WATER	13,990
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EE01	GEN REPAIR/ALTERATIONS/MAINT	275
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EG01	TRAINING REGISTRATION FEES	673
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EG02	CONFERENCE/TECH MEETS/SEMINARS	228
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EG07	TRAINING PROV BY OTHER GOVT	1,585
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EG10	PROFESSIONAL AND OCCUP LICENSE	80
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EH02	TEF EQUIP RENTAL-OPER TEF EQUP	21,375
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EH03	RENT & LEASES FURN AND EQUIP	1,623
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EH07	RENT & LEASES - COPY MACHINES	6,359
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ER06	OTHER SERVICES	3,581
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ER13	SVCS RENDERED BY TEF TO MVF	4,029
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ER16	SVCS RENDERED BY OTHER GOVT	23,131
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ES05	OUTSIDE REPAIRS FERRIES	272
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ES67	MOTOR FUEL - GASOLINE	184
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ES68	MOTOR FUEL - DIESEL	924
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ES71	TEF RENTAL EQUIP REPAIR PARTS	265
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ES72	BATTERIES - WSF ONLY	334
X	367610	EAGLE HARBOR MAINTENANCE FAC.	ES74	FERRIES PARTS & SUPPLIES	21,142
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EY02	PURCHASE/LICENSE-IT SOFTWARE	1,823
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EZ01	OTHER GOODS AND SERVICES	300
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EZ02	ADVERTISING	25
X	367610	EAGLE HARBOR MAINTENANCE FAC.	EZ10	PROTECTIVE & SAFETY CLOTHING	1,314
X	367610	EAGLE HARBOR MAINTENANCE FAC.	GA01	IN-STATE SUBSISTENCE/LODGING	4,731
X	367610	EAGLE HARBOR MAINTENANCE FAC.	GA02	IN-STATE SUBSISTENCE TAXABLE	18
X	367610	EAGLE HARBOR MAINTENANCE FAC.	GC01	PRIVATE AUTOMOBILE MILEAGE	333
X	367610	EAGLE HARBOR MAINTENANCE FAC.	GD01	OTHER TRAVEL EXPENSES	55
X	367610	EAGLE HARBOR MAINTENANCE FAC.	GN02	TEF EQUIP RENTAL-PER W/EQUIP	4,276
X	367610	EAGLE HARBOR MAINTENANCE FAC.	JA01	EQUIPMENT-NON INV/NON CAPITAL	2,209
X	367610	EAGLE HARBOR MAINTENANCE FAC.	JA03	VESSEL TOOLS-NON INVENTORIED	14,806
X	367610	EAGLE HARBOR MAINTENANCE FAC.	JB01	IT SOFTWARE INVENTORIED	3,316
X	367610	EAGLE HARBOR MAINTENANCE FAC.	JC02	CAPITALIZED EQUIP DONATED TEF	3,928
X	367610	EAGLE HARBOR MAINTENANCE FAC.	TE73	OSC PRINTING SERVICES	33
				FY 2010 Total-- Non-Labor	**470,369**

Grand Total Org Code 367610 EH Maint Facilty Office Expenses (Labor and Non-Labor) **914,118**

FY 2010 Worked Hours for Eagle Harbor Shops 202,391

Overhead / Hour ($ / hour) based on Eagle Harbor Maintenance Facility Mgmt Costs **$4.52**

Eagle Harbor Vessel Maintenance Non-Labor Expenses, FY 2010

Activity	Work Op Class	Org Code	Org Code Name	Object Code	Object Code Name	Expenses
				EA01 Total	SUPPLIES & MATERIALS	65,783
				EA79 Total	INVENTORY ISSUES-DEBIT	16,163
				EA80 Total	INVENTORY ISSUES-CLEANING SUPP	357
				EA82 Total	INVENTORY ISSUES-SAFETY SUPP	107
				EC08 Total	HAZARDOUS MATERIAL DISPOSAL	6,715
				EH02 Total	TEF EQUIP RENTAL-OPER TEF EQUP	68
				ER18 Total	PRIVATE TESTING SERVICES	998
				ER66 Total	BUS AND SHUTTLE SERVICE	10
				ES05 Total	OUTSIDE REPAIRS FERRIES	3,907
				ES25 Total	INSPECTION FEES - WSF	25,543
				ES72 Total	BATTERIES - WSF ONLY	629
				ES74 Total	FERRIES PARTS & SUPPLIES	161,675
				EZ10 Total	PROTECTIVE & SAFETY CLOTHING	5,014
				GA01 Total	IN-STATE SUBSISTENCE/LODGING	327
				GB01 Total	IN-STATE AIR TRANSPORTATION	159
				GD01 Total	OTHER TRAVEL EXPENSES	16
				JA01 Total	EQUIPMENT-NON INV/NON CAPITAL	684
				JA03 Total	VESSEL TOOLS-NON INVENTORIED	697
				JA04 Total	EQUIP-INVENTORIED-NON CAPITAL	1,853
X	210	EH Shops			**FY 2010 Eagle Harbor Vsl Maint Non-Labor for Shops**	**290,703**
					FY 2010 Worked Hours for Eagle Harbor Shops for Vessel Maintenance	90,817
					Overhead/Hour ($ / hour) based on Vessel Maint Non-Labor Costs by EH Shops	**$3.20**

Note: Eagle Harbor non-labor expenses are those expenses charges to Eagle Harbor Shops and not directly to vessels

Eagle Harbor Hours Worked Data Used in Overhead Calculations

Activity	Work Op Class	Org Code	Org Code Name	Object Code	FY 2010 Hours
X	210	367611	ELECTRICAL SHOP	TA10	1,460
X	210	367611	ELECTRICAL SHOP	TA11	14,976
X	210	367611	ELECTRICAL SHOP	TA15	290
X	210	367612	PAINT SHOP	TA10	424
X	210	367612	PAINT SHOP	TA11	8,382
X	210	367612	PAINT SHOP	TA15	230
X	210	367612	PAINT SHOP	TA16	3
X	210	367613	CARPENTRY SHOP	TA10	380
X	210	367613	CARPENTRY SHOP	TA11	11,170
X	210	367613	CARPENTRY SHOP	TA15	45
X	210	367614	PIPE SHOP	TA10	1,121
X	210	367614	PIPE SHOP	TA11	12,462
X	210	367614	PIPE SHOP	TA15	817
X	210	367615	MACHINE SHOP	TA10	1,827
X	210	367615	MACHINE SHOP	TA11	14,688
X	210	367615	MACHINE SHOP	TA15	128
X	210	367616	SHEET METAL SHOP	TA10	326
X	210	367616	SHEET METAL SHOP	TA11	9,243
X	210	367616	SHEET METAL SHOP	TA15	202
X	210	367617	WELDING SHOP	TA10	638
X	210	367617	WELDING SHOP	TA11	6,687
X	210	367617	WELDING SHOP	TA15	151
X	210	367618	INSULATION SHOP	TA10	190
X	210	367618	INSULATION SHOP	TA11	4,877
X	210	367618	INSULATION SHOP	TA15	103
			Vessel Maint Hours Worked Eagle Harbor Shops		**90,817**
X	410	367611	ELECTRICAL SHOP	TA10	470
X	410	367611	ELECTRICAL SHOP	TA11	13,544
X	410	367611	ELECTRICAL SHOP	TA15	17
X	410	367612	PAINT SHOP	TA10	954
X	410	367612	PAINT SHOP	TA11	18,847
X	410	367612	PAINT SHOP	TA15	584
X	410	367613	CARPENTRY SHOP	TA10	949
X	410	367613	CARPENTRY SHOP	TA11	18,431
X	410	367613	CARPENTRY SHOP	TA15	351
X	410	367614	PIPE SHOP	TA10	1,209
X	410	367614	PIPE SHOP	TA11	14,587
X	410	367614	PIPE SHOP	TA15	236
X	410	367615	MACHINE SHOP	TA10	1,160
X	410	367615	MACHINE SHOP	TA11	15,342
X	410	367615	MACHINE SHOP	TA15	84
X	410	367616	SHEET METAL SHOP	TA10	302
X	410	367616	SHEET METAL SHOP	TA11	11,124
X	410	367616	SHEET METAL SHOP	TA15	7
X	410	367617	WELDING SHOP	TA10	190
X	410	367617	WELDING SHOP	TA11	7,956
X	410	367617	WELDING SHOP	TA15	4
X	410	367618	INSULATION SHOP	TA10	54
X	410	367618	INSULATION SHOP	TA11	5,134
X	410	367618	INSULATION SHOP	TA15	41
			Terminal Maint Hours Worked Eagle Harbor Shops		**111,575**
			Total Hours Worked in Vsl and Term Maint for Eagle Harbor Shops		**202,391**

Item 7 - Comparable Work

	Work Description	Vessel	Work #	Additional Description	Labor Cost	Matl Cost
1	Main Engine Repack 40k	Klahowya	D71339, D71340	Repack #1 Main Engine, Repack #2 Main Engine	$13,148, $4,399	$22,245 $5,183
		Kitsap	330546, 330547	Rebuild #1 Main Engine, Rebuild #2 Main Engine	$11,545, $10,279	$18,325, $21,355
		Cathlamet	D81844 D81845	40K Hour Overhaul Mn Eng #1 40K Overhaul Man Eng #2	$23,784, $19,713	$16,597, $14,966
2	24V Battery Charger Upgrade	Wenatchee	D87191	24V System for Nav	$6,290	$9,165
		Puyallup	D87192	24V System for Nav	$5,596	$9,165
3	Key control System (1)	Kittitas	D76658	Key Control Box Install	$21,433	*$8,013
		Chelan	D77928	Key Control Sys Install	$20,725	$5,409
		Tillikum	D80212	Key Control Sys Install	$20,476	$4,688
4	UPS Replacement & Electronic Upgrade	Chelan	D77935	UPS Upgrade	$17,713	$5,581
5	Clean out all exterior and interior drains	Chelan	D76876 & D78785	Lay up	$3,424	0
		Klahowya	D90729 & D90727	Lay up	$1,182	0
6	Window Wiper Upgrade	Chelan	D89528	Wiper System Supplied	$15,730	0
7	ADIS Installation over 60K threshold (2)	Various	Various	PMs/Inspect/Repair/Replace	$2,123	$3,361

Notes:

*Materials for multiple jobs

(1) EH provided vibration isolators, Cat 5e cable to some comml yard installs

(2) EH Maintenance only. Average cost for all ADIS Activities per vessel, includes prorated cost for replacing sensors every 5 years

ITEM 3

Kitsap Dec, 2009
330546 **Labor**
REBUILD MN ENG #1

			CODE		
WO#	org_code_name	Data	01	37	Grand Total
FV8303	INSULATION SHOP	Sum of Hrs	10	6	16
		Sum of Dollars	$ 437.32	$ -	$ 437.32
	MACHINE SHOP	Sum of Hrs	266		266
		Sum of Dollars	$11,107.20		$11,107.20
Total Sum of Hrs			276	6	282
Total Sum of Dollars			$11,544.52	$ -	$11,544.52

Material $ 18,324.96
Total Labor & Matl $ 29,869.48

Kitsap Dec, 2009
330547 **Labor**
REBUILD MN ENG #2

			CODE				
WO#	org_code_name	Data	01	02	29	37	Grand Total
FV8303	INSULATION SHOP	Sum of Hrs	4			3	7
		Sum of Dollars	$ 177.10			$ -	$ 177.10
	MACHINE SHOP	Sum of Hrs	211.5	14.5	1		227
		Sum of Dollars	$ 9,172.75	$ 869.27	$ 59.95		$10,101.97
Total Sum of Hrs			215.5	14.5	1	3	234
Total Sum of Dollars			$ 9,349.85	$ 869.27	$ 59.95	$ -	$10,279.07

Material $ 21,355.04
Total Labor & Matl $ 31,634.11

Kitsap Oct & Dec, 2007 *(REBUILD)*
330463 **Labor**

			CODE		
WO#	org_code_name	Data	01	19	Grand Total
FV8303	MACHINE SHOP	Sum of Hrs	47	3	50
		Sum of Dollars	$ 2,014.97	$ 133.35	$ 2,148.32
Total Sum of Hrs			47	3	50
Total Sum of Dollars			$ 2,014.97	$ 133.35	$ 2,148.32

Material $ 3,425.00
Total Labor & Matl $ 5,573.32

Cathlamet Sept-Oct, 2009

D81844 Labor 40K HOUR OVERHAUL MN ENG #1

			CODE				
WO#	org_code_name	Data	01	02	29	37	Grand Total
FV8304	INSULATION SHOP	Sum of Hrs	4	3	2.5	5	14.5
		Sum of Dollars	$ 173.48	$ 186.04	$ 158.13	$ -	$ 517.65
	MACHINE SHOP	Sum of Hrs	517	9			526
		Sum of Dollars	$ 22,704.89	$ 561.95			$23,266.84
Total Sum of Hrs			521	12	2.5	5	540.5
Total Sum of Dollars			$ 22,878.37	$ 747.99	$ 158.13	$ -	$23,784.49

Material $16,597.36
Total Labor & Matl **$40,381.85**

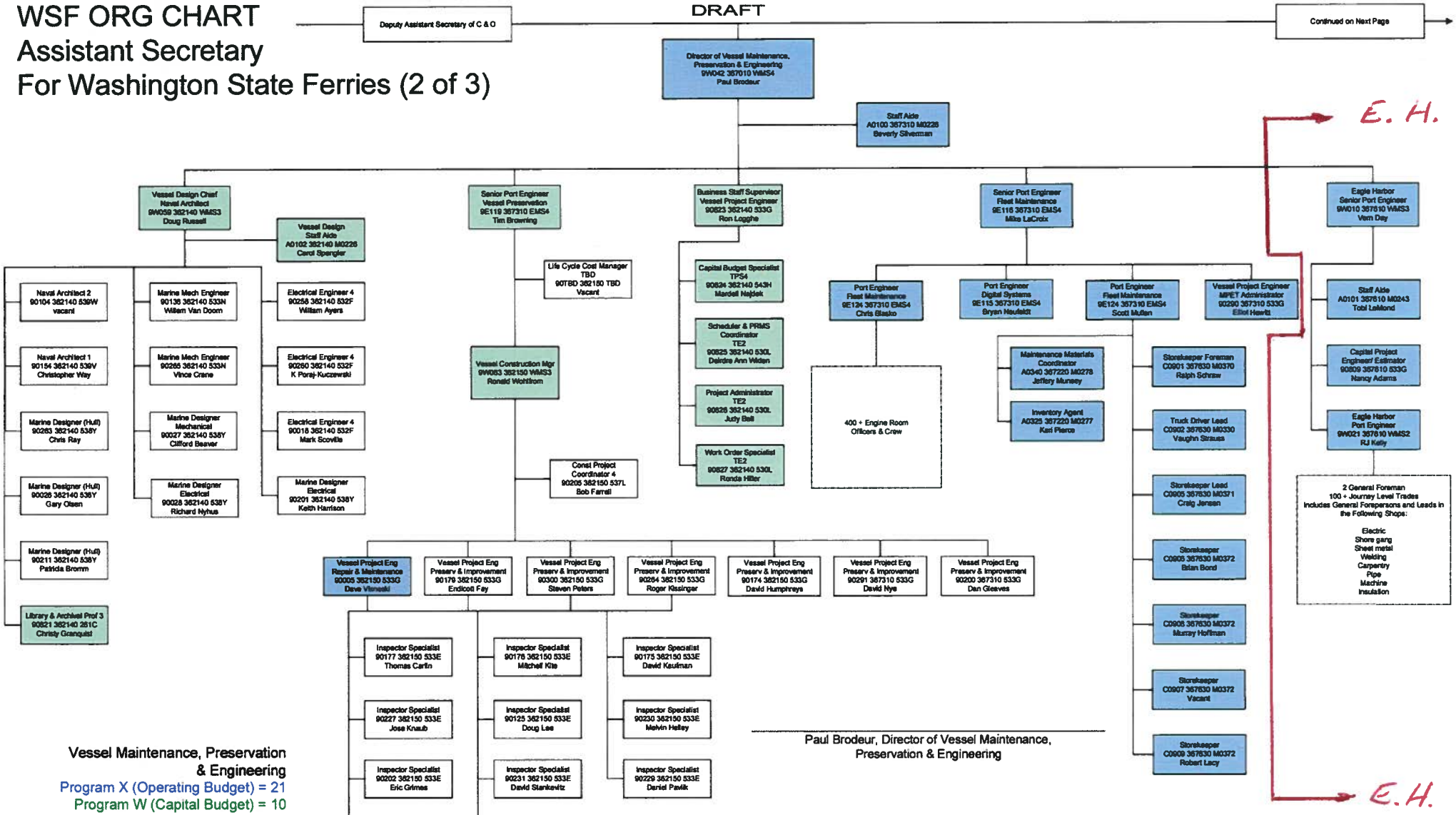
D81845 Labor 40K HOUR OVERHAUL MN ENG #2

			CODE					
WO#	org_code_name	Data	01	02	19	29	37	Grand Total
FV8304	INSULATION SHOP	Sum of Hrs	6.5	3		0.5	7	17
		Sum of Dollars	$ 285.52	$ 186.04		$ 29.97	$ -	$ 501.53
	MACHINE SHOP	Sum of Hrs	395	37	3			435
		Sum of Dollars	$ 16,914.81	$2,158.60	$ 137.73			$19,211.14
Total Sum of Hrs			401.5	40	3	0.5	7	452
Total Sum of Dollars			$ 17,200.33	$2,344.64	$ 137.73	$ 29.97	$ -	$19,712.67

Material $14,966.27
Total Labor & Matl **$34,678.94**

WSF ORG CHART
Assistant Secretary
For Washington State Ferries (2 of 3)

DRAFT



Paul Brodeur, Director of Vessel Maintenance, Preservation & Engineering

David Moseley, Assistant Secretary for Washington State Ferries

Vessel Maintenance, Preservation & Engineering
Program X (Operating Budget) = 21
Program W (Capital Budget) = 10
No color = FTEs Budgeted by Project = 32
(3 X Operating)
(29 W Capital)
Total = 63

Effective 06/01/2010

Appendix F

WSF Personnel Vessel PM Responsibilities

	STANDARD JOBS - VESSELS	
	Work	**Location**
	CARPENTER SHOP	
GENERAL	LAY-UP: Inspect And Replace Overhead Tile As Directed	1, 2, 3, 4
DECK-COVER	LAY-UP: Inspect And Repair Floor Tile & stair treads As Directed.	2, 3, 4
LOCKS	LAY-UP: Lock Maintenance	1, 2, 3, 4
SIGNAGE	LAY-UP: Refinish Vessel Name Boards As Directed	2, 3, 4
WINDOWS	LAY-UP: Insp/Replace Cabin Windows As Directed	2, 3, 4
WINDOWS	LAY-UP: Insp/Replace Mirrors As Directed	1, 2, 3, 4
	ELECTRIC SHOP	
COMM-SYS	LAY-UP: Insp/Repair Sound Powered Phone System As Directed	2,3,4
GENERAL	LAY-UP: Megger All Of Vessel Prior To Lay-up As Directed.	2,3,4
	INSULATION SHOP	
GENERAL	LAY-UP: Survey For Asbestos And Upgrade Asbestos Survey.	1, 2, 3, 4
INSULATION	LAY-UP: Inspect Insulation And Renew As Directed.	1*, 2, 3, 4
	MACHINE SHOP	
SAFETY-EQP	LAY-UP: Inspect/Repair Rescue Boat Davits As Directed	2, 3, 4
SAFETY-EQP	LAY-UP: Remove/Insp/Tune-up/Repair Rescue Boats, Motors & Misc. Equip.	3
SIGNAGE	LAY-UP: Survey All Signage & Replace Where Needed As Directed	1*, 2, 3, 4
	PIPE SHOP	
	LAY-UP: Provide Labor for USCG Annual Inspection	3
PLUMBING-FIX	LAY-UP: Inspect & Repair Restroom Plumbing As Directed	2,3,4
GENERAL	LAY-UP: Clean Scuppers As Directed.	3
SEWAGE SYS	LAY-UP: Hydro-Blast Galley And Upper Car Deck Drains.	3
SAFETY-EQP	LAY-UP: Replace Rescue Boat Davit Hoses As Needed	3, 4
	SHEETMETAL	
SAFETY-EQP	LAY-UP: Inspect/Repair All Fire Extinguisher & Fire Axe Boxes As Directed.	2, 3, 4
GENERAL	LAY-UP: Inspect/Repair All Expanded Metal Fencing	2, 3, 4
GENERAL	LAY-UP: Restroom Maintenance - Maintain Stalls & Hardware As Directed.	1*, 2, 3, 4
DOORS	LAY-UP: Inspect/Repair All Metal Doors As Directed	2, 3
GENERAL	LAY-UP: Inspect/Replace Overhead Tile As Directed	2, 3, 4
	SHORE GANG	
SAFETY-EQP	LAY-UP: Change Out Life Rafts & MES Equipment	2, 3, 4
SIGNAGE	LAY-UP: Refinish Vessel Nameboards As Required.	3
DECK-COVER	LAY-UP: Apply Non-Skid Throughout Vessel	2, 3
GENERAL	LAY-UP: Paint All Areas As Directed.	2, 3
GENERAL	LAY-UP: Fresh Water Wash Down All Areas As Directed.	3
SAFETY-EQP	LAY-UP: Remove/Insp/Tune-up/Repair Rescue Boats, Motors & Misc. Equip.	3
GENERAL	LAY-UP: Renew Safety Markings & Stripes	2, 3
FURNITURE	LAY-UP: Inspect All Upholstery At Ship Check.	1, 2, 3, 4
SAFETY-EQP	LAY-UP: Change Out Rescue Boat Davit Wires When Required	2, 3
	WELD SHOP	
SAFETY-EQP	LAY-UP: Insp/Repair Boarding Platforms & Ladders As Directed.	3
GENERAL	LAY-UP: Inspect & Repair All Deck Sockets As Directed	3
GENERAL	LAY-UP: Inspect & Repair All Sliding Gates As Directed.	3
Legen		
1	On the run	
2	Night tie up	
3	EH Maintenance Facility	
4	Commercial Shipyard	
Notes		
*	Subject to extent and/or location of work	
^	Subject to welding needs	

LCCM

LCCM ITEMS	WORK	LOCATION FOR WORK
Comm/Nav/Life	PA System	1*, 2*, 3, 4
	Interior Communications	1*, 2*, 3, 4
	Landing Radars	3
	Draft Indicating System	2, 3, 4
	General Alarm System	2*, 3, 4
	Security Cameras	1*, 2*, 3, 4
	Electronic Locks (security)	1*, 2*, 3, 4
	Rescue Boats	2*, 3, 4
	MES (Slides and rafts)	2*, 3, 4
	Gyrocompass	2, 3
Major Mech/Elect	Sanitary/FW Flushing	2, 3, 4,
	Lighting Fixtures - Interior	1*, 2, 3, 4
	Lighting Fixtures - Exterior	2, 3, 4,
	Boilers	2*, 3, 4,
	Power systems	2*, 3, 4,
	Generators	2*, 3, 4,
	Motors	2*, 3, 4,
Piping Replacement	Sewage/Soil System Piping	2*, 3, 4^
	Saltwater Piping	2*, 3, 4^
	Bilge Piping	2*, 3, 4^
	Potable Water Piping	2*, 3, 4^
	Firemain/Sprinkler Piping	2*, 3, 4^
	LO Piping	2*, 3, 4^
	FO Piping	2*, 3, 4^
	Steam Piping	2*, 3, 4^
	Air Piping	2*, 3, 4^
Steel Replacement	Limited to above car deck	3

Legend:

1	On the run
2	Night tie up
3	EH Maintenance Facility
4	Commercial Shipyard

Notes:

*	Subject to extent and/or location of work
^	Subject to welding needs

COMMON CORRECTIVE JOBS - V & T
Work
CARPENTER SHOP
Replace Traffic Arms (T)
Repair Rescue Boat Chocks (V)
Repair Floor & Ceiling Tile (T)
Tenant Improvement (T)
Repair Locks/Change Lock Function (V&T)
Repair Wood Doors (T)
ELECTRIC SHOP
Inspect/Repair Sound Powered Phones (V)
Rake and Groove Generators and Drive Motors (V)
Re-brush Generators and Drive Motors (V)
Maintain Security Cameras
Inspect/Repair Steering Systems
Load Test Terminal Emergency Generators
INSULATION SHOP
Fabricate Equipment Covers (V&T)
Measure/Fabricate/Replace Equipment Insulating Pads (V&T)
Asbestos Sampling (V&T)
Renew Piping and Bulkhead Insulation (V&T)
MACHINE SHOP
40k Main Engine Overhaul (V)
Replace Deck Hatch Springs (V)
Replace Propulsion Clutch (V)
Replace Steering Rams (V)
Replace SW & LO Coolers (V)
Inspect SSDG Top Deck (V)
Replace Turbochargers (V)
Change Engine Packs (V)
Replace Fuel Injectors (V)
Rebuild/Replace Air Compressors (V & EH)
Repair Traffic Gate Assemblies (T)
Maintain Emergency Generators (T)
Maintain Dock Bulls (T)
PIPE SHOP
Replace Sewage Hoses (V&T)
Replace Fresh Water Fill Hose (V)
Repair Restroom Plumbing (V&T)
Repair/Replace Failed Piping - Misc Systems (V&T)
Tenant Improvement (V&T)
SHEETMETAL
Repair Metal Doors (V&T)
Repair Bathroom Partitions (V&T)
Maintain Bathroom Accessories (V&T)
Maintain Fire Extinguisher Boxes (V&T)
Repair/Replace Fans (V&T)
Tenant Improvement (V)
SHORE GANG
Provide Small Boat Support for Inspections (V&T)
Process Hazardous Materials (V&T)
Provide Facility Maintenance (EH)
Maintain Rescue Boats (V)
Manage Change Out of MES and Life rafts (V)
Miscellaneous Painting (V&T)
WELD SHOP
Reseal Deck Hatches (V)
Fabricate Access Ladders (V&T)
Fabricate Equipment Foundations (V&T)
Provide Weld Support to Other Crafts

Example Work Scopes for Vessel Crews and Eagle Harbor personnel to perform while in Commercial Shipyards

EBDG / Alion Notes and analysis of MV Tillikum's April 2010 SY Availability

- 31 Specific Tasks for crew to perform. (Others were indicated but not specifically identified.)
- Diesel Engines – 12; Electrical – 7; Standard PM stuff – 8; Annual Inspection Prep – 4;
- EBDG / Alion identifies 8 tasks (25%) that could be accomplished by crew during stops, at night, or during the course of normal operations.

Crafts / Skill Break downs:

Diesel Engine Mechanics / Outside Machinists

Diesel engine repair, inspections, & general service (fuel and oil filters): 1-6; 10-14; 21

Electrical (See also various crafts below)

(EH w/crew assist) Rewiring jobs, DC Drive Motor brushes and Springs: 7-9; 22-24; 27;

Piping

Various Crafts – Electrical / Machinists

General Engine Room Crew

Primarily Annual Inspection Preparations: 15-18;

Standard PM type efforts – Crew standard duties: 19-20; 25; 29 (should have been done in advance) ; 30-31.

Painting, Labor: 26; 28;

To: Chris Blasko, Port Engineer, Dave Nye, Vessel Project Engineer

From: Scott Calhoun, Staff Chief, MV Tillikum

Date: April 16, 2010

Subject: Commercial Lay-up Crew Work List, April 19, 2010 thru May 7, 2010

Chris,

The following is the work list for vessel crew while at Todd's Shipyard April 19th 2010 thru May 7, 2010:

1. Remove #2 main engine governor, send to Case Marine for refurbishment.
2. On return of refurbished governor reinstall, set-up, and test operation.
3. Remove turbo screen assembly and inspect condition of turbocharger stationary nozzle rings on #1 main engine. After inspection reinstall and test for leaks.
4. Remove turbo screen assembly and inspect condition of turbocharger stationary nozzle rings on #2 main engine. After inspection reinstall and test for leaks.
5. Take lead readings on all cylinders on #1 main engine.
6. Take lead readings on all cylinders on #2 main engine.
7. Assist Eagle Harbor with rewiring and testing of shutdown circuits on #1 main engine.
8. Assist Eagle Harbor with rewiring and testing of shutdown circuits on #2 main engine.
9. Clean interior of all 4 drive motors and support Eagle Harbor with installation of new drive motor brushes and springs.
10. Rebuild fuel oil purifier.
11. Rebuild fuel oil purifier pneumatic actuated 3-way valve.
12. Repair faulty Murphy low oil level switch on Inport Generator.
13. Replace faulty #1 main engine manifold air pressure transducer.
14. Repair broken pyrometer tray mounting brackets on #1 main engine.
15. Test all bilge level alarm switches in preparation of USCG annual inspection.
16. Test all shutdown devices on all machinery as part of preparation of USCG annual inspection.
17. Test operation of all ships fire dampers.
18. Witness all required inspections and test machinery as required by commercial lay-up contract.
19. Complete all scheduled preventive maintenance as per preventive maintenance schedule.
20. Complete all standard duties as required on posted daily and weekly watch duties.
21. Rebuild #1 air compressor.
22. Replace and/or repair #2 end forward mast head light fixture.
23. Assist Eagle Harbor with correcting circuit supply wiring for propeller shaft tach indicating systems.
24. Check and calibrate as needed all throttle control signal input potentiometers. This includes all control handles at all control stations.
25. General cleanup of vessel at end of lay-up period.
26. Prep and paint as allowed while in commercial shipyard interior areas of vessel hull where corrosion or paint failure is occurring.
27. Clean interior of both #1 and #2 Propulsion Control / Alarm & Monitoring UPS units.

28. Clean all containment areas on vehicle deck.
29. Move all interferences including but not limited to spare parts, consumables, tools, shelving, and cabinets as required for Todd's Shipyard to complete contracted work. Put all back in place once work is completed.
30. Continue organization of storage areas as part of MPET inventory requirements.
31. Test all systems as required prior to coming off of dry dock.

This is a list of work expected to be completed while at Todd's Shipyard. It is a certainty that other tasks will need vessel crew attention while in lay-up status.

Best regards,

Scott Calhoun, Staff Chief, MV Tillikum

EBDG / Alion Notes and analysis of MV Spokane's 2 month 2010 SY Availability

- 27 Specific Tasks for crew to perform. (Others were indicated but not specifically identified.)
- Diesel Engines – 6; Electrical – 8; Piping – 7; Standard PM stuff (including painting and deck equipment)– 7; nnual Inspection Prep – 0;
- EBDG / Alion identifies 9 tasks (33%) that could be accomplished by crew during stops, at night, or during the course of normal operations.

Crafts / Skill Break downs:

Diesel Engine Mechanics / Outside Machinists

Diesel engine repair, inspections, & general service (fuel and oil filters): 1-2; 17; 22; 25; 27;

Electrical (See also various crafts below)

(EH w/crew assist) Rewiring jobs, DC Drive Motor brushes and Springs: 8-9; 15-16; 20; 23-24; 26

Piping:

Hoses, gauges, pressure lines, heat exchangers, valves: 1-2; 4-6; 10; 18; 21;

Various Crafts – Electrical / Machinists

General Engine Room Crew

Primarily Annual Inspection Preparations: 0

Standard PM type efforts – Crew standard duties: 3; 11-14;

Painting, semi-skilled labor: 7;19

CREW WORK LIST. M.V. SPOKANE

EVERETT SHIPYARD, JULY 20 through SEPT.17 2010

1) Overhaul all bilge system valves

2) Install new hose and fittings on salt water pressure sensing lines for all 4 main engines

3) Install new engine room slop sink by EMD tool board

4) Remove all CAC components and piping on all 4 main engines

5) Install new after coolers and piping on all four main engines

6) Install new Aeroquip hoses on all 4 thrust bearing LO pumps

7) Scale , paint and preserve entire engine room tank top area

8) Clean all RDU cabinets, EOS console, EX2K and GF2K cabinets

9) Rework propulsion rcetifier diodes identified in survwy

10) Repair all air compressor gages

11) Build spare parts boxes for Cummins parts

12) Build Cummins tool board

13) Conduct spare parts inventory

14) Conduct HHM and PLC training with crew

15) Correct problems identified in infrascan

16) Switch around buss bars and install new breaker adaptors on 6 hot areas on EOS MCC's

17) Change oil in drive motor bearings and thrust bearings

18) Clean treatment tanks and ME raw water heat exchangers

19) Clean, scale , preserve , and paint steering room hatches and escape hatches

20) Open and clean vital heat exchanger

21) Chemically clean vital fresh water cooling system

22) Install new FO injectors in vital

23) Electrically isolate ECU on vital from mounting plate

24) Clean inside and outside of all 4 propulsion rectifiers

25) Inspect all ME vibro- isolators

26) Fix " Auto Armed" light wiring problem on #2 air compressor

27) Change thermostats on all four Main engines

Date Prepared
06/01/2010

PM At A Glance For 2010

Machine ID	Task ID	Task Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8306-A-1	36-A06-06M	Change F.O. Filter.	XX	XX	23	XX	XX	XX	XX	XX		XX	XX	XX
8306-A-2	36-A06-06M	Change F.O. Filter.	XX	XX	23	XX	XX	XX	XX	XX		XX	XX	XX
8306-A-1	36-A08-03M	Clean Educator/Piping & Mist Oil Separator.	09	XX	XX	08	XX	XX		XX	XX		XX	XX
8306-A-2	36-A08-03M	Clean Educator/Piping & Mist Oil Separator.	XX	XX	12	XX	XX		XX	XX		XX	XX	
8306-A-1	36-A09-06M	Take Crankcase Thrust & Deflection Readings.	XX	XX	04	XX	XX	XX	XX	XX		XX	XX	XX
8306-A-2	36-A09-06M	Take Crankcase Thrust & Deflection Readings.	XX	XX	05	XX	XX	XX	XX	XX		XX	XX	XX
8306-A-1	36-A10-06M	Inspect Base.	XX	XX	04	XX	XX	XX	XX	XX		XX	XX	XX
8306-A-2	36-A10-06M	Inspect Base.	XX	XX	05	XX	XX	XX	XX	XX		XX	XX	XX
8306-A-1	36-A13-06M	Check Valve Lash.	10	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-A-2	36-A13-06M	Check Valve Lash.	10	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-A-1	36-A14-06M	Clean Prelube Pump Y-strainer.	XX	XX	XX	06	XX	XX	XX	XX	XX		XX	XX
8306-A-2	36-A14-06M	Clean Prelube Pump Y-strainer.	XX	XX	XX	06	XX	XX	XX	XX	XX		XX	XX
8306-A-1	36-A15-06M	Compression Test.	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-A-2	36-A15-06M	Compression Test.	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-A-1	36-A16-06M	Check Exhaust Pipe Expansion Flange Bolts	XX	XX	XX	XX	15	XX	XX	XX	XX	XX		XX
8306-A-2	36-A16-06M	Check Exhaust Pipe Expansion Flange Bolts	XX	XX	XX	XX	16	XX	XX	XX	XX	XX		XX
8306-A-1	36-A17-02M	Inspect Exhaust System & Clean Soot Pots.	XX	04	XX	08	XX		XX		XX		XX	
8306-A-2	36-A17-02M	Inspect Exhaust System & Clean Soot Pots.	XX	04	XX	08	XX		XX		XX		XX	
8306-A-1	36-A18-06M	Retorque Exhaust Manifold Fr. Cylinder To Turbo	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-A-2	36-A18-06M	Retorque Exhaust Manifold Fr. Cylinder To Turbo	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	

8306-A-1	36-A19-06M	Inspect Valve Gear & Oil Flow.	17	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-A-2	36-A19-06M	Inspect Valve Gear & Oil Flow.	18	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-A-1	36-A20-06M	Retorque Turbo Stack Transition Bolts (55-60 Lb-ft)	XX	XX	XX	XX	15	XX	XX	XX	XX	XX		XX
8306-A-2	36-A20-06M	Retorque Turbo Stack Transition Bolts (55-60 Lb-ft)	XX	XX	XX	XX	16	XX	XX	XX	XX	XX		XX
8306-A-1	36-A21-06M	Take Axial & Redial Turbocharger Readings.	XX	XX	XX	12	XX	XX	XX	XX	XX		XX	XX
8306-A-2	36-A21-06M	Take Axial & Redial Turbocharger Readings.	XX	XX	XX	12	XX	XX	XX	XX	XX		XX	XX
8306-A-I	36-A22-06M	Test Alarm Systems And Emergency Stops.	XX	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX
8306-A-2	36-A22-06M	Test Alarm Systems And Emergency Stops.	XX	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX
8306-A-1	36-A23-01Y	Test Overspeed Function.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-A-2	36-A23-01Y	Test Overspeed Function.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-A-1	36-A25-06M	Check Mounting Bolts.	20	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-A-2	36-A25-06M	Check Mounting Bolts.	20	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-A-1	36-A26-06M	Inspect/Change Air Intake Filters,clean Screen	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-A-2	36-A26-06M	Inspect/Change Air Intake Filters,clean Screen	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-A-1	36-A29-01Y	Change Injector Nozzles.	XX	XX	XX	XX	Ckd	XX	XX	XX	XX	XX	XX	XX
8306-A-2	36-A29-01Y	Change Injector Nozzles.	XX	XX	XX	XX	Ckd	XX	XX	XX	XX	XX	XX	XX
8306-A-R	36-A34-03M	Clean Starting Motor, Air Supply Strainer.	20	XX	XX	12	XX	XX		XX	XX		XX	XX
8306-A-1	36-A37-01Y	Flush Cooling Water System.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-A-2	36-A37-01Y	Flush Cooling Water System.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-A-1	36-A38-01Y	Inspect Gear Bonded Coupling Match Marks.	XX		**	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-A-2	36-A38-01Y	Inspect Gear Bonded Coupling Match Marks.	XX	XX	05	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-A-1	36-A39-01M	Change Jacket Water Filters.	17	06	04	05	05							
8306-A-2	36-A39-01M	Change Jacket Water Filters.	17	06	05	05	05							

8306-A-R	36-A40-06M	Exercise All Butterfly Valves And Reach Rods	01	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-A-R	36-A41-01M	Pop Test Fuel Injection System.	18	15	09	02	03							
8306-A-R	36-A42-03M	Grease FO Drain Pump Bearings.	XX	05	XX	XX	03	XX	XX		XX	XX		XX
8306-A-1	36-A43-01Y	Inspect & Lube Starter Drive Pinion.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX
8306-A-2	36-A43-01Y	Inspect & Lube Starter Drive Pinion.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX
8306-B-EMER	36-B01-01M	Check Air Box Drains Flow & Clean, As Necessary.	31	23	18	02	27							
8306-B-EMER	36-B02-01M	Inspect All Piping & Connections.	31	07	18	02	27							
8306-B-SS-1	36-B02-01M	Inspect All Piping & Connections.	17	07	09	02	05							
8306-B-SS-2	36-B02-01M	Inspect All Piping & Connections.	19	12	09	02	05							
8306-B-VITAL	36-B02-01M	Inspect All Piping & Connections.	17	07	09	02	05							
8306-B-EMER	36-B03-01M	Inspect Emer Gen Fan Belt & Water/Oil/Fuel Tanks.	20	07	03	02	02							
8306-B-EMER	36-B04-01M	Run Emer Gen 2 Hrs Under Load Near EOM .	31	23	29	28	27							
8306-B-EMER	36-B05-06M	Change Emer Gen F.O. Filters.	31	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-B-SS-1	36-B06-XXX	Clean Air Intake Filter	XX	XX	06	XX	XX		XX	XX		XX	XX	
8306-B-SS-2	36-B06-XXX	Clean Air Intake Filter	23	Ckd	06	07	05							
8306-B-VITAL	36-B06-XXX	Clean Air Intake Filter	23	03	06	07	05							
8306-B-EMER	36-B07-01M	Grease Governor Linkage.	20	XX	XX	02	XX	XX		XX	XX		XX	XX
8306-B-EMER	36-B08-03M	Inspect Exhaust System & Clean Soot Pots.	20	XX	XX	02	XX	XX		XX	XX		XX	XX
8306-B-SS-1	36-B08-03M	Inspect Exhaust System & Clean Soot Pots.	XX	XX	16	XX	XX		XX	XX		XX	XX	
8306-B-SS-2	36-B08-03M	Inspect Exhaust System & Clean Soot Pots.	20	XX	XX	02	XX	XX		XX	XX		XX	XX
8306-B-VITAL	36-B08-03M	Inspect Exhaust System & Clean Soot Pots.	20	XX	XX	16	XX	XX		XX	XX		XX	XX
8306-B-EMER	36-B10-06M	Inspect Gen. Diode Board, Connections, Vents	XX	07	XX	XX	XX	XX	XX		XX	XX	XX	XX

8306-B-SS-2	36-B11-03M	Test & Record Crankcase Pressure (A/S Hose Off)	XX	04	XX	XX	21	XX	XX		XX	XX		XX
8306-B-VITAL	36-B11-03M	Test & Record Crankcase Pressure (A/S Hose Off)	XX	03	XX	XX	21	XX	XX		XX	XX		XX
8306-B-EMER	36-B12-03M	Test Alarms & Shutdowns.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-B-SS-1	36-B12-03M	Test Alarms & Shutdowns.	XX	XX	09	XX	XX		XX	XX		XX	XX	
8306-B-SS-2	36-B12-03M	Test Alarms & Shutdowns.	XX	XX	09	XX	XX		XX	XX		XX	XX	
8306-B-VITAL	36-B12-03M	Test Alarms & Shutdowns.	XX	XX	09	XX	XX		XX	XX		XX	XX	
8306-B-SS-1	36-B13-XXX	Check Valve Lash At 1500 Hrs.	XX	XX	XX	02	XX	XX	XX	XX	XX	XX	XX	XX
8306-B-SS-2	36-B13-XXX	Check Valve Lash At 1500 Hrs.	XX	XX	XX	02	XX	XX	XX		XX	XX	XX	
8306-B-VITAL	36-B13-XXX	Check Valve Lash At 1500 Hrs.	XX	03	XX	XX	16	XX	XX		XX	XX		XX
8306-B-SS-1	36-B18-01M	Change Gen Set Jacket Water Filters	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-B-SS-2	36-B18-01M	Change Gen Set Jacket Water Filters	07	XX	09	XX	05	XX		XX		XX		XX
8306-B-VITAL	36-B18-01M	Change Gen Set Jacket Water Filters	07	XX	09	XX	05	XX		XX		XX		XX
8306-B-SS-1	36-B19-06M	Inspect GEN. Elect. Connections And Diode Boards	06	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-B-SS-2	36-B19-06M	Inspect GEN. Elect. Connections And Diode Boards	06	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-B-VITAL	36-B19-06M	Inspect GEN. Elect. Connections And Diode Boards	06	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX
8306-B-SS-1	36-B20-01Y	Flush Cooling System.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX
8306-B-SS-2	36-B20-01Y	Flush Cooling System.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX
8306-B-VITAL	36-B20-01Y	Flush Cooling System.	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	XX
8306-B-SS-1	36-B27-01Y	Inspect & Lube Starter Drive.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-B-SS-2	36-B27-01Y	Inspect & Lube Starter Drive.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX
8306-B-VITAL	36-B27-01Y	Inspect & Lube Starter Drive.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX
8306-B-SS-1	36-B28-02M	Inspect Top Deck And Cam Shaft	XX	XX	16	XX	XX	XX	XX	XX		XX	XX	XX
8306-B-SS-2	36-B28-02M	Inspect Top Deck And Cam Shaft	XX	04	XX	02	XX		XX		XX		XX	

8306-B-VITAL	36-B28-02M	Inspect Top Deck And Cam Shaft	XX	03	XX	14	XX		XX		XX		XX	
8306-F-1	36-F02A-LU	Inspect #1 Clutch Tires, Springs & Shoes.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-1	36-F02B-LU	Inspect #2 Clutch Tires, Springs & Shoes.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-1	36-F02C-LU	Inspect #3 Clutch Tires, Springs & Shoes.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-2	36-F02D-LU	Inspect #4 Clutch Tires, Springs & Shoes.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-2	36-F02E-LU	Inspect #5 Clutch Tires, Springs & Shoes.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-2	36-F02F-LU	Inspect #6 Clutch Tires, Springs & Shoes.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-1	36-F03A-LU	Replace #1 End Main Clutch Pilot Bearing.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-2	36-F03B-LU	Replace #2 End Main Clutch Pilot Bearing.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX		XX	XX
8306-F-1	36-F04-01Y	Flush Reduction Gear Cooling System.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-F-2	36-F04-01Y	Flush Reduction Gear Cooling System.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-F-1	36-F05-03M	Internally Inspect Reduction Gear, Check Oil Flow	XX	XX	13	XX	XX		XX	XX		XX	XX	
8306-F-2	36-F05-03M	Internally Inspect Reduction Gear, Check Oil Flow	XX	XX	14	XX	XX		XX	XX		XX	XX	
8306-F-1	36-F06-01Y	Test Standby L.O. Pump Cut-In/Out Pressure Switch.	XX	XX	11	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-F-2	36-F06-01Y	Test Standby L.O. Pump Cut-In/Out Pressure Switch.	XX	XX	11	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-F-1	36-F07-01Y	Inspect Standby L.O. Pump Coupling.	XX	XX	11	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-F-2	36-F07-01Y	Inspect Standby L.O. Pump Coupling.	XX	XX	11	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-F-1	36-F08-01Y	Check Reduction Gear Alarm Functions/Sensors.	XX	XX	XX	XX	23	XX	XX	XX	XX	XX	XX	XX
8306-F-2	36-F08-01Y	Check Reduction Gear Alarm Functions/Sensors.	XX	XX	XX	XX	23	XX	XX	XX	XX	XX	XX	XX
8306-F-1	36-F09-01Y	Change Reduction Gear Oil.	23	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-F-2	36-F09-01Y	Change Reduction Gear Oil.	22	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
8306-F-1	36-F10-03M	Inspect Magnet & Discharge Strainer.	XX	XX	13	XX	XX		XX	XX		XX	XX	
8306-	36-F10-	Inspect Magnet & Discharge												

F-2	03M	Strainer.	XX	XX	14	XX	XX		XX	XX		XX	XX	
8306-F-1	36-F11-03M	Clean Y-strainer.	XX	XX	12	XX	XX		XX	XX		XX	XX	
8306-F-2	36-F11-03M	Clean Y-strainer.	XX	XX	12	XX	XX		XX	XX		XX	XX	
8306-G-1	36-G01-01M	Inspct CPP Piping For Leaks & Wear.	01	03	11	07	07							
8306-G-2	36-G01-01M	Inspct CPP Piping For Leaks & Wear.	01	03	11	07	06							
8306-G-1	36-G02-01M	Inspect Servo Pump And Drain Pump Couplings	01	03	11	07	06							
8306-G-2	36-G02-01M	Inspect Servo Pump And Drain Pump Couplings	01	03	11	07	06							
8306-G-R	36-G03-01Y	Inspect Or Replace Rotoseal & Release Valves.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX
8306-G-1	36-G05-01M	Verify Local Operation Of CPP System.	20	07	11	09	07							
8306-G-2	36-G05-01M	Verify Local Operation Of CPP System.	20	07	11	09	06							
8306-G-1	36-G06-01Y	Check All Hydraulic System Settings.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX	XX	XX	XX
8306-G-2	36-G06-01Y	Check All Hydraulic System Settings.	XX	XX	XX	Ckd	XX	XX	XX	XX	XX	XX	XX	XX
8306-G-1	36-G07-06M	Clean & Inspect All CPP Suction Strainers.	XX	XX	XX	XX	07	XX	XX	XX	XX	XX		XX
8306-G-2	36-G07-06M	Clean & Inspect All CPP Suction Strainers.	XX	XX	XX	XX	06	XX	XX	XX	XX	XX		XX
8306-G-1	36-G08-01Y	Test All Servo System Alarms.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-G-2	36-G08-01Y	Test All Servo System Alarms.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-G-1	36-G09-03M	Recirc. Cpp Tk W/ Coalescer Filter	20	XX	XX	01	XX	XX		XX	XX		XX	XX
8306-G-2	36-G09-03M	Recirc. Cpp Tk W/ Coalescer Filter	20	XX	XX	01	XX	XX		XX	XX		XX	XX
8306-G-1	36-G10-06M	Inspect Slide Valve Bellofram Seals	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-G-2	36-G10-06M	Inspect Slide Valve Bellofram Seals	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-G-1	36-G11-01Y	Replace Slide Valve Bellofram Seal	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-G-2	36-G11-01Y	Replace Slide Valve Bellofram Seal	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-H	36-H01-01M	Test Operation Of Manual Controls.	24	22	27	11	09							

8306-H 36-H03A-1Y	Check & Calibrate All #1 End Indicating Meters.	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	XX		
8306-H 36-H03B-1Y	Check & Calibrate All #2 End Indicating Meters.	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	XX		
8306-H 36-H04-LU	Check Control System Termial Strips & Connectors.	Ckd	07	23	Ckd	Ckd									
8306-H 36-H07A-1M	Check #1 End Zero Thrust.	18	XX	XX	13	XX	XX		XX	XX		XX	XX		
8306-H 36-H07B-1M	Check #2 End Zero Thrust.	18	XX	XX	13	XX	XX		XX	XX		XX	XX		
8306-H 36-HE1-01M	Check PLC3 I/O Modules Locking Tab To The Far Left	20	07	15	11	11									
8306-H 36-HE2-01M	Check PLC Module Clips	20	07	15	11	11									
8306-I- 36-I01-01M 1	Inspect Follow-Up Linkage.	01	05	05	01	03									
8306-I- 36-I01-01M 2	Inspect Follow-Up Linkage.	01	05	05	01	03									
8306-I- 36-I02-01M 1	Inspect Hoses & Seals For Leaks & Wear.	01	05	05	01	03									
8306-I- 36-I02-01M 2	Inspect Hoses & Seals For Leaks & Wear.	01	05	05	01	03									
8306-I- 36-I03-01M 1	Inspect Piping & Support Brackets.	01	05	05	01	03									
8306-I- 36-I03-01M 2	Inspect Piping & Support Brackets.	01	05	05	01	03									
8306-I- 36-I04-01M 1	Inspect Jam Nuts On Piston Rods & Palm Bolts.	01	05	05	01	03									
8306-I- 36-I04-01M 2	Inspect Jam Nuts On Piston Rods & Palm Bolts.	01	05	05	01	03									
8306-I- 36-I05-01M 1	Check Rudder Movement.	01	05	05	01	03									
8306-I-36-I05-01M 2	Check Rudder Movement.	01	05	05	01	03									
8306-I-36-I06-06M 1	Change Hydraulic System Filter.	XX	XX	XX	XX	03	XX	XX	XX	XX	XX		XX		
8306-I-36-I06-06M 2	Change Hydraulic System Filter.	XX	XX	XX	XX	03	XX	XX	XX	XX	XX		XX		
8306-I-36-I09-01Y 1	Test Steering Alarms.	XX	XX	06	XX	XX	XX	XX	XX	XX	XX	XX	XX		
8306-I-36-I09-01Y 2	Test Steering Alarms.	XX	XX	06	XX	XX	XX	XX	XX	XX	XX	XX	XX		
8306-I-36-I10-02Y R	C/O Directional Relay/Sens Pair, Dig. VOM 2 And 3	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX			
8306-I-36-I12-	Check Steering Control System														

1	06M	Terminals For Tightness	31	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-I-2	36-I12-06M	Check Steering Control System Terminals For Tightness	31	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-P	36-I13-01M	Clean VCS Vent Fan Filter In Door.	20	12	12	11	11								
8306-P	36-I14-06M	Clean Fan Tray Filters Vcs/ph1,ph2.	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX		
8306-JQ-1	36-J02-01M	Visually Inspect & Grease Line Shaft Bearings.	20	12	08	02	03								
8306-JQ-2	36-J02-01M	Visually Inspect & Grease Line Shaft Bearings.	20	12	08	02	03								
8306-JQ-1	36-J03-01M	Visually Inspect HSS And Flex Coupling	20	12	15	02	03								
8306-JQ-2	36-J03-01M	Visually Inspect HSS And Flex Coupling	20	12	15	02	03								
8306-JQ-1	36-J04-01M	Grease HSS Bearings (3 Shots).	20	12	08	02	03								
8306-JQ-2	36-J04-01M	Grease HSS Bearings (3 Shots).	20	12	08	02	03								
8306-JN-1-P	36-J05-01M	Run Stern Tube Oil Pump - 24 Hrs.	02	10	03	19	14								
8306-JN-2-P	36-J05-01M	Run Stern Tube Oil Pump - 24 Hrs.	02	10	03	19	14								
8306-J-R	36-J06-03M	Check Oil Level In Gieslinger Couplings.	XX	XX	03	XX	XX		XX	XX		XX	XX		
8306-J-R	36-J07-01Y	Change Oil In Gieslinger Couplings.	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX		
8306-I-R	36-J08-01Y	Change Stern Tube Filters	29	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-KH	36-K01-01M	Clean, Grease & Operate All Deck Hatches.	21	13	18	16	07								
8306-KG	36-K03-01M	Grease Roller Gate Wheels.	20	13	03	01	03								
8306-KH	36-K06-03M	Remove Deck Plugs & Operate Remote Operators.	XX	XX	17	XX	XX		XX	XX		XX	XX		
8306-KA	36-K07-01Y	ISE Inspection Frames 0-36 FWD	XX	XX	15	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-KA	36-K08-01Y	ISE Inspection Frames 0-36 AFT	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	XX	
8306-KA	36-K09-01Y	ISE Inspection Frames 36-75 FWD	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	
8306-KA	36-K10-01Y	ISE Inspection Frames 36-75 AFT	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX		
8306-LA-R	36-L01-03M	Clean Fire Pump Strainers & Insp-Change Zincs	XX	18	XX	XX	14	XX	XX		XX	XX		XX	

8306-LA-R	36-L02-01Y	Change Oil In Fire Pump Housing.	04	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-L	36-L03-06M	Exercise/Lubricate All Fire Dampers. USE CHECK List	XX	21	XX	XX	XX	XX	XX		XX	XX	XX	XX	
8306-L	36-L04-01M	Inspect All Fire Stations. Use Check List	21	04	03	01	06								
8306-L	36-L05-01Y	Flush Shore Conn & Cabin Fire Stations.	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	XX	
8306-L	36-L06-01Y	Clean & Lube All Fire Station Nozzels As Req.	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	XX	
8306-L	36-L07-01M	Inspect Fire Dampers & Operators	09	21	16	01	03								
8306-L	36-L08-01M	Drain Sediment From E/R Fire Stations, One Bucket	18	04	03	04	04								
8306-L	36-L09-06M	Change Out Smoke Detector Batteries In Crews Qtrs.	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX		
8306-M	36-M10-03M	Grease And Oil Search Light Lube Points	XX	21	XX	XX	03	XX	XX		XX	XX		XX	
8306-NC	36-N01-01M	Change Purifier Oil.	08	03	03	01	05								
8306-O	36-O01-06M	Clean F.O. Tank Vent Screens.	XX	XX	XX	17	XX	XX	XX	XX	XX		XX	XX	
8306-O	36-O02-06M	Freshen Fuel Tanks 1 & 4	15	XX	XX	XX	XX	XX		XX	XX	XX	XX	XX	
8306-PA-R	36-P03-03M	Change On Line Boiler Fuel Filter.	XX	12	XX	XX	07	XX	XX		XX	XX		XX	
8306-P	36-P04A-3M	Change Out #1 Eng Room Ventilation Filters.	XX	09	XX	XX	19	XX	XX		XX	XX		XX	
8306-P	36-P04B-3M	Change Out #2 Eng Room Ventilation Filters.	XX	09	XX	XX	19	XX	XX		XX	XX		XX	
8306-PA-1	36-P05-01Y	Clean Burner Assembly.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	
8306-PA-2	36-P05-01Y	Clean Burner Assembly.	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	XX	
8306-PA-1	36-P06-01Y	Pop Test Safety Valves.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	
8306-PA-2	36-P06-01Y	Pop Test Safety Valves.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	
8306-PA-1	36-P07-01Y	Inspect Combustion Chamber & Refractory.	XX	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	
8306-PA-2	36-P07-01Y	Inspect Combustion Chamber & Refractory.	XX	XX	XX	XX	XX	XX	XX		XX	XX	XX	XX	
8306-PA-1	36-P08-01Y	Clean Feed Pump Y-strainer.	XX	XX	04	XX	XX	XX	XX	XX	XX	XX	XX	XX	
8306-	36-P08-	Clean Feed Pump Y-strainer.													

Appendix G

VMP&I Task Cost Comparison Model

PENALTY PAY

org_code_name	Data	CODE	Total
CARPENTRY SHOP	Sum of Hrs	07	393.5
		37	10
	Sum of Dollars	07	$ 11,408.53
		37	$ -
CARPENTRY SHOP	Sum of Hrs		403.5
CARPENTRY SHOP	Sum of Dollars		$ 11,408.53
ELECTRICAL SHOP	Sum of Hrs	07	335.5
		37	6
	Sum of Dollars	07	$ 9,792.50
		37	$ -
ELECTRICAL SHOP	Sum of Hrs		341.5
ELECTRICAL SHOP	Sum of Dollars		$ 9,792.50
INSULATION SHOP	Sum of Hrs	07	143.5
		37	2812.75
	Sum of Dollars	07	$ 4,309.56
		37	$ -
INSULATION SHOP	Sum of Hrs		2956.25
INSULATION SHOP	Sum of Dollars		$ 4,309.56
MACHINE SHOP	Sum of Hrs	07	212
		37	26
	Sum of Dollars	07	$ 6,222.38
		37	$ -
MACHINE SHOP	Sum of Hrs		238
MACHINE SHOP	Sum of Dollars		$ 6,222.38
PAINT SHOP	Sum of Hrs	07	817
		36	1173
		37	3
	Sum of Dollars	07	$ 25,025.02
		36	$ -
		37	$ -
PAINT SHOP	Sum of Hrs		1993
PAINT SHOP	Sum of Dollars		$ 25,025.02
PIPE SHOP	Sum of Hrs	07	1081
		37	22.5
	Sum of	07	$ 31,351.45

	Dollars	37	$ -
PIPE SHOP	Sum of Hrs		1103.5
PIPE SHOP	Sum of Dollars		$ 31,351.45
SHEET METAL SHOP	Sum of Hrs	07	207
		37	28
	Sum of Dollars	07	$ 5,900.98
		37	$ -
SHEET METAL SHOP	Sum of Hrs		235
SHEET METAL SHOP Dollars	Sum of		$ 5,900.98
WELDING SHOP	Sum of Hrs	07	157
	Sum of Dollars	07	$ 4,568.29
WELDING SHOP	Sum of Hrs		157
WELDING SHOP	Sum of Dollars		$ 4,568.29
Total Sum of Hrs			7427.75
Total Sum of Dollars			$ 98,578.71

TRAVEL PAY

org_code_name	Data	CODE	Total
CARPENTRY SHOP	Sum of Hrs	19	2746.75
		29	490.75
	Sum of Dollars	19	$ 119,401.46
		29	$ 29,662.50
CARPENTRY SHOP	Sum of Hrs		3237.5
CARPENTRY SHOP	Sum of Dollars		$ 149,063.96
ELECTRICAL SHOP	Sum of Hrs	19	3173.95
		29	678
	Sum of Dollars	19	$ 138,489.39
		29	$ 41,141.55
ELECTRICAL SHOP	Sum of Hrs		3851.95
ELECTRICAL SHOP	Sum of Dollars		$ 179,630.94
INSULATION SHOP	Sum of Hrs	19	874
		29	98.5
	Sum of Dollars	19	$ 38,627.71
		29	$ 6,085.94

INSULATION SHOP	Sum of Hrs		972.5
INSULATION SHOP	Sum of Dollars		$ 44,713.65
MACHINE SHOP	Sum of Hrs	19	1603
		29	987
	Sum of Dollars	19	$ 69,342.11
		29	$ 59,356.26
MACHINE SHOP	Sum of Hrs		2590
MACHINE SHOP	Sum of Dollars		$ 128,698.37
PAINT SHOP	Sum of Hrs	19	2178.25
		29	342.5
	Sum of Dollars	19	$ 99,730.37
		29	$ 20,905.77
PAINT SHOP	Sum of Hrs		2520.75
PAINT SHOP	Sum of Dollars		$ 120,636.14
PIPE SHOP	Sum of Hrs	19	1956
		29	920.5
	Sum of Dollars	19	$ 84,647.76
		29	$ 55,716.25
PIPE SHOP	Sum of Hrs		2876.5
PIPE SHOP	Sum of Dollars		$ 140,364.01
SHEET METAL SHOP	Sum of Hrs	19	1278.5
		29	272.5
	Sum of Dollars	19	$ 55,109.82
		29	$ 16,603.43
SHEET METAL SHOP	Sum of Hrs		1551
SHEET METAL SHOP	Sum of Dollars		$ 71,713.25
WELDING SHOP	Sum of Hrs	19	826
		29	387.5
	Sum of Dollars	19	$ 35,655.73
		29	$ 23,277.42
WELDING SHOP	Sum of Hrs		1213.5
WELDING SHOP	Sum of Dollars		$ 58,933.15
Total Sum of Hrs			18813.7
Total Sum of Dollars			$ 893,753.47

BILLABLE MAN HOURS

Sum of Hrs		
org_code_name	CODE	Total
CARPENTRY SHOP	01	25469
	02	533.25
	07	393.5
	14	406
	19	2746.75
	29	490.75
	37	10
CARPENTRY SHOP Total		30049.25
ELECTRICAL SHOP	01	29173.35
	02	1566.6
	07	335.5
	14	742.5
	19	3173.95
	29	678
	37	6
	39	24
ELECTRICAL SHOP Total		35699.9
INSULATION SHOP	01	9321.4
	02	161.25
	07	143.5
	14	112.5
	19	874
	29	98.5
	37	2812.75
	39	38.5
INSULATION SHOP Total		13562.4
MACHINE SHOP	01	27063
	02	1637
	07	212
	14	1439
	19	1603
	29	987
	37	26
	39	11.5
MACHINE SHOP Total		32978.5
PAINT SHOP	01	25298.25
	02	792.75

	07	817
	14	148
	19	2178.25
	29	342.5
	36	1173
	37	3
	38	15
PAINT SHOP Total		30767.75
PIPE SHOP	01	27087
	02	1746.5
	07	1081
	14	1048
	19	1956
	29	920.5
	37	22.5
	39	33.5
PIPE SHOP Total		33895
SHEET METAL SHOP	01	19128.25
	02	355
	07	207
	14	144
	19	1278.5
	29	272.5
	37	28
	39	20.5
SHEET METAL SHOP Total		21433.75
WELDING SHOP	01	14366.5
	02	440.5
	07	157
	14	416.5
	19	826
	29	387.5
	39	51.5
WELDING SHOP Total		16645.5
Grand Total		215032.05

Maintenance Tasks	Labor / Craft / Employee Category Required	# of Employees / Employee Category	Est. ST Labor Hours	Est. OT Labor Hours	Employee ST Wages	Employee OT Wages	Vessel Crew ST Labor $/Hr	Vessel Crew OT Labor $/Hr	EH ST Labor $ / Hr.	EH OT Labor $ / Hr.	Est. Material / Equipment Rentals / Services Costs	Travel Pay Hours	Crew Travel Pay Rate (%)	Travel Pay ($)	Penalty Pay Hours	Penalty Pay Rate (% of wage)	Penalty Pay ($)	Task Sub Total / Employee Category Labor & Material Costs	Est. VMP&I Task Cost - Vessel Crew	Est. VMP&I Task Cost - EH Personnel
Provide Labor for USCG Annual Inspections																				
Vessel Crew:	Assistant Engineer	2	10	2	$34.84	$69.68	$53.26	$78.72			$1,000.00	1.5	$39.36	$118.08	2	100%	$139.36	$2,637.52	$2,637.52	
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
EH Personnel:	Machinist Journeyman	1	10	2	$26.14	$52.28			$51.97	$69.22	$1,000.00	1.5		$77.96	2	100%	$52.28	$1,788.38		$2,576.75
	Electrical Journeyman	1	10	2	$26.14	$52.28			$51.97	$69.22		1.5		$77.96	2	100%	$52.28	$788.38		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
Clean Scuppers																				
Vessel Crew:	Assistant Engineer	1	4	0	$34.84	$69.68	$53.26	$78.72			$250.00	0	$39.36	$0.00	1	100%	$34.84	$497.88	$1,318.58	
	Oiler	1	8	0	$23.23	$46.46	$36.73	$52.48				0	$0.00	$0.00	6	100%	$139.38	$433.22		
	Wiper	1	8	0	$20.46	$40.92	$33.09	$46.22				0	$0.00	$0.00	6	100%	$122.76	$387.48		
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
EH Personnel:	shore gang lead	1	4	0	$26.98	$53.96			$51.97	$69.22	$250.00	0		$0.00	1	100%	$26.98	$484.86		$1,622.74
	shore gang	2	8	0	$25.53	$51.06			$51.97	$69.22		0		$0.00	6	100%	$306.36	$1,137.88		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
Minor Bilge Preservation (Incl. cleaning, mech. prep., & painting.)																				
Vessel Crew:		0	0	0	$0.00	$0.00	$0.00	$0.00			$0.00	0	$0.00	$0.00	0	100%	$0.00	$0.00	$0.00	
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
EH Personnel:		0	0	0	$0.00	$0.00			$51.97	$69.22	$0.00	0		$0.00	0	100%	$0.00	$0.00		$0.00
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
Re-Work Void Hatch at Car Deck																				
Vessel Crew:		0	0	0	$0.00	$0.00	$0.00	$0.00			$0.00	0	$0.00	$0.00	0	100%	$0.00	$0.00	$0.00	
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00	$0.00	$0.00				0	$0.00	$0.00	0	100%	$0.00	$0.00		
EH Personnel:		0	0	0	$0.00	$0.00			$51.97	$69.22	$0.00	0		$0.00	0	100%	$0.00	$0.00		$0.00
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		
		0	0	0	$0.00	$0.00			$51.97	$69.22		0		$0.00	0	100%	$0.00	$0.00		

General Notes:
1) Yellow highlighted fields require reader input, and all numerical fields highlighted in yellow require population.
2) Olive green fields represent Vessel Crew controlled areas
3) Light Purple fields are EH controlled areas.

	Base Pay 7/1/2009	draft FY2010 WEIGHTED RATES			FY2009 WEIGHTED RATES		
		Weighted Rate ST	Weighted Rate OT	Weighted Rate Other	Weighted Rate ST	Weighted Rate OT	Weighted Rate Other
METAL TRADES							
General Foreman - Vessel/Terminal	28.62	46.77	65.58	32.33	46.50	67.43	33.35
Foreperson/Planner	27.97	45.86	64.11	31.60	45.57	65.92	32.59
Leadperson/H&S Supervisor	27.45	45.14	62.94	31.01	44.83	64.71	31.98
Journey Level	26.14	43.31	59.98	29.53	42.96	61.67	30.46
IBU-SHOREGANG							
Shoregang Fore	27.56	47.65	65.01	32.07	47.72	67.46	32.93
Shoregang Lead	26.98	46.79	63.66	31.41	46.83	66.06	32.25
Shoregang	25.53	44.64	60.29	29.77	44.60	62.56	30.57

Engine Room Employee Wages and Weighted Labor Rates, FY 2011

Job Classification	Hourly Wage	Straight Time Weighted Rate*	Over Time Weighted Rate**	Other (Travel) Weighted Rate**
Staff Chief Engineer (L)	$45.36	$67.32	$102.41	$51.20
Alt Staff Chief Eng (L)	$42.16	$63.07	$95.26	$47.62
Chief Engineer (L)	$41.34	$61.97	$93.40	$46.70
Assistant Engineer (L)	$34.84	$53.26	$78.72	$39.36
Oiler (U)	$23.23	$36.73	$52.48	$26.24
Wiper (U)	$20.46	$33.09	$46.22	$23.11

L= MEBA - Licensed U= MEBA - Unlicensed

* The straight time weighted wage rate is the primary cost center for labor costs for regular work hours paid at straight time pay. The weighted hourly wage rate includes the employer share of benefits for pension (5.31%), Social Security (6.2%), and Medicare (1.45%). This weighted wage rate also includes costs related to annual leave, sick leave, miliary/holiday/misc leave, health insurance, MEBA training fund and sick leave buy-out, based on historical averages for the two bargaining units.

** Overtime weighted rate is twice the hourly wage rate plus pension (5.31%), Social Security (6.2%) and Medicare (1.45%). "Other" pay weighted wage rate, which includes travel time, is straight time pay plus pension (5.31%), Social Security (6.2%) and Medicare (1.45%).

Developed by:
Ferries Budget Office (M Hanbey)

Appendix G
uly 1, 2005

WASHINGTON STATE FERRIES

POINT-TO-POINT TERMINAL MILEAGE

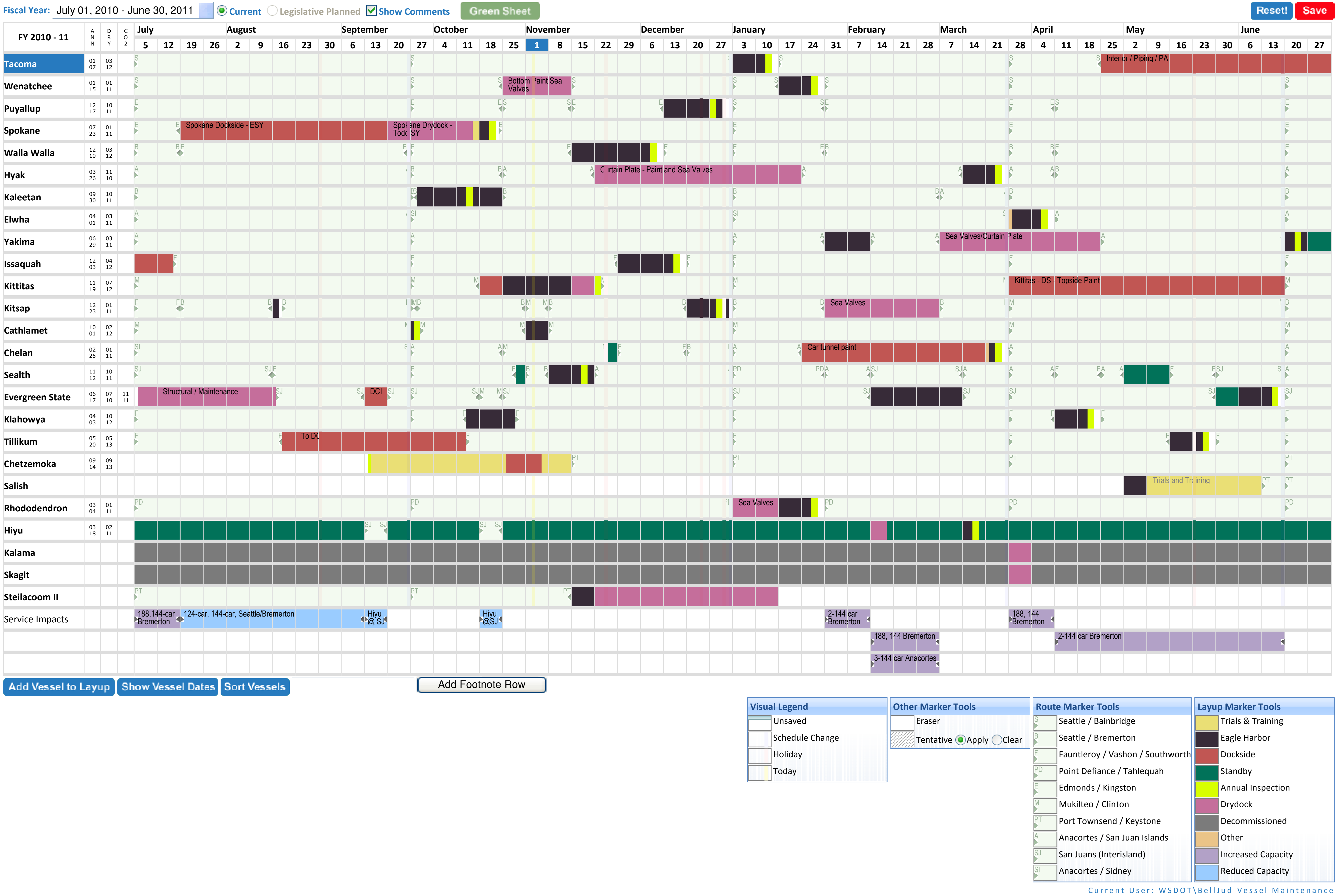
SCHEDULE A [effective 7/1/2000]

SCHEDULE A - WSF TERMINAL TO TERMINAL

		ANACORTES	BREMERTON	MUKILTEO	CLINTON	EDMONDS	KINGSTON	FAUNTLEROY	VASHON	SOUTHWORTH	PT. DEFIANCE	TAHLEQUAH	PIER 52	WINSLOW	PT. TOWNSEND	KEYSTONE	LOFALL	SOUTHPOINT	TACOMA BOAT
ANACORTES	TIME		2:45	1:30	1:30	2:15	2:30	2:15	2:30	2:45	3:15	3:00	1:45	2:15	1:30	1:00	2:30	2:15	2:45
	MILES		87	63	63	70	70	95	95	95	110	110	87	87	39	39	64	64	120
BREMERTON	TIME	2:45		1:45	2:00	1:15	:45	1:00	:45	:30	1:30	1:15	1:00	:45	1:30	2:00	:30	:45	2:00
	MILES	87		32	32	28	28	18	18	18	33	33	0	32	48	48	23	23	23
MUKILTEO	TIME	1:30	1:45		:15	:30	1:00	1:15	1:30	1:45	2:15	2:00	:45	1:15	1:15	:45	1:15	1:30	1:45
	MILES	69	32		0	14	14	40	40	40	55	55	32	32	26	26	26	26	65
CLINTON	TIME	1:30	2:00	:15		:45	1:15	1:30	1:45	2:00	2:30	2:15	1:00	1:30	1:00	:30	1:30	1:45	2:00
	MILES	63	32	0		14	14	40	40	40	55	55	32	32	26	26	26	26	65
EDMONDS	TIME	1:45	1:15	:30	:45		:30	1:00	1:15	1:30	2:00	1:45	:30	1:00	1:45	1:15	:45	1:00	1:30
	MILES	70	28	14	14		0	26	26	26	41	41	18	18	37	40	12	12	51
KINGSTON	TIME	2:15	:45	1:00	1:15	:30		1:30	1:15	1:00	2:00	1:45	1:00	:30	1:15	1:45	:15	:30	2:00
	MILES	70	28	14	14	0		26	41	41	56	56	18	18	37	37	12	12	51
FAUNTLEROY	TIME	2:15	1:00	1:15	1:30	1:00	1:30		:15	:30	1:00	:45	:30	1:00	2:30	2:00	1:30	1:45	1:15
	MILES	95	18	40	40	26	26		0	0	15	15	8	8	51	66	26	26	29
VASHON	TIME	2:30	:45	1:30	1:45	1:15	1:15	:15		:15	:45	:30	:45	1:15	2:15	2:15	1:15	1:30	1:30
	MILES	95	18	40	40	26	41	0		0	15	15	8	8	61	66	36	36	29
SOUTHWORTH	TIME	2:45	:30	1:45	2:00	1:30	1:00	:30	:15		1:00	:45	1:00	1:30	2:00	2:30	1:00	1:15	1:45
	MILES	95	18	40	40	26	41	0	0		15	15	8	50	61	61	36	36	29
PT. DEFIANCE	TIME	3:15	1:30	2:15	2:30	2:00	2:00	1:00	:45	1:00		:15	1:30	2:00	3:00	3:00	2:00	2:15	:30
	MILES	110	33	55	55	41	56	15	15	15		0	23	23	76	81	51	51	10
TAHLEQUAH	TIME	3:00	1:15	2:00	2:15	1:45	1:45	:45	:30	:45	:15		1:15	1:45	2:45	2:45	1:45	2:00	:45
	MILES	110	33	55	55	41	56	15	15	15	0		23	23	76	81	51	51	10
PIER 52	TIME	1:45	1:00	:45	1:00	:30	1:00	:30	:45	1:00	1:30	1:15		:30	2:00	1:30	1:00	1:15	1:00
	MILES	87	0	32	32	18	18	8	8	8	23	23		0	43	58	18	18	33
WINSLOW	TIME	2:15	:45	1:15	1:30	1:00	:30	1:00	:15	1:30	2:00	1:45	:30		1:30	2:00	:30	:45	1:30
	MILES	87	32	32	32	18	18	8	8	50	23	23	0		43	43	18	18	33
PT. TOWNSEND	TIME	1:30	1:30	1:15	1:00	1:45	1:15	2:30	2:15	2:00	3:00	2:45	2:00	1:30		:30	1:00	:45	3:00
	MILES	39	48	26	26	37	37	51	61	61	76	76	43	43		0	25	25	76
KEYSTONE	TIME	1:00	2:00	:45	:30	1:15	1:45	2:00	2:15	2:30	3:00	2:45	1:30	2:00	:30		1:30	1:15	2:30
	MILES	39	48	26	26	40	37	66	66	61	81	81	58	43	0		25	25	91
LOFALL	TIME	2:30	:30	1:15	1:30	:45	:15	1:30	1:15	1:00	2:00	1:45	1:00	:30	1:00	1:30		:15	2:00
	MILES	64	23	27	26	12	12	26	36	36	51	51	18	18	25	25		0	51
SOUTHPOINT	TIME	2:15	:45	1:30	1:45	1:00	:30	1:45	1:30	1:15	2:15	2:00	1:15	:45	:45	1:15	:15		2:15
	MILES	64	23	26	26	12	12	26	36	36	51	51	18	18	25	25	0		51
TACOMA BOAT	TIME	2:00	2:00	1:45	2:00	1:30	2:00	1:15	1:30	1:45	:30	:45	1:00	1:30	3:00	2:30	2:00	2:15	
	MILES	120	33	65	65	51	51	28	29	29	10	10	33	33	76	91	51	51	
MINI	TIME	WINSLOW TO MINI VIA BREMERTON: 67																	
	MILES	SEATTLE TO MINI: 34																	
		P-52 TO TODD: 6																	

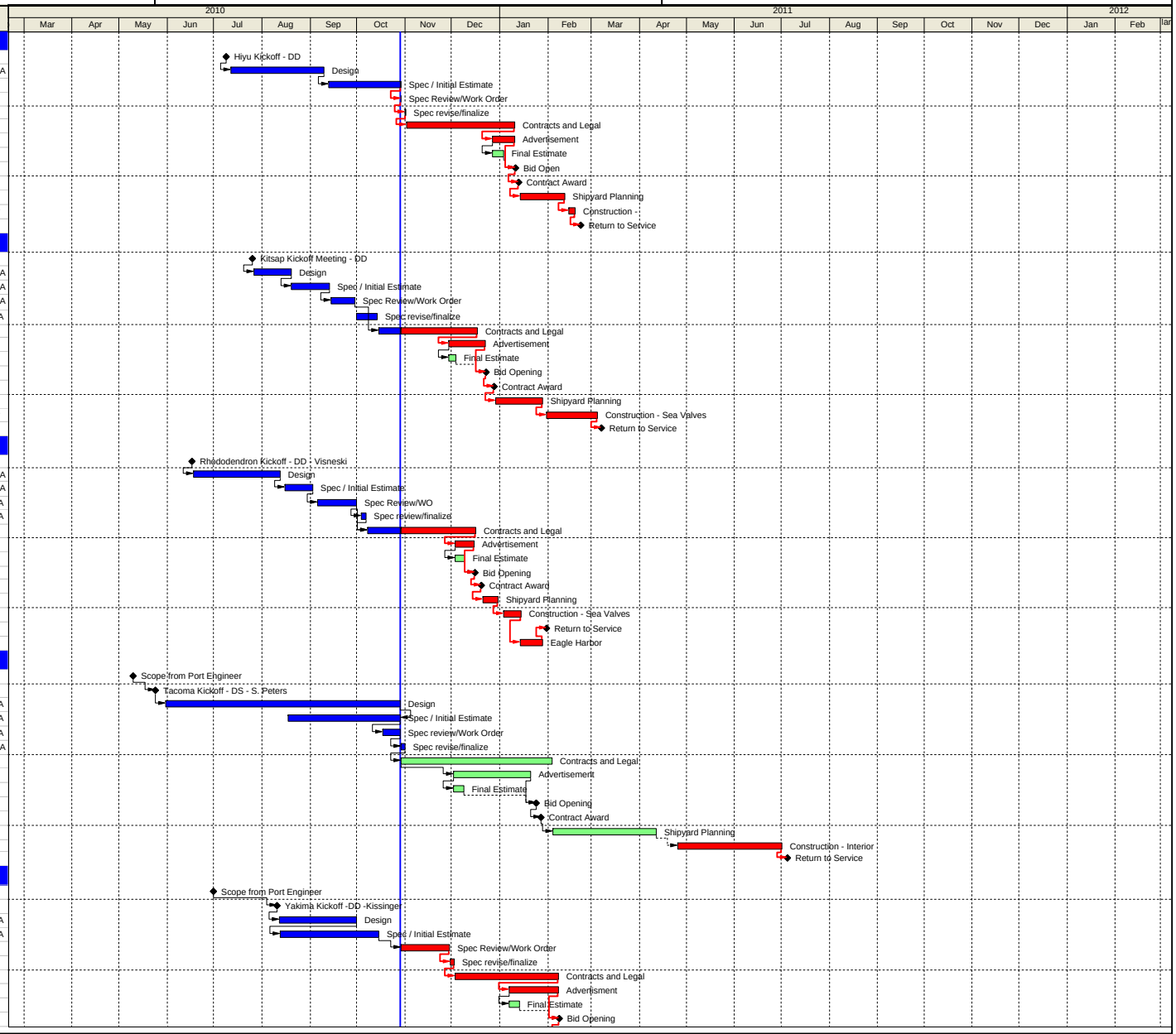
Appendix H

Contracting Process and Contractual Requirements



Fiscal Year: July 01, 2010 - June 30, 2011
Current
Legislative Planned
Show Comments
Green Sheet
Reset!
Save
FY 2010 - 11
July
August
September
October
November
December
January
February
March
April
May
June
Tacoma
Wenatchee
Puyallup
Spokane
Walla Walla
Hyak
Kaleetan
Elwha
Yakima
Issaquah
Kittitas
Kitsap
Cathlamet
Chelan
Sealth
Evergreen State
Klahowya
Tillikum
Chetzemoka
Salish
Rhododendron
Hiyu
Kalama
Skagit
Steilacoom II
Service Impacts
Interior / Piping / PA
Spokane Dockside - ESY
Sea Valves
Car tunnel paint
Structural / Maintenance
DCI
Kittitas - DS - Topside Paint
Trials and Training
188, 144 Bremerton
2-144 car Bremerton
3-144 car Anacortes
124-car, 144-car, Seattle/Bremerton
Add Vessel to Layup
Show Vessel Dates
Sort Vessels
Add Footnote Row
Visual Legend
Unsaved
Schedule Change
Holiday
Today
Other Marker Tools
Eraser
Tentative
Apply
Clear
Route Marker Tools
Seattle / Bainbridge
Seattle / Bremerton
Fauntleroy / Vashon / Southworth
Point Defiance / Tahlequah
Edmonds / Kingston
Mukilteo / Clinton
Port Townsend / Keystone
Anacortes / San Juan Islands
San Juans (Interisland)
Anacortes / Sidney
Layup Marker Tools
Trials & Training
Eagle Harbor
Dockside
Standby
Annual Inspection
Drydock
Decommissioned
Other
Increased Capacity
Reduced Capacity
Current User: WSDOT\BellJud Vessel Maintenance
Last Updated: November 03, 2010 07:42:28 by WSDOT\BellJud

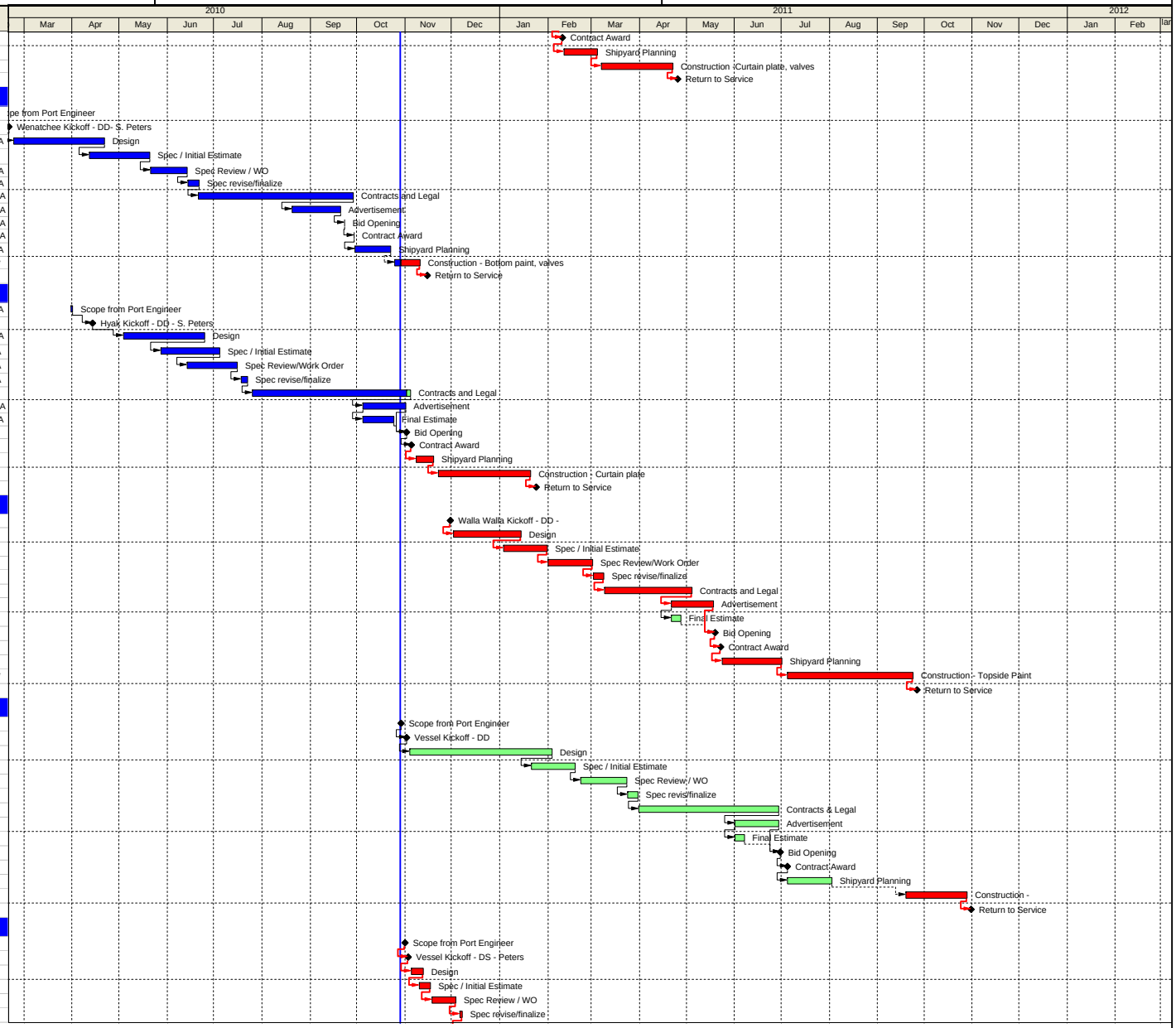
Activity ID	Activity Name	Original Duration	Start	Finish
VC-6 Hiyu		81	09-Jul-10 A	22-Feb-11
02	Hiyu Kickoff - DD	0	09-Jul-10 A	
03	Design	21	12-Jul-10 A	10-Sep-10 A
04	Spec / Initial Estimate	14	13-Sep-10 A	29-Oct-10
05	Spec Review/Work Order	1	29-Oct-10	29-Oct-10
06	Spec revise/finalize	1	01-Nov-10	01-Nov-10
07	Contracts and Legal	45	02-Nov-10	10-Jan-11
08	Advertisement	10	27-Dec-10	10-Jan-11
09	Final Estimate	5	27-Dec-10	03-Jan-11
10	Bid Open	0	11-Jan-11	
11	Contract Award	0	13-Jan-11	
12	Shipyard Planning	20	14-Jan-11	11-Feb-11
13	Construction -	5	14-Feb-11	18-Feb-11*
14	Return to Service	0	22-Feb-11*	
VC-4 Kitsap		183	26-Jul-10 A	07-Mar-11
02	Kitsap Kickoff Meeting - DD	0	26-Jul-10 A	
03	Design	21	27-Jul-10 A	20-Aug-10 A
04	Spec / Initial Estimate	21	20-Aug-10 A	13-Sep-10 A
05	Spec Review/Work Order	21	14-Sep-10 A	30-Sep-10 A
06	Spec revise/finalize	5	01-Oct-10 A	14-Oct-10 A
07	Contracts and Legal	45	15-Oct-10 A	17-Dec-10
08	Advertisement	18	29-Nov-10	22-Dec-10
09	Final Estimate	5	29-Nov-10	03-Dec-10
10	Bid Opening	0	23-Dec-10	
11	Contract Award	0	28-Dec-10	
12	Shipyard Planning	21	29-Dec-10	28-Jan-11
13	Construction - Sea Valves	24	31-Jan-11	04-Mar-11*
14	Return to Service	0	07-Mar-11*	
VC-6 Rhododendron		263	17-Jun-10 A	31-Jan-11
02	Rhododendron Kickoff - DD - Visneski	0	17-Jun-10 A	
03	Design	42	18-Jun-10 A	13-Aug-10 A
04	Spec / Initial Estimate	10	16-Aug-10 A	03-Sep-10 A
05	Spec Review/WO	21	06-Sep-10 A	01-Oct-10 A
06	Spec review/finalize	5	04-Oct-10 A	07-Oct-10 A
07	Contracts and Legal	52	08-Oct-10 A	16-Dec-10
08	Advertisement	9	03-Dec-10	15-Dec-10
09	Final Estimate	5	03-Dec-10	09-Dec-10
10	Bid Opening	0	16-Dec-10	
11	Contract Award	0	20-Dec-10	
12	Shipyard Planning	7	21-Dec-10	30-Dec-10
13	Construction - Sea Valves	10	03-Jan-11	14-Jan-11*
14	Return to Service	0	31-Jan-11*	
15	Eagle Harbor	10	14-Jan-11	28-Jan-11*
VC-1 Tacoma		340	10-May-10 A	05-Jul-11
01	Scope from Port Engineer	0	10-May-10 A	
02	Tacoma Kickoff - DS - S. Peters	0	24-May-10 A	
03	Design	64	31-May-10 A	29-Oct-10 A
04	Spec / Initial Estimate	32	18-Aug-10 A	29-Oct-10 A
05	Spec review/Work Order	6	18-Oct-10 A	29-Oct-10 A
06	Spec revise/finalize	5	29-Oct-10 A	01-Nov-10 A
07	Contracts and Legal	64	01-Nov-10 A	03-Feb-11
08	Advertisement	33	02-Dec-10	20-Jan-11
09	Final Estimate	5	02-Dec-10	08-Dec-10
10	Bid Opening	0	24-Jan-11	
11	Contract Award	0	27-Jan-11	
12	Shipyard Planning	45	04-Feb-11	11-Apr-11
13	Construction - Interior	49	25-Apr-11	01-Jul-11*
14	Return to Service	0	05-Jul-11*	
VC-3 Yakima		172	01-Jul-10 A	25-Apr-11
01	Scope from Port Engineer	0	01-Jul-10 A	
02	Yakima Kickoff -DD -Kissinger	0	11-Aug-10 A	
03	Design	15	12-Aug-10 A	01-Oct-10 A
04	Spec / Initial Estimate	21	13-Aug-10 A	15-Oct-10 A
05	Spec Review/Work Order	19	29-Oct-10	29-Nov-10
06	Spec revise/finalize	3	30-Nov-10	02-Dec-10
07	Contracts and Legal	44	03-Dec-10	07-Feb-11
08	Advertisment	21	07-Jan-11	07-Feb-11
09	Final Estimate	5	07-Jan-11	13-Jan-11
10	Bid Opening	0	08-Feb-11	



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining ...

TASK filter: All Activities

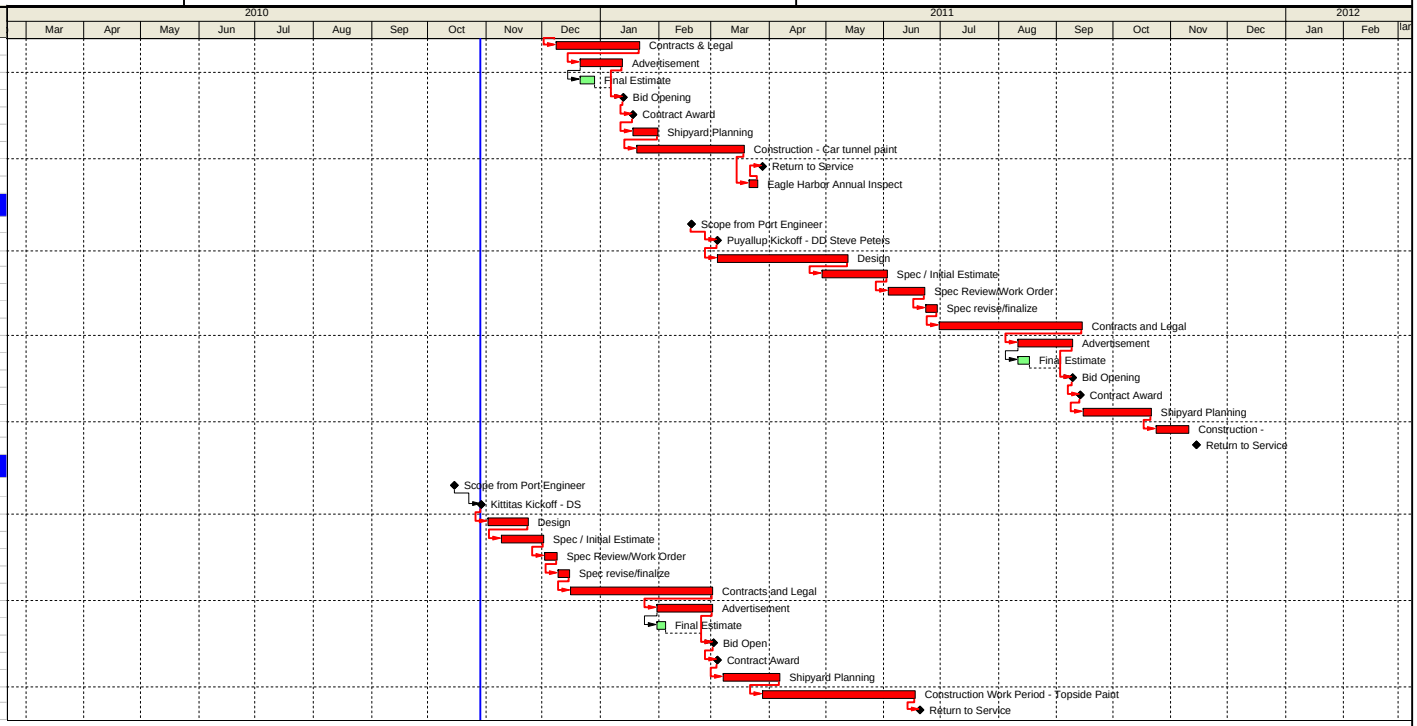
Activity ID	Activity Name	Original Duration	Start	Finish
11	Contract Award	0	10-Feb-11	
12	Shipyard Planning	15	11-Feb-11	04-Mar-11
13	Construction -Curtain plate, valves	34	07-Mar-11	22-Apr-11*
14	Return to Service	0	25-Apr-11*	
VC-1 Wenatchee		186	05-Feb-10 A	15-Nov-10
01	Scope from Port Engineer	0	05-Feb-10 A	
02	Wenatchee Kickoff - DD- S. Peters	0	19-Feb-10 A	
03	Design	43	22-Feb-10 A	21-Apr-10 A
04	Spec / Initial Estimate	32	12-Apr-10 A	20-May-1...
05	Spec Review / WO	21	21-May-10 A	14-Jun-10 A
06	Spec revise/finalize	6	14-Jun-10 A	21-Jun-10 A
07	Contracts and Legal	65	21-Jun-10 A	29-Sep-10 A
08	Advertisement	21	20-Aug-10 A	20-Sep-10 A
10	Bid Opening	0	23-Sep-10 A	23-Sep-10 A
11	Contract Award	0	29-Sep-10 A	29-Sep-10 A
12	Shipyard Planning	17	30-Sep-10 A	22-Oct-10 A
13	Construction - Bottom paint, valves	14	25-Oct-10 A	10-Nov-10*
14	Return to Service	0	15-Nov-10*	
VC-3 Hyak		330	31-Mar-10 A	24-Jan-11
01	Scope from Port Engineer	0	31-Mar-10 A	01-Apr-10 A
02	Hyak Kickoff - DD - S. Peters	0	14-Apr-10 A	
03	Design	60	04-May-10 A	25-Jun-10 A
04	Spec / Initial Estimate	11	28-May-10 A	05-Jul-10 A
05	Spec Review/Work Order	30	14-Jun-10 A	16-Jul-10 A
06	Spec revise/finalize	5	19-Jul-10 A	23-Jul-10 A
07	Contracts and Legal	63	26-Jul-10 A	04-Nov-10
08	Advertisement	12	05-Oct-10 A	01-Nov-10 A
09	Final Estimate	6	05-Oct-10 A	25-Oct-10 A
10	Bid Opening	0	02-Nov-10 A	
11	Contract Award	0	05-Nov-10	
12	Shipyard Planning	9	08-Nov-10	19-Nov-10
13	Construction - Curtain plate	39	22-Nov-10	20-Jan-11*
14	Return to Service	0	24-Jan-11*	
VC-2 Walla Walla		206	30-Nov-10	26-Sep-11
02	Walla Walla Kickoff - DD -	0	30-Nov-10	
03	Design	30	02-Dec-10	14-Jan-11
04	Spec / Initial Estimate	20	03-Jan-11	31-Jan-11
05	Spec Review/Work Order	20	01-Feb-11	01-Mar-11
06	Spec revise/finalize	5	02-Mar-11	08-Mar-11
07	Contracts and Legal	40	09-Mar-11	04-May-11
08	Advertisement	20	21-Apr-11	18-May-11
09	Final Estimate	5	21-Apr-11	27-Apr-11
10	Bid Opening	0	19-May-11	
11	Contract Award	0	23-May-11	
12	Shipyard Planning	28	24-May-11	01-Jul-11
13	Construction - Topside Paint	58	05-Jul-11	23-Sep-11*
14	Return to Service	0	26-Sep-11*	
VC-3 Kaleetan		250	29-Oct-10	31-Oct-11
01	Scope from Port Engineer	0	29-Oct-10	
02	Vessel Kickoff - DD	0	02-Nov-10	
03	Design	60	04-Nov-10	03-Feb-11
04	Spec / Initial Estimate	21	21-Jan-11	18-Feb-11
05	Spec Review / WO	21	22-Feb-11	23-Mar-11
06	Spec revis/finalize	5	24-Mar-11	30-Mar-11
07	Contracts & Legal	64	31-Mar-11	29-Jun-11
08	Advertisement	21	01-Jun-11	29-Jun-11
09	Final Estimate	5	01-Jun-11	07-Jun-11
10	Bid Opening	0	30-Jun-11	
11	Contract Award	0	05-Jul-11	
12	Shipyard Planning	21	05-Jul-11	02-Aug-11
13	Construction -	30	19-Sep-11	28-Oct-11*
14	Return to Service	0	31-Oct-11*	
VC-4 Chelan		97	01-Nov-10	28-Mar-11
01	Scope from Port Engineer	0	01-Nov-10	
02	Vessel Kickoff - DS - Peters	0	03-Nov-10	
03	Design	5	05-Nov-10	12-Nov-10
04	Spec / Initial Estimate	5	10-Nov-10	17-Nov-10
05	Spec Review / WO	10	18-Nov-10	03-Dec-10
06	Spec revise/finalize	2	06-Dec-10	07-Dec-10



Remaining Level of Effort
Actual Work
Actual Level of Effort
Remaining ...

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Start	Finish
07	Contracts & Legal	30	08-Dec-10	21-Jan-11
08	Advertisement	15	21-Dec-10	12-Jan-11
09	Final Estimate	5	21-Dec-10	28-Dec-10
10	Bid Opening	0	13-Jan-11	
11	Contract Award	0	18-Jan-11	
12	Shipyard Planning	10	18-Jan-11	31-Jan-11
13	Construction - Car tunnel paint	40	20-Jan-11	18-Mar-11*
14	Return to Service	0	28-Mar-11*	
15	Eagle Harbor Annual Inspect	5	21-Mar-11	25-Mar-11*
VC-1 Puyallup		185	18-Feb-11	14-Nov-11
01	Scope from Port Engineer	0	18-Feb-11	
02	Puyallup Kickoff - DD Steve Peters	0	04-Mar-11	
03	Design	49	04-Mar-11	12-May-11
04	Spec / Initial Estimate	24	29-Apr-11	02-Jun-11
05	Spec Review/Work Order	14	03-Jun-11	22-Jun-11
06	Spec revise/finalize	5	23-Jun-11	29-Jun-11
07	Contracts and Legal	53	30-Jun-11	14-Sep-11
08	Advertisement	21	11-Aug-11	09-Sep-11
09	Final Estimate	5	11-Aug-11	17-Aug-11
10	Bid Opening	0		09-Sep-11
11	Contract Award	0		13-Sep-11
12	Shipyard Planning	27	15-Sep-11	21-Oct-11
13	Construction -	14	24-Oct-11	10-Nov-11*
14	Return to Service	0	14-Nov-11*	
VC-4 Kittitas		157	15-Oct-10 A	20-Jun-11
01	Scope from Port Engineer	0	15-Oct-10 A	
02	Kittitas Kickoff - DS	0	29-Oct-10	
03	Design	15	02-Nov-10	23-Nov-10
04	Spec / Initial Estimate	14	09-Nov-10	01-Dec-10
05	Spec Review/Work Order	5	02-Dec-10	08-Dec-10
06	Spec revise/finalize	5	09-Dec-10	15-Dec-10
07	Contracts and Legal	50	16-Dec-10	01-Mar-11
08	Advertisement	21	31-Jan-11	01-Mar-11
09	Final Estimate	5	31-Jan-11	04-Feb-11
10	Bid Open	0	02-Mar-11	
11	Contract Award	0	04-Mar-11	
12	Shipyard Planning	22	07-Mar-11	06-Apr-11
13	Construction Work Period - Topside ...	59	28-Mar-11	17-Jun-11*
14	Return to Service	0	20-Jun-11*	



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining ...

TASK filter: All Activities

Vessel Maintenance, Preservation & Engineering
Lessons Learned Process

Process

The main focus of a lessons learned system is the gathering and sharing of knowledge for the purpose of improving project delivery.

Steps of the process:
A. Identify
B. Validate
C. Store
D. Report
E. Implement
F. Post implementation analysis

A. Identify

The first step in the process is the identification of lessons learned. Lessons may be triggered by change orders (COs), condition reports (CRs), end of project reviews, monthly status reports, or any other means by which a problem and subsequent solution is either documented or discussed.

Lessons are to be submitted to the Project Administrator (PA) in the Vessel Business Group, using the Lessons Learned Form or by submitting notes, COs, CRs, or other documents with sufficient information for the PA to draft the form. A form drafted by the PA will be returned to the initiator for approval of content before being submitted to the Steering Committee.

The Project Administrator will review the submitted form for format to

remove slang or inappropriate language,
ensure submission is written in conversational language using active verbs,
ensure clear and concise verbiage is used, and
ensure acronyms are defined and can be understood by all.

Lessons are not to be submitted on projects that have open claims.

B. Validate

The Lessons Learned Form will then be forwarded to the Lessons Learned Steering Committee, consisting of

Senior Port Engineer, Vessel Preservation
Vessel Design Chief Naval Architect
Vessel Engineering Construction Manager
Vessel Business Group Manager

The committee will validate the submittal by

clarifying the description of the lesson (contacting the submitter, if necessary),
validating the recommendation and/or lesson learned,
verifying that the submission is authentic and properly categorized,
ensuring recommendations do not conflict with WSF or WSDOT policies,
and determining distribution of the lesson.

C. Store

Once the Steering Committee has validated the lesson learned, the document is returned to the Project Administrator for filing and distribution. Lessons Learned Forms will be stored on the network drive at G:\Vessel Business Group\Lessons Learned by the project Administrator which makes them available for viewing and reporting.

D. Report

Reports and newsletters will be generated using the information from the lesson. Some possible reports are:

Monthly or quarterly Reports – Reports participation, submittals and actions taken as a result of lessons,
Highlight and share lessons,
and multiple Occurrence Reports.

E. Implement

The Steering committee will meet periodically to determine the types of improvements, if any, which can be made using global lessons. A global lesson is one that has high monetary value, has occurred multiple times, has high educational value, or is an overall good way to do business. This information may be then used to implement a change to the project delivery program. That

change may come in the form of a revision to a manual, instructional letter, personal visits to share information, or an encouragement to meet and discuss.

F. Post-implementation Analysis

If improvements are made to the project delivery program an effort will be made to find appropriate performance measures to evaluate the success of the system.

6/2/2010

MV Tillikum 00-7913 Drydocking Closing meeting

ATTENDEES

Vessel Design: Doug Russell, Chris Way, Bill Van Doorn; Vessel Construction: Cotty Fay, Larry Mikelsen
Maintenance/Preservation: Tim Browning; Vessel: Scott Calhoun;
Vessel Business Group: Ron Logghe, Judy Bell

COMMENTS ON PROJECT

Preliminary Engineering: None on this project.

Contracts & Legal: The WO was delayed for review of funding sources at the Pre-Bid Level.

Award: The WOA approval was delayed primarily due to the length of time to clarify addition of contingency funding, clarification, and modification to adjust funding sources. The WOA did not become active until after the MV Tillikum left the shipyard. This resulted in WSF payrolls being charged to a different work order, requiring the need to balance both work orders by journal vouchers. It also caused delays in paying the Contractor's initial invoice and processing of the change orders.

Specifications:
Zinc Renewal- The specification notes bolt on zincs in the sea chests. Only one in nine was bolted, the rest were welded. Authorized change order to install studs to accept bolt on zincs to avoid hot work in sea chests in the future. Cotty made the correction in the Specification template.

Construction:
Rudder Inspection- The #2 rudder failed its air test; #1 rudder passed easily. A few welds were made on #2 and a doubler added to accept the bottom drain plug. Cotty thinks it could be a grounding issue. Scott thinks it could be the pressure put on the #2 end rudder after backing out of Vashon and Southworth.

Outboard Eagle Seals- The plan here is to replace the seals and inspect the liner every five years where WSF supplies the replacement seals. This time we choose not to remove the propellers, requiring the subcontractor Sound Propeller to vulcanize the seals in place. Normally, this procedure is not a problem, but the technician from Sound had some contamination on the mold where the lip on two seals were torn (stuck to the mold) when the mold was unclamped. The result was a leaking seal.

- If we're going to replace the seals and most likely grind the liner, the propeller should be removed and hung during the inspection and repair.
- Spare Seals: it turns out that we only had one ship set of seals and currently have none in inventory.
- The liners on the Tillikum have now been ground to the minimum diameter and cannot be ground again. We need to have spares made for the next evolution (5) years.

CAPAC System Renewal- This work went well with the help and oversight of Eagle Harbor personnel.

Audio Gauge Hull- We found some areas on the wind and water that need to be monitored. The data has been provided to engineering to incorporate the readings into the hull expansion drawing along with all other readings.

Overboard Discharge Renewal- Two of the overboards needed additional work, which might have been avoided if found in the shipcheck. One overboard pipe was set at a different angle due to piping mods which were not recorded. The angle change left an elliptical hole in the shell, which had been bridged poorly by welding, requiring the shell be replaced with an 18 inch diameter insert. One overboard valve was fitted to a 4 inch spool piece on the hull which was not reinforced with any brackets. This deviation from the 1995 plan was also not recorded.

Painting of the Hull below the Waterline Antifouling full coat: This vessel has 18-24 inches of green slime up on the green hull because splash line is too low. Need Anti-Foul paint in this zone.

Clad Welding- Found a pair of pits in No. 1 Engine Room between frames 8 & 9 starboard side, approximately 6' off centerline at the forward end of the engine.

ACTION ITEMS

Drawings:
Sewage Overboard Discharge Removal – make sure drawing has been updated.
Outer Stern Tube Nut repair – the weld joint is not per drawing as the joint is flush and concentric with the stern tube with the joint a couple of inches away from landing for the rope guard weld attachment surface area.

Specifications:
Work out a change to the specification to encourage the shipyard to complete the hull wash within the specified period of 24 hours after landing the gangway. Delay takes away from time to find and fix steel corrosion.

This yard uses an ultrahigh pressure water blast instead of grit blasting to reduce the amount of grit disposal. During this drydock evolution the yard failed to cover up the ADIS transducers and damaged 3 out of 4 of the units. They also water blasted into vent air supply trunks on the car deck in four places requiring cleaning and replacement of the filters. Add a hold point for the WSF Inspector to sign-off that wood plugs are installed in all openings prior to the start of hull washdown work.

Scott Calhoun:
Send Cotty information (MSDS) on paint your crew is using in #1 Engine Room for adding to paint history.

New work:
Add a range of permanent welding grounds connections to the hull at the keel for drydock work and some on the main deck for dockside work.

The pipe guard at the top of the curtain plate for both rescue boat stations is badly deteriorated and needs to be replaced.

The coating has failed and the deck area is badly corroded on the Car Deck outer wing just inboard of the curbing on both sides of the vessel.

The overall coating system of white in Curtain Plate Exterior Zone 1 is dead and should be considered for a complete refinish in the next five years.

Consider raising waterline (AF Coating) 18 to 24 inches to control development of scum line. The new line would require a locating weld bead every 4-5 feet resulting in burning the interior coating.

Lessons Learned: Inspector sign-off before blasting, Enforce 24-Hr washdown period

See Lessons Learned file, G:\Vessel Business Group\PROJECT ADMINISTRATION\Lessons Learned

Appendix I

Comparing Planned vs. Actual SY Out-of-Service Time

Availability Data 2005 through 2010

Dry Dock Availabilities

Contract Number	Vessel Name		Start Date	Orig End Date	Actual End Date	Actual Days	Contract Days	Delta Days	Weeks	Award Cost	Final cost	% Change	$/WK	
6887	Elwha	DD	2/28/2005	3/18/2005	3/18/2005	19	19	0	2.71	$ 325,936	$ 411,213	26%	$ 151,500	
6900	Yakima	DD	2/22/2005	5/27/2005	5/27/2005	95	95	0	13.57	$ 1,886,433	$ 2,124,821	13%	$ 156,566	End 6/10 awaiting inclining results
6956	E State	DD	7/15/2005	7/24/2005	7/24/2005	10	10	0	1.43	$ 85,585	$ 90,317	6%	$ 63,222	Start/End changed from 6/1 and 6/10
6972	Tillikum	DD	6/13/2005	7/1/2005	6/29/2005	17	19	-2	2.43	$ 588,725	$ 534,944	-9%	$ 220,271	
7037	Hyak	DD	10/17/2005	11/4/2005	11/10/2005	25	19	6	3.57	$ 435,658	$ 441,199	1%	$ 123,536	
7044	Kitsap	DD	11/28/2005	1/27/2006	1/27/2006	61	61	0	8.71	$ 1,582,565	$ 1,748,594	10%	$ 200,658	
7055	Rhododendron	DD	2/13/2006	2/24/2006	3/3/2006	19	12	7	2.71	$ 87,886	$ 147,466	68%	$ 54,330	
7057	Chelan	DD	1/30/2006	2/24/2006	2/24/2006	26	26	0	3.71	$ 433,767	$ 409,674	-6%	$ 110,297	
7066	Spokane	DD	1/30/2006	2/10/2006	2/10/2006	12	12	0	1.71	$ 516,197	$ 398,855	-23%	$ 232,665	
7067	Wenatchee	DD	1/9/2006	1/27/2006	1/26/2006	18	19	-1	2.57	$ 773,345	$ 644,264	-17%	$ 250,547	
7075	Yakima	DD	3/20/2006	4/7/2006	4/6/2006	18	19	-1	2.57	$ 375,620	$ 278,058	-26%	$ 108,134	
7166	Hiyu	DD	6/19/2006	6/23/2006	6/22/2006	4	5	-1	0.57	$ 95,106	$ 95,037	0%	$ 166,315	
7175	Elwha	DD	7/5/2006	10/13/2006	11/22/2006	141	101	40	20.14	$ 2,487,264	$ 2,802,160	13%	$ 139,114	Passenger / Prominade Deck Steel Repairs
7183	Kaleetan	DD	9/18/2006	10/6/2006	10/7/2006	20	19	1	2.86	$ 386,402	$ 472,148	22%	$ 165,252	
7208	Puyallup	DD	10/23/2006	11/3/2006	11/3/2006	12	12	0	1.71	$ 671,854	$ 768,133	14%	$ 448,078	
7210	Cathlamet	DD	12/18/2006	2/2/2007	2/9/2007	54	47	7	7.71	$ 1,255,478	$ 1,279,000	2%	$ 165,796	End 3/20 due to post redelivery requirements
7238	Tacoma	DD	2/7/2007	3/10/2007	3/10/2007	31	31	0	4.43	$ 793,115	$ 741,934	-6%	$ 167,533	
7253	Walla Walla	DD	2/12/2007	3/2/2007	3/2/2007	19	19	0	2.71	$ 545,519	$ 611,251	12%	$ 225,198	End 3/30 due to post redelivery requirements
7222	Issaquah	DD	3/5/2007	4/20/2007	4/20/2007	47	47	0	6.71	$ 1,224,032	$ 1,188,616	-3%	$ 177,028	End 5/14 due to spare prop repairs
7284	Klickitat	DD	5/14/2007	6/14/2007	6/14/2007	48	29	0	6.86	$ 344,520	$ 577,334	68%	$ 84,195	Start changed to 5/14. End 6/20 for inclining
7255	Illahee 1	DD	5/16/2007	6/12/2007	6/14/2007	30	28	2	4.29	$ 582,519	$ 684,194	17%	$ 159,645	End 6/21 due to post redelivery requirements
7286	Kittitas	DD	5/21/2007	7/13/2007	7/13/2007	54	54	0	7.71	$ 1,380,400	$ 1,447,110	5%	$ 187,588	End 7/21 due to post redelivery requirements
7319	Klahowya	DD	10/15/2007	11/2/2007	11/7/2007	24	19	5	3.43	$ 492,565	$ 679,307	38%	$ 198,131	
7415	Hyak	DD	11/26/2007	12/14/2007	2/8/2008	75	19	56	10.71	$ 527,373	$ 1,302,578	147%	$ 121,574	Unexpected Hull steel replacement
7449	Chelan	DD	1/14/2008	2/8/2008	2/8/2008	26	26	0	3.71	$ 363,167	$ 657,323	81%	$ 176,972	
7475	Spokane	DD	2/4/2008	2/15/2008	2/18/2008	15	12	3	2.14	$ 575,873	$ 762,109	32%	$ 355,651	
7511	Kaleetan	DD	2/27/2008	3/21/2008	3/21/2008	24	24	0	3.43	$ 268,852	$ 849,635	216%	$ 247,810	
7549	Tillakum	DD	4/28/2008	5/16/2008	5/17/2008	20	19	1	2.86	$ 684,955	$ 954,944	39%	$ 334,230	
7554	E State	DD	4/30/2008	6/9/2008	6/9/2008	41	41	0	5.86	$ 1,183,807	$ 1,560,181	32%	$ 266,372	
7530	Yakima	DD	5/19/2008	7/25/2008	7/25/2008	68	68	0	9.71	$ 1,454,273	$ 1,942,005	34%	$ 199,912	
7562	Wenatchee	DD	7/23/2008	8/18/2009	8/19/2008	28	28	0	4.00	$ 1,158,861	$ 1,195,940	3%	$ 298,985	
7548	Sealth	DD	8/25/2008	10/24/2008	10/24/2008	40	40	0	5.71	$ 1,352,465	$ 1,471,738	9%	$ 257,554	
7604	Elwha	DD	10/28/2008	2/19/2008	12/23/2008	57	54	3	8.14	$ 341,857	$ 803,915	135%	$ 98,726	
7603	Puyallup	DD	11/29/2008	12/24/2008	12/24/2008	26	26	0	3.71	$ 1,047,734	$ 1,012,523	-3%	$ 272,602	
7570	Hiyu 2	DD	11/10/2008	12/5/2008	12/23/2008	44	26	18	6.29	$ 1,546,753	$ 1,801,486	16%	$ 286,600	Unexpected Hull steel replacement
7617	Kitsap	DD	1/5/2009	2/6/2009	2/14/2009	41	33	8	5.86	$ 1,546,753	$ 1,801,486	16%	$ 307,571	
7650	Walla Walla	DD	2/9/2009	3/13/2010	3/27/2009	47	33	14	6.71	$ 2,040,610	$ 2,490,948	22%	$ 370,992	Unexpected Hull steel replacement
7665	Cathlemet	DD	2/17/2009	3/20/2009	3/27/2009	39	32	7	5.57	$ 895,167	$ 1,426,385	59%	$ 256,018	
7694	Issaquah	DD	4/1/2009	5/8/2009	5/1/2009	31	38	-7	4.43	$ 679,229	$ 903,416	33%	$ 203,997	
7703	Kaleetan	DD	5/18/2009	6/19/2009	6/19/2009	33	33	0	4.71	$ 1,283,709	$ 1,480,497	15%	$ 314,045	End 6/24 due to post redelivery requirements
7799	Klahowya	DD	8/3/2009	10/9/2009	11/2/2009	92	68	24	13.14	$ 1,998,682	$ 3,284,629	64%	$ 249,917	Passenger Deck Steel repairs
7829	Tacoma	DS	10/5/2009	10/23/2009	10/25/2009	21	19	2	3.00	$ 1,003,453	$ 1,300,969	19%	$ 273,905	
7807	Kittitas	DD	10/5/2009	11/13/2009	11/16/2009	43	40	3	6.14	$ 1,290,269	$ 1,753,972	36%	$ 285,530	
7863	Chelan	DD	1/4/2010	2/26/2010	2/24/2010	52	54	-2	7.43	$ 1,942,635	$ 1,996,152	3%	$ 268,713	
7854	Elwha	DD	2/15/2010	3/26/2010	3/26/2010	40	40	0	5.71	$ 919,775	$ 1,074,476	17%	$ 188,033	End 4/16 due to post redelivery requirements
						1707		193				1252%	$9,591,309	

DD Delta Days	High 56 40 24 18 14
5	14 days or above
1	8-days
8	3-7 days
31	2 or less days

DD Data	45 Events
Average Period	37.9
Avg Extension	4.3
Avg % Growth	27.82%
Avg 4/Wk	$ 213,140

Note 1 Illahee 5/16/2007 DD originally scheduled for 4 weeks 2/5 to 3/2 2007 Assumed to be 19 working days plus a holiday to calculate orig end date.

Note 2 Hiyu 7570 Tim Browning: Delayed start 11/10 planned end 12/05. Extended to 12/23 but snow storm and weather delayed until 1/06. Assume 12/23 actual end date.

Dockside Availabilities

	Vessel Name		Start Date	Orig End Date	Actual End Date	Actual Days	Contract Days	Delta Days	Weeks	Contract Cost	Final cost	% Change Orders	$/WK		
6973	Klahowya	DS	7/11/2005	9/14/2005	9/15/2005	67	66	1	9.57	$ 963,485	$1,078,457	12%	$ 112,675		
7039	Hyak	DS	11/7/2005	2/17/2006	3/17/2006	131	103	28	18.71	$ 3,400,031	$4,565,302	34%	$ 243,947	MDE's	
7076	Kaleetan	DS	3/13/2006	6/2/2006	6/2/2006	82	82	0	11.71	$ 1,299,998	$1,473,897	13%	$ 125,820		
7083	Sealth	DS	6/12/2006	9/22/2006	9/29/2006	110	103	7	15.71	$ 4,365,032	$5,156,541	18%	$ 328,144	TS Paint	
7110	Tillikum	DS	3/20/2006	5/26/2006	5/25/2006	67	68	-1	9.57	$ 1,125,742	$1,203,877	7%	$ 125,778		
7184	Rhododendron	DS	9/11/2006	12/1/2006	12/8/2006	89	82	7	12.71	$ 896,532	$1,031,002	15%	$ 81,090	TS Paint	
7221	Hiyu	DS	11/13/2006	12/22/2006	12/22/2006	40	40	0	5.71	$ 223,646	$ 254,932	14%	$ 44,613		
7294	Kaleetan	DS	4/23/2007	5/11/2007	5/11/2007	19	19	0	2.71	$ 142,204	$ 149,581	5%	$ 55,109		
7357	Tacoma *	DS	8/13/2007	11/16/2007	11/16/2007	96	96	0	13.71	$ 2,321,391	$2,541,592	9%	$ 185,324	TS Paint	
7385	Issaquah**	DS	7/23/2007	10/12/2007	10/17/2007	87	82	5	12.43	$ 2,830,403	$2,967,931	5%	$ 238,799	TS Paint	
7416	Hyak	DS	2/14/2008	3/14/2008	3/14/2008	30	30	0	4.29	$ 1,043,764	$1,045,505	0%	$ 243,951		
7486	Wenatchee	DS	3/24/2008	7/1/2008	7/4/2008	103	100	3	14.71	$ 2,285,131	$2,361,870	3%	$ 160,515	TS Paint	Start date moved out 21 days
7547	Puyallup	DS	8/22/2008	11/21/2008	11/28/2008	99	92	7	14.14	$ 2,999,880	$3,587,371	20%	$ 253,652	Security	
7607	Rhododendron	DS	1/15/2009	2/6/2009	2/16/2009	33	23	10	4.71	$ 368,676	$ 571,683	55%	$ 121,266		
7635	Elwha	DS	2/16/2009	3/6/2009	3/6/2009	19	19	0	2.71	$ 216,039	$ 241,137	12%	$ 88,840		
7683	Spokane	DS	4/6/2009	7/10/2009	7/17/2009	103	96	7	14.71	$ 3,524,114	$3,888,240	10%	$ 264,249	TS Paint	Galley Pass
7723	E State	DS	4/27/2009	7/3/2009	7/3/2009	68	68	0	9.71	$ 1,754,623	$1,939,887	11%	$ 199,694	TS Paint	end 7/25 post redelivery req'ts
7800	Walla Walla	DS	7/27/2009	9/4/2009	9/4/2009	40	40	0	5.71	$ 743,676	$1,226,033	65%	$ 214,556		
7635	Elwha	DS	10/28/2009	12/24/2009	12/24/2009	58	58	0	8.29	$ 690,074	$ 821,715	19%	$ 99,173		
* and ** dates provided by Tim Browning's email 10/21/2010						1341		74				328%	$3,187,197		

* 7357 Tacoma Original dates 7/23/07-10/12/07 Actuals were same period started 8/13/07-11/16/07. No Extension

**7385 Issaquah original dates were 7/23/07 – 10/12/07, and the actuals were 7/23/07 – 10/17/07, a 5 day extension.

DS Delta Days	High 28
1	14 days or more
1	8 to 13 days
6	3- 7 days
11	2 days or less

DS Data	19 Events
Average Period	70.6
Avg Ext	3.9
Avg % Growth	17.25%
Avg $/Wk	$ 167,747

Appendix J

Route Impacts on VMP&I Projects

Route Impact Analysis Matrix (RIAM)

Route	Route Specific Influence Drivers for Maintenance, Preservation & Improvement Projects (Gnu 1)											
	Quantity of Fuel Burned (Main Engines)	Engine Load Factors (Includes star/stops)	Main Engine Operating Hours (at various loads)	Number of Passengers / Autos	Passenger Type (G.N. No.2)	Exposure to Weather Extremes (winds & waves)	Total Daily Operating Hours	One Way Trip Durations	SOLAS Requirements	Geographic Impact on VMP&I projects w/respect to EH Assistance	RIAM Score	Vessels / Vessel Classes normally assigned to these specific routes
Anacortes - Sidney	2	1	1	1	3	3	1	0	1	3	16	M/V Chelan & M/V Elwa
Anacortes - San Juan Islands	2	1	1	1	2	2	3	1	0	3	16	(1) Super Class - (substituted with) M/V Sealth
San Juan Interisland	1	1	1	1	3	2	1	2	0	2	14	M/V Evergreen State - (substituted with) M/V Stealth
Port Townsend - Keystone	1	1	1	2	3	3	1	1	0	3	16	64 Auto Ferry Class
Mukilteo - Clinton	2	2	2	2	1	1	2	2	0	2	16	(2) Issaquah Class Vessels
Edmonds - Kingston	3	1	3	2	1	2	2	1	0	2	17	(1) Jumbo Mark II Class with (1) Jumbo Class; or (2) Jumbo Class Vessels
Seattle - Bainbridge	3	1	3	3	3	1	3	2	0	1	20	(2) Jumbo Mark II Class Vessels
Seattle - Bremerton	3	1	3	3	2	1	3	1	0	1	18	Most varied route w/respect to assigned vessel capacity. (1) Issaquah with (1) Super; (1) Jumbo replaces the super in summer; Trend is for (2) Supers at a minimum.
Fauntleroy - Vashon	3	2	2	2	1	1	3	3	0	2	19	(1) Issaquah Class with (2) Evergreen State Class vessels
Pt. Defiance - Tahlequah	1	3	1	2	2	0	1	3	0	2	15	M/V Rhododendron with M/V Sealth as replacement.

General Notes:

1) In General, scores are assigned relative to one another, and also in accordance with how "negatively" they might impact the vessel or vessel systems with respect to accomplishing maintenance.
Higher scores from the influence drivers represent negative impacts from the route. The higher the RIAM score, the greater the overall negative impact of the route.
For example, frequent, short duration one way trips negatively impacts the "potential" for crews to perform maintenance during the voyage; However, as all WSF vessels shut down for some period of time every day, some of this required maintenance can and still does get accomplished. This impact is not considered as significant as the impact of fuel consumption. The true impact on vessel systems due to the total number of passengers is somewhat relative to the vessel size.

2) The type of "passenger service" has varying degrees of influence upon specific "types" of VMP&I activities. For purposes of this analysis, passenger service "types" are defined as follows:

a) Walk on Tourist (Level 2 impact)
b) Drive on Tourist (Short trips - some impact; Long trips - significant impact.)
c) Walk on Resident (Level 1 impact)
d) Drive on Resident (Short trips - minimal impact; Longer trips, more impact)

3) The frequency and degree of engine maintenance is largely dependent upon a number of factors. Engine Mfgrs. Requirements, total operating hours, fuel burned, load factors, all impact engine maintenance. Where applicable and possible, we have attempted to include route impacts on Auxiliary as well as Main Engine Maintenance events.

Appendix K

Evaluating Ongoing Maintenance and Preservation Costs
Associated with Proposed Improvement Projects

Improvement Life Cycle Cost Model for a New Improved Radar
This analysis assumes that WSF is replacing an existing radar before its interval

Acquisiton Cost Line Item	Staff Engineering or Consultant Labor	Shipyard or Supplier Labor or Materials
Ø Pre Installation Costs		
o Requirements Analysis	Yes	N/A
o Hardware and Software Development and Design	N/A	N/A
o Installation Specification Development	Yes	N/A
o Long Lead Materials	Yes	Yes
Ø Installation costs		
o Materials (Other than Long Lead Materials)	N/A	Yes
o Installation Labor	N/A	Yes
Ø Acquisition Integrated Logistics costs		
o Maintenance Planning and LCCM Input	Yes	N/A
o Supply Support : Planning and Initial Spare and Repair Parts	Yes	Yes
o Support and Test Equipment Procurement	Yes	Yes
o Required Manpower and Personnel Planning	No Change	No Change
o Initial Training and Training Support Planning	N/A	Yes
o Technical Data and Publications: Technical Manuals and Drawings	N/A	Yes
o Computer Resource: Sustainment Plans	N/A	N/A
o Facilities Requirements and building	N/A	N/A
o Packaging, Handling, Storage and Transportation	N/A	N/A
Ø Sustainment Support Costs		
o Manpower and Personnel	No Change	N/A
o Maintenance and Preservation (Hardware and Software)	Yes	Yes
o Emergent Long Lead Spares	N/A	Yes
o Spare and Repair Parts	N/A	Yes
o Energy	N/A	N/A
o Training	N/A	Yes
Ø Disposal costs	N/A	Yes

Appendix L

Vessel Route Suitability Matrices

Super Class Ferry - Vessel Route Suitability Score (VRSS)

Route	Route Requirements / Characteristics																			
	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities (See GN 5)	Passenger Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	2	3	3	3	3	3	3	3	3	13122	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	2	2	3	3	1	1	2	2	144	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	1	1	1	2	1	1	1	1	2	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	1	2	2	3	2	2	3	1	144	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	1	1	1	2	2	2	2	2	32	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	1	1	1	2	2	2	1	1	8	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	3	3	3	3	3	3	3	3	6561	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	1	1	1	2	2	1	1	1	4	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	1	1	1	2	1	1	1	1	2	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

Rhododendron Class Ferry - Vessel Route Suitability Score (VRSS)																			
Route	Route Requirements / Characteristics																		
	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities (See GN 5)	Vessel Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hiyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	0	1	1	1	0	1	1	1	1	0	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	2	2	2	1	2	2	2	1	64	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	3	3	1	1	3	3	3	3	729	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	1	1	1	2	2	2	1	1	8	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	1	1	1	1	2	2	1	1	4	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	1	1	1	1	2	2	1	1	4	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	1	1	1	1	2	2	1	1	4	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	1	1	1	2	2	2	1	1	8	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	3	3	3	3	3	3	3	3	6561	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

Jumbo Mark II Class Ferry - Vessel Route Suitability Score (VRSS)

Route	Route Requirements / Characteristics																			
	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities	Vessel Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	0	2	2	3	3	1	1	1	1	0	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	1	1	1	2	1	1	1	1	2	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	1	1	3	3	0	0	0	0	0	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	2	2	2	1	1	2	1	1	16	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	3	3	3	3	3	3	3	3	6561	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	3	3	3	3	3	3	3	3	6561	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	2	2	3	3	2	3	2	2	864	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	2	2	1	2	1	1	1	1	8	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	1	1	1	1	0	0	0	0	0	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

Jumbo Class Ferry - Vessel Route Suitability Score (VRSS)

Route	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities (See GN 5)	Vessel Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hiyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
	Route Requirements / Characteristics																		
Anacortes - Sidney	0	2	2	3	3	1	1	1	1	0	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	1	1	1	2	1	1	1	1	2	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	1	1	3	3	0	0	0	0	0	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	2	2	2	1	1	2	1	1	16	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	3	3	3	3	3	3	3	3	6561	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	2	2	3	3	3	3	3	3	2916	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	3	3	3	3	3	3	3	2	4374	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	2	2	1	2	1	1	1	1	8	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	1	1	1	1	0	0	0	0	0	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

Issaquah Class Ferry - Vessel Route Suitability Score (VRSS)

Route	Route Requirements / Characteristics																			
	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities (See GN 5)	Vessel Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hyu Class Ferry	Issaquah Class Ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	2	3	3	3	3	3	3	3	3	13122	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	2	2	1	2	1	2	2	2	64	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	2	2	3	2	1	1	1	1	24	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	3	3	3	3	3	3	3	3	6561	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	2	2	3	2	3	3	3	3	1944	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	2	2	3	2	3	3	3	3	1944	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	3	3	3	3	3	3	2	2	2916	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	3	3	3	3	3	3	2	2	2916	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah										0	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

Hiyu Class Ferry - Vessel Route Suitability Score (VRSS)

Route	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities (See GN 5)	Vessel Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hiyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	1	1	1	1	1	1	1	1	1	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	1	1	1	0	1	1	1	1	0	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	0	0	0	0	0	0	0	0	0	0	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	0	0	0	0	0	0	0	0	0	0	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	0	0	0	0	0	0	0	0	0	0	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	0	0	0	0	0	0	0	0	0	0	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon										0	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	1	2	1	1	1	1	1	1	2	4374	2916	384	2	0	0	0	6561	2

Route Requirements / Characteristics

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

Evergreen State Class Ferry - Vessel Route Suitability Score (VRSS)																			
Route	Route Requirements / Characteristics																		
	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities (See GN 5)	Vessel Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hiyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	0	2	2	2	2	3	3	3	3	0	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	3	3	3	3	3	3	3	3	6561	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	2	2	1	2	2	2	2	1	64	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	2	2	2	2	3	3	3	2	864	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	1	1	1	2	3	3	2	3	108	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	1	1	1	2	3	3	2	3	108	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	1	1	1	3	3	3	2	2	108	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	3	3	3	3	3	3	3	3	6561	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	2	2	2	3	2	2	2	2	384	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

144 Auto Class Ferry - Vessel Route Suitability Score (VRSS)

Route	Route Requirements / Characteristics																			
	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN5)	Vessel Sea-worthiness (See GN5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities	Vessel Size (LOA) v. Landing Maneuverability Requirements (See GN 5)	VRSS	64 Auto Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	0	2	2	3	3	3	3	3	3	0	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	2	2	3	3	2	2	2	2	576	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	2	2	3	3	2	2	2	1	288	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	3	3	3	3	3	3	3	3	6561	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	1	1	3	3	3	3	3	3	729	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	1	1	3	3	3	3	3	3	729	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	1	1	3	3	3	3	3	3	729	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	3	3	3	3	3	3	3	3	6561	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	2	2	3	3	3	3	3	3	2916	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.

64 Auto Class Ferry - Vessel Route Suitability Score (VRSS)

Route	Route Requirements / Characteristics																			
	SOLAS Requirements	Passenger Capacity	Vehicle Capacity	Vessel Speed Capabilities (See GN 5)	Vessel Sea-worthiness (See GN 5)	Vessel Size v. Community Infrastructure Limitations	Vessel Draft v. Terminal Water Depth	Vessel Loading / Discharge Arrangements v. Terminal Capabilities (See GN 5)	Vessel Maneuverability v. Landing Requirements (See GN 5)	VRSS	64 Auto car Ferry	144 Auto Ferry	Evergreen State Class Ferry	Hyu Class Ferry	Issaquah Class ferry	Jumbo Class Ferry	Jumbo Mark II Class Ferry	Rhododendron Class Ferry	Super Class Ferry
Anacortes - Sidney	0	1	1	3	3	3	3	2	3	0	0	0	0	0	13122	0	0	0	13122
San Juan Interisland	1	1	1	3	3	3	3	3	3	729	729	576	6531	1	64	2	2	64	144
Port Townsend - Keystone	1	3	3	3	3	3	3	3	3	6561	6561	288	64	0	24	0	0	729	2
Mukilteo - Clinton	1	1	1	3	3	3	3	2	3	486	486	6561	864	0	6561	16	16	8	144
Edmonds - Kingston	1	1	1	3	3	3	3	2	3	486	486	729	108	0	1944	6561	6561	4	32
Seattle - Bainbridge	1	1	1	3	3	3	3	2	3	486	486	729	108	0	1944	2916	6561	4	8
Seattle - Bremerton	1	1	1	3	3	3	3	3	3	729	729	729	108	0	2916	4374	864	4	6561
Fauntleroy - Vashon	1	1	1	3	3	3	3	2	3	486	486	6561	6561	0	2916	8	8	8	4
Pt. Defiance - Tahlequah	1	2	3	3	3	3	3	3	3	4374	4374	2916	384	2	0	0	0	6561	2

General Notes:

1) For this matrix, scores are assigned from 0 to 3 in whole number increments. Each assigned score (82 total) reflects how well the performance, arrangements, construction, and other design capabilities of the identified vessel class matches up against each specific route characteristic, for each of the 9 routes.

2) The 9 assigned scores for each route are multiplied together, to arrive at the VRSS for each route, for this specific vessel class. A score of "0" indicates a fatal flaw between the particular route requirement, and the capabilities of the specific vessel class. Any route characteristic scored as a "0" results in a "0" total VRSS, and indicates the vessel is not able to be used on that route, due to a significant incompatibility. Higher VRSS scores reflect higher compatibility between vessel class and a particular route.

3) Vessel classes' with significantly too much capacity as compared to the route's requirements, are scored slightly higher than vessel classes with significantly too little capacity relative the route's requirements.

4) The comparative VRSM Scores (shaded gray boxes) represents a side-by-side / direct comparison of all WSF vessel classes' VRSSs.

5) Invidual VRSSs are discounted and reduced where a particular vessel's speed, manuverability, sea-worthiness, or size {relative to the landing facilities capabilities} either do not offer a significant advamntage, or are not well matched to the more important route requirments, such as passenger and auto capacities, and community infrastructure capacities and/or limitations.