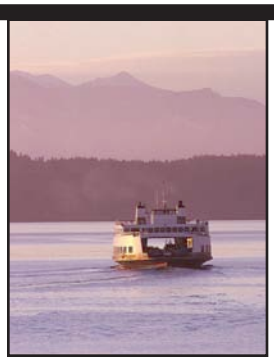
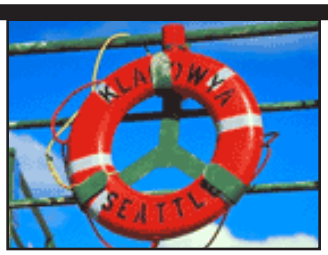
Performance Audit Report

Washington State Ferries

Executive Summary

Report No. 1000003





September 4, 2007

Washington State Auditor Brian Sonntag, CGFM

A letter from State Auditor Brian Sonntag

Brian Sonntag, CGFM
Washington State Auditor

Transportation is one of the most ubiquitous functions in government — nearly every person in this state is affected by it daily. The Department of Transportation shoulders an enormous responsibility for the effectiveness and efficiency of the transportation system – from planning for and managing traffic flow to operation of the state's Ferry System, the largest ferry system in the nation.

During outreach work done by our Office in 2006, citizens told us transportation is one of the top three priorities for performance audits. Citizens' main concerns about transportation are the number of people affected and the visibility of problems that involve transportation.

In 2005, the Washington Legislature asked the State Auditor's Office to take a comprehensive look at the economy, efficiency and effectiveness of Washington's transportation system. This report is the first chapter in that story. The Washington State Ferries performance audit, taken in context with the other transportation-related audits that we will report on in 2007, will give an overview of the state of transportation in Washington. The legislatively requested audits will examine the Department's administration and overhead; highway efficiency (congestion); and highway maintenance and construction management. We also are examining Sound Transit's light rail construction management and the Port of Seattle's Third Runway construction management.

The legislation that authorized the audits at the Department of Transportation required us to hire a contractor. The Washington State Ferries audit was performed by Ernst and Young, an internationally known firm that brought more than 100 years of experience and expertise to the audit. Ernst and Young partnered with a subcontractor who has civil and naval engineering experience to assist with this audit.

We appreciate the firms' work and the cooperation and courtesy the Department and the Ferry System extended to us during the course of the audit. We look forward to further discussions with the Legislature about this audit, and the others we will release over the coming months.

Our audit authority

Washington voters approved Initiative 900 in November 2005, giving the State Auditor's Office the authority to conduct independent performance audits of state and local government entities on behalf of citizens. The purpose of conducting these performance audits is to promote accountability and cost-effective uses of public resources.

Additionally, the Legislature passed Engrossed Substitute Senate Bill 6839 in 2005. The legislation required the Auditor's Office to hire a contractor to conduct performance audits of the Department of Transportation.

The State Auditor's Office and its contractor, Ernst & Young, conducted this performance audit in accordance with Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence that provides a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence we obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

No privileged or confidential information was omitted in this report.

The complete text of Initiative 900 and Senate Bill 6839 are available on our Web site at www.sao.wa.gov/PerformanceAudit/generalinformation.htm.

What's next?

In accordance with I-900, the release of this audit report triggers a series of actions by the Legislature. The appropriate committee or committees will take the following actions:

- Hold at least one public hearing within 30 days of this report's issuance to receive public testimony on the report.
- Consider the findings and recommendations contained in this report during the appropriations process.
- Issue an annual report by July 1 detailing the Legislature's progress in responding to the State Auditor's recommendations. The report must justify any recommendations the Legislature did not respond to and detail additional corrective measures taken.

Notices of public hearings are posted to our Web site next to the report to which they pertain at www.sao.wa.gov/PerformanceAudit/audit_reports.htm.

Follow-up performance audits of any state or local government entity or program may be conducted when determined necessary by the State Auditor.

Additionally, Senate Bill 6839:

• Requires the State Auditor to provide performance audit reports to the Governor, the audited transportation entity, the Joint Legislative Audit and Review Committee, appropriate legislative committees and other interested parties. It also requires the State Auditor to post reports on the Internet.

• Makes the audited entity responsible for follow-up and corrective action on all performance audit findings and recommendations.

• Makes the Office of Financial Management responsible for tracking and achieving audit resolution. The Office must report the status of the audit resolution to the appropriate legislative committees and the State Auditor by December 31 of each year. The Legislature is responsible for considering performance audit results during the appropriations process.

Objectives and scope

Objectives

Initiative 900 directs the State Auditor's Office to address the following elements:

1. Identification of cost savings.
2. Identification of services that can be reduced or eliminated.
3. Identification of programs or services that can be transferred to the private sector.
4. Analysis of gaps or overlaps in programs or services and recommendations to correct them.
5. Feasibility of pooling the entity's information technology systems.
6. Analysis of the roles and functions of the entity and recommendations to change or eliminate roles or functions.
7. Recommendations for statutory or regulatory changes that may be necessary for the entity to properly carry out its functions.
8. Analysis of the entity's performance data, performance measures and self-assessment systems.
9. Identification of best practices.

Additionally, Senate Bill 6839 authorizes the Office to consider the following elements:

1. Identification of programs and services that can be eliminated, reduced, consolidated or enhanced.
2. Identification of funding sources to the transportation-related agency, to programs, and to services that can be eliminated, reduced, consolidated or enhanced.
3. Recommendations for improving, dropping, blending separating functions to correct gaps or overlaps.
4. Recommendations for pooling information technology systems used within the transportation-related agency, and evaluation of information processing and telecommunications policy, organization and management.
5. Analysis of the roles and functions of the transportation-related agency, its programs and services and its compliance with statutory authority and recommendations for eliminating or changing those roles and functions and ensuring compliance with statutory authority.
6. Recommendations for eliminating or changing state law, rules and policy directives as may be necessary to ensure that the transportation-related agency carry out reasonably and properly those functions vested in the agency by statute;
7. Verification of the reliability and validity of transportation related agency performance data, self assessments and performance measurement systems, as required under RCW 43.88.090.
8. Identification of potential cost savings.
9. Identification and recognition of best practices.
10. Evaluate planning, budgeting and program evaluation policies and practices.
11. Evaluate personnel systems operation and management.
12. Evaluate purchasing operations and management policies and practices.
13. Evaluate organizational structure and staffing levels.
14. Evaluate transportation-related project costs, including but not limited to environmental mitigation, competitive bidding practices, permitting processes and capital project management.

Scope

The performance audit analyzed data from June 30, 2004 through June 30, 2006. The auditors conducted an initial risk assessment of the entire Washington State Ferries agency to identify the best opportunities for improvement. The audit firm determined two audit areas:

- The functions and activities performed by WSF's Maintenance Department, specifically the Eagle Harbor Repair Facility, which bears the main responsibility for vessel maintenance and preservation.
- The capacity and efficiency of ferry routes, in order to identify opportunities for cost savings related to fuel and labor.

Findings and Recommendations

The performance audit identified 10 findings and developed 10 recommendations:

Finding 1: Eagle Harbor's hours of service do not efficiently match the needs of WSF vessel and terminal maintenance demands.

Finding 2: Eagle Harbor could reduce the amount of time charged to indirect work codes.

- **Recommendation 1:** Reduce indirect and overtime charges by Eagle Harbor staff.

Finding 3: Less than 2 percent of the positions at Eagle Harbor are filled by WSF management.

Finding 4: Eagle Harbor work practices allow considerable flexibility in managing maintenance staff, creating weaknesses in control and accountability of staff performance and costs.

Finding 5: Eagle Harbor has insufficient performance indicators and metrics for assuring appropriate management of resources.

- **Recommendation 2:** Improve and strengthen overall management of Eagle Harbor.

Finding 6: Except in emergencies, WSF maintenance personnel lack priority-loading privileges while traveling to perform maintenance tasks. This may require them to wait for a later boat and thus incur unnecessary time charges.

- **Recommendation 3:** Eliminate the no-priority boarding policy for Eagle Harbor staff.

Finding 7: The timekeeping process at Eagle Harbor is a manual, labor-intensive, non-standardized, and inefficient process.

- **Recommendation 4:** Standardize timekeeping procedures.
- **Recommendation 5:** Eliminate dual entry of timecard data at Eagle Harbor.

Finding 8: WSF lacks a comprehensives set of standardized business processes, policies, and maintenance tasks.

- **Recommendation 6:** Document key business processes.
- **Recommendation 7:** Develop a comprehensive maintenance training program.
- **Recommendation 8:** Implement a rigorous quality control/quality assurance program.

Finding 9: There is a lack of communication and information exchange among departments at WSF, which has the potential for causing financial management risk and business inefficiencies.

- **Recommendation 9:** Establish an Agency-Wide Task Force to Facilitate Data Sharing and Exchange.

Finding 10: WSF provides a level of service above what traffic volumes demand.

- **Recommendation 10:** Change WSF's ferry service schedule to reduce operational losses.

Potential Cost Savings

Potential cost savings from the recommendations provided in the audit report are presented either in terms of estimated cost savings or derived benefits of improved performance and reduced financial management risk.

Total Potential Cost Savings

Recommendation	One-Year Potential Cost Savings	Five-year Potential Cost Savings	10-Year Potential Cost Savings
1	$368,000 to $445,000	$1.84 million to $2.22 million	$3.68 million to $4.45 million
2	• Better use of existing resources • Better project management		
3	• Better use of existing resources		
4	• Better use of existing staff resources • Improved quality and tracking of work		
5	• Reduced expenditures for administrative tasks • Lower overhead costs		
6	• Better use of existing staff resources • Improved quality and tracking of work		
7	• Better use of existing resources • Cross-training of work		
8	• Higher quality work • Less rework • Lower future operational risk		
9	• Improved internal communications • Better data integrity • More open government		
10	$9.675 million	$48.375 million	$96.75 million
Total	$10.043 million to $10.12 million	$50.215 million to $50.595 million	$100.43 million to $101.2 million

Cross references to objectives and findings

I-900 element	Finding 1	Finding 2	Finding 3	Finding 4	Finding 5	Finding 6	Finding 7	Finding 8	Finding 9	Finding 10
1. Identification of cost savings.	x									x
2. Identification of services that can be reduced or eliminated.		x								x
3. Identification of programs or services that can be transferred to the private sector.	*The audit did not make recommendations pertaining to outsourcing because of the significant opportunities within the Ferry system for improved efficiency, effectiveness and economy. The audit report contains recommendations to institute these opportunities and improvements. However, if these recommendations are not put in place, the Legislature should consider transferring these services to the private sector.*									
4. Analysis of gaps or overlaps in programs or services and recommendations to correct them.	x		x	x	x		x	x	x	x
5. Feasibility of pooling the entity's information technology systems.							x		x	
6. Analysis of the roles and functions of the entity and recommendations to change or eliminate roles or functions.	x	x	x	x			x			x
7. Recommendations for statutory or regulatory changes that may be necessary for the entity to properly carry out its functions.						x				x
8. Analysis of the entity's performance data, performance measures and self-assessment systems.	x	x		x	x					
9. Identification of best practices.	x	x	x	x	x	x	x	x	x	x

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Mission Statement

The State Auditor's Office independently serves the citizens of Washington by promoting accountability, fiscal integrity and openness in state and local government. Working with these governments and with citizens, we strive to ensure the proper and efficient use of public resources.

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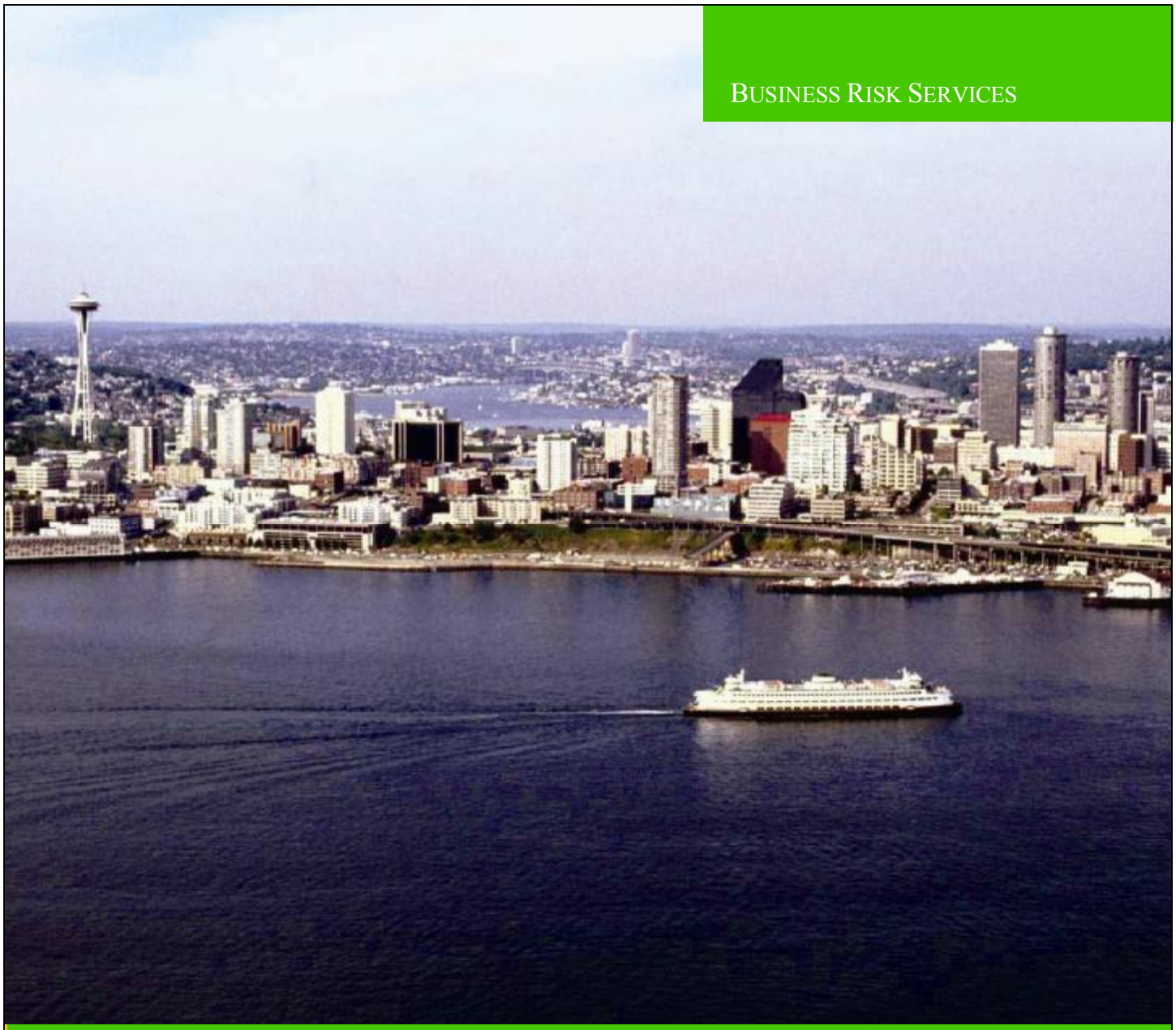

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Performance Audit of the Washington State Ferries System

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SUMMARY OF THE WASHINGTON STATE FERRIES PERFORMANCE AUDIT

Purpose and Objective

In 2005, the voters in Washington State passed Initiative 900 (I-900), giving the Washington State Auditor's Office (SAO) the authority to conduct performance audits of state and local government entities. The performance audits include reviews of the economy, efficiency, and effectiveness of each entity's policies, management, fiscal affairs, and operations. The objective of these audits is to promote accountability and cost-effective use of public resources through I-900's nine specific actions for performance audits:

1. Identification of cost savings.
2. Identification of services that can be reduced or eliminated.
3. Identification of programs or services that can be transferred to the private sector.
4. Analysis of gaps or overlaps in programs or services and recommendations to correct them.
5. Feasibility of pooling the entity's information technology systems.
6. Analysis of the roles and functions of the entity and recommendations to change or eliminate roles or functions.
7. Recommendations for statutory or regulatory changes that may be necessary for the entity to properly carry out its functions.
8. Analysis of the entity's performance data, performance measures and self-assessment systems.
9. Identification of best practices.

Also in 2005, the Washington Legislature granted the SAO the authority to audit transportation agencies through the passage of ESSB 6839. The legislation states: "Citizens demand and deserve accountability of transportation-related programs and expenditures. Transportation-related programs must continuously improve in quality, efficiency, and effectiveness in order to increase public trust."

The Auditor's Office commissioned a series of citizen forums to shape the direction of performance audits. The Office contracted with Elway Research, Inc., to hold two town hall meetings and two focus groups with Washington voters across the state. The public surveys identified that the Washington State Ferries system (WSF), a division of the Washington State Department of Transportation (WSDOT), was an area of interest for a performance audit.

Both ESSB 6839 and I-900 require performance audits conducted on behalf of the Washington State Auditor's Office to meet generally accepted Government Auditing Standards. The performance audit of Washington State Ferries was completed in accordance with generally accepted Government Auditing Standards. The Washington State Legislature regularly performs studies of the capital, operational and financing aspects of the Washington State Ferries. These studies, which are not subject to the independence, evidence, and planning standards required by Government Auditing Standards, were considered during the planning of this audit.

Findings and Recommendations

The performance audit identified 10 findings and developed 10 recommendations:

- **Finding 1:** Eagle Harbor's hours of service do not efficiently match the needs of WSF vessel and terminal maintenance demands.
- **Finding 2**: Eagle Harbor could reduce the amount of time charged to indirect work codes.
- **Recommendation 1:** Reduce Indirect and Overtime Charges by Eagle Harbor Staff.

- **Finding 3**: Less than two percent of the positions at Eagle Harbor are filled by WSF management.
- **Finding 4**: Eagle Harbor work practices allow considerable flexibility in managing maintenance staff, creating weaknesses in control and accountability of staff performance and costs.
- **Finding 5**: Eagle Harbor has insufficient performance indicators and metrics for assuring appropriate management of resources.
- **Recommendation 2:** Improve and Strengthen Overall Management of Eagle Harbor.

- **Finding 6**: Except in emergencies, WSF maintenance personnel lack priority-loading privileges while traveling to perform maintenance tasks. This may require them to wait for a later boat and thus incur unnecessary time charges.
- **Recommendation 3:** Eliminate the No-Priority Boarding Policy for Eagle Harbor Staff.

- **Finding 7:** The timekeeping process at Eagle Harbor is a manual, labor-intensive, non-standardized, and inefficient process.
- **Recommendation 4:** Standardize Timekeeping Procedures.
- **Recommendation 5:** Eliminate Dual Entry of Timecard Data at Eagle Harbor.

- **Finding 8:** WSF lacks a comprehensives set of standardized business processes, policies, and maintenance tasks.
- **Recommendation 6:** Document Key Business Processes.
- **Recommendation 7:** Develop a Comprehensive Maintenance Training Program.
- **Recommendation 8:** Implement a Rigorous Quality Control/Quality Assurance Program.

- **Finding 9:** There is a lack of communication and information exchange among departments at WSF, which has the potential for causing financial management risk and business inefficiencies.

- **Recommendation 9:** Establish an Agency-Wide Task Force to Facilitate Data Sharing and Exchange.

- **Finding 10:** WSF provides a level of service above what traffic volumes demand.

- **Recommendation 10:** Change WSF's Ferry Service Schedule to Reduce Operational Losses.

Potential Cost Savings

Potential cost savings or derived benefits from improved performance from the recommendations provided in the audit report are based on recommendations being fully implemented. Realization of cost savings and benefits are relative to the timing of implementation and the degree to which a recommendation is implemented. Potential cost savings are shown in annualized present-day dollars.

Table 1 – Total Potential Cost Savings

Recommendation	1-Year Potential Cost Savings	5-Year Potential Cost Savings	10-Year Potential Cost Savings
1	$368,000 to 445,000	$1.84 to 2.22 million	$3.68 to 4.45 million
2	▪ Better use of existing resources ▪ Better project management		
3	▪ Better use of existing resources		
4	▪ Reduced expenditures for administrative tasks ▪ Lower overhead costs		
5	▪ Reduced expenditures for administrative tasks ▪ Lower overhead costs		
6	▪ Better use of existing staff resources ▪ Improved quality and tracking of work		
7	▪ Better use of existing resources ▪ Cross-training of work		
8	▪ Higher quality work ▪ Less rework ▪ Lower future operational risk		
9	▪ Improved internal communications ▪ Better data integrity ▪ More open government		
10	$9.675 million	$48.375 million	$96.75 million
Total	**$10.043 to $10.12 million**	**$50.215 to $50.595 million**	**$100.43 to $101.2 million**

BACKGROUND ON WSF

Ferry operations have been an integral part of the surface transportation network in Puget Sound since before the turn of the 20th century. The largest and last of the major private operators was Black Ball, which operated ferries on many of the same routes that exist today. Following labor disputes and establishment of regulations preventing Black Ball from raising rates in order to meet operational costs, the state bought the company's ferry terminals and vessels. At the time, WSF was a part of the Washington State Bridge and Toll Authority, reflecting the existent plans to move forward with construction of numerous toll bridges across Puget Sound and between island communities and mainland points. That plan's only remnants are the Lake Washington floating bridge and the Hood Canal floating bridge, both of which were established as toll bridges.

Since 1951, WSF has been a part of the state government agency responsible for managing and operating cross-sound and regional waterborne transportation in the state. While a number of private and local ferry operations have existed and currently operate in the state, WSF operates the largest fleet of auto-passenger ferries in the region, connecting communities and regions throughout the Puget Sound. WSF also provides a passenger-only service; plans are being made to transfer the service to King County. In 1977, WSF became a division of the Washington State Department of Transportation and remains so today. WSF accounts for more than 25 percent of WSDOT's budget.

Figure 1 illustrates the geographic distribution of WSF route services. It shows that WSF provides transportation linkages between:

- Urban areas on the east side of Puget Sound and communities on the Kitsap and Olympic Peninsulas.
- Communities within the San Juan Islands to one another and the mainland.
- Vashon Island and the mainland.
- Washington state and Canada via Sidney, Vancouver Island, British Columbia.

Figure 1 - WSF Route Map - 2006

Source: WSF

WSF Management and Organization

Management

WSF is officially the Marine Division of WSDOT. WSF is headed by the Assistant Secretary of Transportation, who directly reports to the state's Secretary of Transportation. WSF's organizational structure consists of seven key departments that cover all aspects of operating the marine transportation activity:

- Communications
- Finance
- Operations
- Human Resources
- Terminal Engineering
- Vessel Engineering
- Vessel Preservation and Maintenance

Approximately 1,600 full-time-equivalent positions are maintained at WSF for crewing vessels and terminals, maintaining the ferry fleet and terminals, and managing operations. WSF operates on a nearly 24-hour, seven-day per-week cycle (vessels have engine crews on board at all times).

Organization

WSF staff are members of and are represented by 16 labor unions, some with multiple collective bargaining units, depending on their trade, specialty, or location within the organization. WSF employees working at the terminals are organized under the Inland Boatman's Union. Deck personnel are represented by the International Association of Masters, Mates & Pilots and the Inlandboatmen's Union Of The Pacific, Marine Division Of The International Longshore And Warehouse Union. Engine room crewmen are represented by the Marine Engineers Benevolent Association.

Capital Assets

WSF provides waterborne transportation to the public through two very visible sets of assets: the distinctive green and white ferries and the terminals through which the public passes to take the ferries, by foot, bicycle, or vehicle. Table 2 presents a list of the existing active and inactive vessels in the WSF fleet at the time the fieldwork for the audit was conducted.

Table 2 – Washington State Ferry Fleet - 2006

Class	Name	Status	In Service Date	Type	Age
Jumbo II	*Tacoma*	In Service	1997	Auto-ferry	9
	Wenatchee	In Service	1998		8
	Puyallup	In Service	1999		7
Jumbo	*Spokane*	In Service	1972	Auto-ferry	34
	Walla Walla	In Service	1972		34
Super	*Elwha*	In Service	1967	Auto-ferry	39
	Hyak	In Service	1967		39
	Kaleetan	In Service	1967		39
	Yakima	In Service	1967		39
Issaquah 130/100	*Issaquah*	In Service	1979	Auto-ferry	27
	Kitsap	In Service	1980		26
	Kittitas	In Service	1980		26
	Cathlamet	In Service	1981		25
	Chelan	In Service	1981		25
	Sealth	In Service	1982		24
Evergreen State	*Evergreen State*	In Service	1954	Auto-ferry	52
	Klahowya	In Service	1958		48
	Tillikum	In Service	1959		47
Steel Electric	*Illahee*	In Service	1927	Auto-ferry	79
	Klickitat	In Service	1927		79
	Nisqually	Out of Service	1927		79
	Quinault	In Service	1927		79
Rhododendron	*Rhododendron*	In Service	1947	Auto-ferry	59
Hiyu	*Hiyu*	Out of Service	1967	Auto-ferry	39
Chinook	*Chinook*	Out of Service	1998	Passenger-Only	8
	Snohomish	Out of Service	1999		7
Kalama	*Skagit*	In Service	1989	Passenger-Only	17
	Kalama	In Service	1989		17
	Number in Service	24	Average Age		36.6 years

Source: WSF.
Note: Status of vessels as of Fall 2006.

Three key facts are presented in this table:

- WSF's fleet is made up two types of ships: auto ferries and passenger-only ferries, covering 10 vessel classes (distinctive designs).

  Vessel class does not mean that all the ships in the particular class are exact copies of one another. There is some variation in the physical condition, components, and equipment that

make up the ships in each class. This is standard practice in the industry. Typical practice for vessel management is to insert modifications and other changes to suit the maintenance, preservation, and operational needs of each ship. For example, a more thorough analysis of the WSF fleet boats would show a decrease in the certified carrying capacity of the ships in order to comply with federal law passed after the ships were designed and constructed. Passage of the Americans with Disabilities Act has required refitting vessels; these refits have reduced the carrying capacity of those ships by approximately 10 percent.

- WSF maintains a fleet of vessels in service, as well as some out of service for extended maintenance for sale or for disposal.

  Due to service reductions and program cuts, the relatively new Chinook-class ferries are out of service and WSF has been directed to sell them. Due to vessel condition and regulatory issues, two auto ferries are also out of service. WSF is expected to retire the other passenger-only ferries in 2007 when the passenger-only route between Seattle and Vashon Island is transferred to King County.

- The average age of WSF's vessels is 37 years.

  WSF's vessels range in age between seven and 79 years old, resulting in a fleet average of 37 years old. These figures are based solely on the year the vessels were built, not on the calculated life of each vessel and its components, as tracked in WSF's Life Cycle Cost Model, a tool used for conducting long-range financial planning of vessel and terminal maintenance and preservation. As documented in other studies and audits conducted on the ferry system, WSF operates a fleet of vessels that are considerably older than is followed by ocean-going transportation entities. Generally, the ferry system has added new vessels to the fleet about every 10 years.

Table 3 lists WSF's ferry terminals. When created, WSF took over the terminals that Black Ball had operated. Over the last 50-plus years, WSF has replaced major structures, such as overhead loading bridges, trestles, and ramps, added or increased vehicle holding areas, and added other buildings. The locations of some terminals and routes have changed due to changing requirements and the needs of WSF to meet traffic demands. Most changes have occurred in developing additional holding space, tollbooths, and improving the overall condition of facilities, docks, bridges, vessel slips, etc.

Table 3 – Washington State Ferry Terminals

Location	Ownership	Trestle Built/Rebuilt	Roads Authority
Anacortes*	Leased	'59, '71	WSDOT, City of Anacortes
Bainbridge Island*	WSF	'66, '84	WSDOT, City of Bainbridge Island
Bremerton*	WSF	'90	WSDOT, City of Bremerton
Clinton*	WSF	'51, '68, '03	WSDOT, Island County
Edmonds*	WSF	'52, '89, '95	WSDOT, City of Edmonds
Fauntleroy	WSF	'57, '84, '02	City of Seattle
Friday Harbor	WSF	'68, '92	City of Friday Harbor
Keystone	Leased	'79	WSDOT, Island County
Kingston	Leased	'54, '86, '90	WSDOT, Kitsap County
Lopez Island	WSF	'80	San Juan County
Mukilteo	Leased	'82	WSDOT, City of Mukilteo
Orcas Island	WSF	'59	San Juan County
Point Defiance	Leased	'58, '94	WSDOT, King County, Cities of Tacoma and Ruston
Port Townsend	WSF	'82	WSDOT, City of Port Townsend
Seattle*	WSF	North: '38, '64, '71, '87 South: '91	WSDOT, City of Seattle
Shaw Island	WSF	'74, '05	San Juan County
Sidney, B.C.	Leased	N/A	No U.S. Authority
Southworth	WSF	'57	WSDOT
Tahlequah	WSF	'58, '94	King County
Vashon Island	WSF	'57, '74	King County

Source: WSF.
Note(*): Capable of Overhead Loading of Passengers. Where overhead loading is not available, the terminals are considered not ADA-compliant.

A few key points related to the exhibit above are:

- WSF leases some of the terminal facilities and/or land where terminals are situated.
- Several local government authorities have jurisdiction over the construction and maintenance of roadways connecting WSF terminals to the regional road network.
- The layout and loading capabilities (such as overhead loading) of the terminals are not uniform, but meet the traffic volumes and conditions of the local environment.
- Operationally, these local terminal capabilities require a variety of loading/unloading procedures for walk-on ferry riders and vehicles.
- Vehicle capacity limits at terminals require some terminals to use off-site lots and local roads near the terminals as holding areas.

At some of these terminals, a portion of the costs of operating the terminals comes from traffic control and real estate leases.

In addition, WSF leases include a warehouse in south Seattle and its headquarters in Seattle. WSF owns the Eagle Harbor repair facility, formerly a shipyard, located on Bainbridge Island.

Operations

Since its creation, WSF has been an integral part of the Puget Sound region's transportation infrastructure. Between the 1950s and 1990s, the population of the region grew about 2.1 percent per year. Concurrently, the volume of traffic moved by WSF grew approximately 4.5 percent per year. However, since 2000, WSF has experienced declining volumes in both passengers and vehicles, in part due to funding constraints created by the passage of Initiative 695 in November 1999. Table 4 illustrates this decline in transportation volumes at WSF for fiscal years (FY) 2000 through 2006.

Table 4 – WSF Traffic Volumes, FY 2000 – 2006 (in millions)

	2000	2001	2002	2003	2004	2005	2006
Vehicles + Driver	11.54	11.46	11.14	10.82	10.87	10.81	10.83
Vehicle Passenger	7.79	7.94	7.31	6.95	7.20	6.89	6.94
Walk-on Passenger	7.53	7.20	7.18	6.78	6.34	6.18	6.02
Total Riders	**26.86**	**26.60**	**25.63**	**24.55**	**24.41**	**23.88**	**23.79**

Source: WSF.

WSF's planning department believes this declining trend is not continuing, but rather that volumes are leveling off and should increase again. Foot passenger traffic has declined 20 percent (-3.7 percent per year). Vehicle traffic has declined at the more modest rate of 1.1 percent per year.

AUDIT METHODOLOGY

Methodology for Conducting the Audit

To achieve the audit's objective, the audit team developed a multi-phased statement of work. The project was conducted in six phases:

- Phase 1 – Conducted a broad view performance and risk assessment to identify improvement opportunities.
- Phase 2 – Identified areas that have the greatest opportunity to reduce costs and improve efficiency.
- Phase 3 – Developed a work plan to identify and quantify root causes of the highest risk areas identified in Phase 2.
- Phase 4 – Executed the work plan.
- Phase 5 – Developed the draft report of our findings to discuss with WSF management and obtain management's input and feedback.
- Phase 6 – Issued the final audit report to SAO and assist SAO in presentations to state legislators or legislative committees.

Throughout the fieldwork conducted in Phase 1 and Phase 4, interviews with WSF executives, directors, managers, and staff were conducted, as well as with WSDOT executives and managers. In addition, the fieldwork included site visits to the Eagle Harbor maintenance facility, several terminals, and several on-board vessel tours and ferry sailings. (Note: All titles, position descriptions, and organizational structure references used in this report are based on the time that interviews and fieldwork were conducted). Benchmarking and leading practices inquiries were conducted with British Columbia Ferries, Texas Department of Transportation, and North Carolina Ferries Division. Labor data, financial data, information technology systems, operational data, and supporting information were provided by WSF and WSDOT for our review and analysis for WSF's fiscal years ended June 30 2004, through 2006. For the purposes of this performance audit, we did not audit the data provided by WSF.

Audit Objectives and Scope

The scope included an initial risk assessment of the entire Washington State Ferries agency to identify the most beneficial opportunities to focus on for the performance audit. The initial risk assessment conducted in Phase 1 looked at 14 broad areas for improvement opportunities:

1. Services
2. Performance Data and Measure
3. Personnel Systems, Operations, and Management
4. Employee Job Function
5. Purchasing
6. Capital Maintenance
7. Statutes, Rules, and Policies
8. Non-Fare Revenue
9. Planning, Budgeting, Cost, and Performance Evaluations
10. Organizational Structure
11. Information Technology
12. Capital Acquisition
13. Management Policies and Practices
14. Other Administrative Operations

From the Phase 1 work, we identified 27 issues as potential opportunities for improvement in efficiency, effectiveness, and economy. These issues were discussed and prioritized during Phase 2 in order to select the issue to be examined further in Phase 4 of the performance audit. The issue selected as the scope of the performance audit was:

> *Washington State Ferries is a division of the Washington State Department of Transportation; WSF faces potential conflicts between its proprietary (revenue generating) interests and its need to comply with policies, budgets, regulations, etc., as a governmental entity. Therefore, the performance audit is to evaluate the efficiency and economy of the following functions at WSF: Vessel Maintenance and Preservation, Services (specific ferry routes), and Terminal Maintenance, Preservation, and Operations.*

This issue divided the scope of the performance audit into two key areas. The first area to audit was the functions and activities performed by WSF's Maintenance and Repair Facility at Eagle Harbor, specifically the management, policies and practices, job functions, and performance. The audit did not include examining maintenance activities conducted by shipboard personnel, work completed by outside contractors or other shipyards, or the overall utility of the Eagle Harbor Repair Facility. The second area to audit was the level of service each ferry route provides to identify opportunities for cost savings related to fuel and labor.

The performance audit analysis focused on WSF's data from fiscal years ended June 30, 2004 through 2006 relevant to the two audit areas.

Audit Assumptions

Our analysis, conclusions, and recommendation include these assumptions:

- For the purposes of identifying cost saving opportunities through the elimination of underused ferry runs, we assumed that all the travelers on an eliminated run would take the next convenient run.

  This is the most conservative approach in order to establish the criterion for the least amount of service level impact to the ferry riders.

- Our savings calculations do not take into account the possible loss in revenue for the underused runs from passengers choosing alternative transportation for several reasons.

  First, the lost revenue would be nominal, given that the runs are underused and therefore operating at a significant loss. Second, as stated in the assumption above, we assume that many if not eventually the majority of the passengers who would have taken an eliminated run will take the next convenient run. If that is not the case and ferry passengers choose to take alternative transportation permanently, then the analysis and removal of underused ferry runs should continue until the ferry schedule has reached an optimal point of supply and demand. From state government's perspective, however, lost revenue to the ferry system does not imply the state will lose revenue; ferry riders' increased use of automobile transportation would directly correlate to increased revenue from bridge tolls and/or gas taxes.

- Our recommendation of fuel savings calculations assumes vessels would be tied up and engines turned off when not sailing in order to save fuel and reduce pollution.

  The vessel fuel burn rate during idle was unavailable; however, if WSF chooses to idle rather than tie-off and turn off engines, that would decrease our fuel savings calculations slightly.

- Although this performance audit was not structured to include detailed implementation plans, it is expected that WSF has or will seek the necessary outside expertise to develop the specific steps necessary to implement the recommendations.

AUDIT AREA 1 – WSF MAINTENANCE FACILITY AT EAGLE HARBOR

This audit area focused on identifying opportunities for improving efficiency and reducing costs of WSF's in-house maintenance and repair facility for its vessels and terminals. WSF has a dedicated maintenance department for conducting vessel and terminal maintenance and repair activities. The majority of the maintenance staff is located at WSF's only repair facility, Eagle Harbor on Bainbridge Island. The performance audit examined WSF's performance in managing and conducting vessel and terminal maintenance tasks performed by the maintenance staff at the Eagle Harbor Repair Facility. These maintenance tasks include work completed both onboard the ferry vessels and at terminal facilities. The audit did not include maintenance conducted by shipboard personnel, work completed by outside contractors or other shipyards, or the overall utility of the Eagle Harbor Repair Facility.

Background

WSF performs systems maintenance on its terminals and vessels using craft skills and capabilities housed at Eagle Harbor. The facility is located on the site of a former shipyard, providing sheltered facilities for the staff, tools, equipment, and some parts inventory used by WSF.

The general marine industry in both the United States and in Washington State in particular has been in decline for several decades. Public agencies and private firms both have faced difficulty in hiring and retaining skilled staff to build and maintain vessels. This difficulty is due both to the decline of the marine industry in general and the competition from a booming landside construction and maintenance industry.

Eagle Harbor, like many ship repair facilities, provides a centralized location for WSF to store and maintain the vessels in the WSF fleet. The facility itself consists of two main buildings, several minor structures, and a number of slips for tying up the ferries. Protected from much of the typical weather conditions on Puget Sound, the facility affords WSF the ability to keep vessels in a protected environment so that WSF can perform maintenance on the vessels at any time.

The main building houses the tools and shop facilities for most of the repair facility, as well as management support offices and some spare parts inventory. The facility contains eight shops: carpentry, electrical, insulation, machine, pipe, sheet metal, shoregang, and welding, as well as a small management team. A warehouse activity and tool shop provide materials and the necessary tools for completing maintenance activities by the shop tradesmen.

Two Types of Systems Maintenance

The maintenance activities completed by WSF are generally broken into two categories: preventive and corrective maintenance. Preventive maintenance is conducted at regular intervals to keep equipment working within specifications -- either manufacturers' or WSF's. Corrective maintenance is repairs to equipment that fails to meet operational specifications, has broken, or does not meet WSF and WSDOT physical condition requirements.

- Vessel and Terminal Preventive Maintenance

  Both the engineering crew and Eagle Harbor tradesmen perform vessel preventive maintenance. As a routine part of operating a vessel's engines, the ship's engineers perform a considerable amount of routine, preventive maintenance required to keep the vessel operational. WSF's Maintenance Department and the Eagle Harbor Repair Facility oversee and conduct preventive maintenance of terminal systems and infrastructure.

- Vessel and Terminal Corrective Maintenance

  Vessel corrective maintenance activities are managed by the WSF Maintenance Department, which oversees and manages the Eagle Harbor Repair Facility. WSF operates a process for identifying, recording, assigning, and completing corrective maintenance jobs. WSF also contracts with outside ship repair facilities to conduct major repairs that WSF does not have the in-house capability to perform, such as dry-docking. WSF uses "not to interfere" clauses in these contracts, so that Eagle Harbor tradesmen can complete some repair work while vessels are at the contractor's facilities.

Table 5 – Business Model of Vessel and Terminal Maintenance

Business Areas	Vessel Maintenance	Terminal Maintenance
Preventive Maintenance	Engineering staff on board vessels	Eagle Harbor staff
Corrective Maintenance	Eagle Harbor staff, engineering staff on board vessels, contractors	Eagle Harbor staff, WSDOT staff, contractors

Table 6 below shows labor hour and labor cost expenditures incurred by WSF for the work completed by Eagle Harbor personnel over the last three fiscal years: direct maintenance activities for vessels and terminals, work on capital projects, training, and costs accounted to administrative accounts. The table shows that Eagle Harbor has been keeping working hours steady; however, costs are increasing, especially for administrative functions.

Table 6 – Eagle Harbor Costs FY 2004 - 2006

Statistic	2004	2005	2006	Average Growth
Labor Hours				
- Vessels	104,100	107,300	101,900	-1%
- Terminals	43,700	37,700	34,700	-7%
- Admin	53,100	53,100	64,100	7%
- Capital Projects	14,200	18,600	15,000	2%
- Training	3,900	3,300	2,800	-10%
Total	**219,000**	**220,000**	**218,500**	**0%**
Labor Costs*				
- Vessels	$3,766,000	$3,964,000	$3,944,000	2%
- Terminals	1,581,000	1,374,000	1,337,000	-5%
- Admin	1,864,000	1,922,000	2,384,000	9%
- Capital Projects	532,000	697,000	576,000	3%
- Training	142,000	127,000	112,000	-8%
Total	**$7,885,000**	**$8,084,000**	**$8,353,000**	**2%**

Source: WSF Marine Labor System.
Note(*): Includes travel cost.

WSF and its employees take pride in providing a highly reliable service to the traveling public. With an aging fleet (over half the active fleet is 39 years old or more), WSF has a considerable amount of maintenance to perform to keep the vessels in operation. WSF uses trip reliability as a key measure for identifying how well it is providing a service to the public and the state. Table 7 below shows a high percentage of reliability. Maintaining a continuously crewed engineering space helps maintain the mechanical aspects of the vessels.

Table 7 – System Vessel Reliability Statistics

Statistic	2003	2004	2005	2006	AAG*
Scheduled vessel trips	175,652	169,570	167,169	165,801	-1.4%
Trips missed due to vessel	507	489	305	334	-8.5%
Trips missed due to non-vessel related issue	526	1,102	528	586	2.9%
Trip reliability	99.70%	99.35%	99.68%	99.65%	

Source: WSF.
Note(*): Average Annual Growth.

Eagle Harbor's staffing model and collective bargaining agreements are not structured to provide WSF with the most efficient and economical benefits

There are two audit findings to support the above conclusion.

Condition

FINDING 1

Eagle Harbor's hours of service do not efficiently match the needs of WSF vessel and terminal maintenance demands.

The current level of operations includes operating 12 vessels for 16 hours per day and five vessels for 20 to 22 hours per day. Terminals are staffed prior to first sailings of the day until slightly after the arrival of the last sailing at night. The schedules for vessel deck crews (Masters, Mates, and Able-Bodied and Ordinary Seamen) follow a similar pattern.

Engineering space crews (chief engineers, assistants, wipers, and oilers) staff the vessels 24 hours per day, in 12-hour shifts. However, Eagle Harbor provides maintenance services in a single shift and only during regular business hours. With few exceptions, work conducted outside the normal daytime work hours established in the collective bargaining agreements (CBA) is worked as overtime. Eagle Harbor uses overtime and call-outs to handle maintenance activities that extend beyond the normal working hours, such as emergency repair work or planned repair efforts that cannot be accomplished during the workday. For planned maintenance activities during peak maintenance periods throughout the year, Eagle Harbor uses an unofficial second-shift that is accomplished through overtime. In some instances where overtime reaches specific criteria established in the CBA, administrative leave charges are incurred as well. Overtime costs at Eagle Harbor totaled $1 million for fiscal year 2006, equating to over 12 percent of all Eagle Harbor labor costs of $8.4 million.

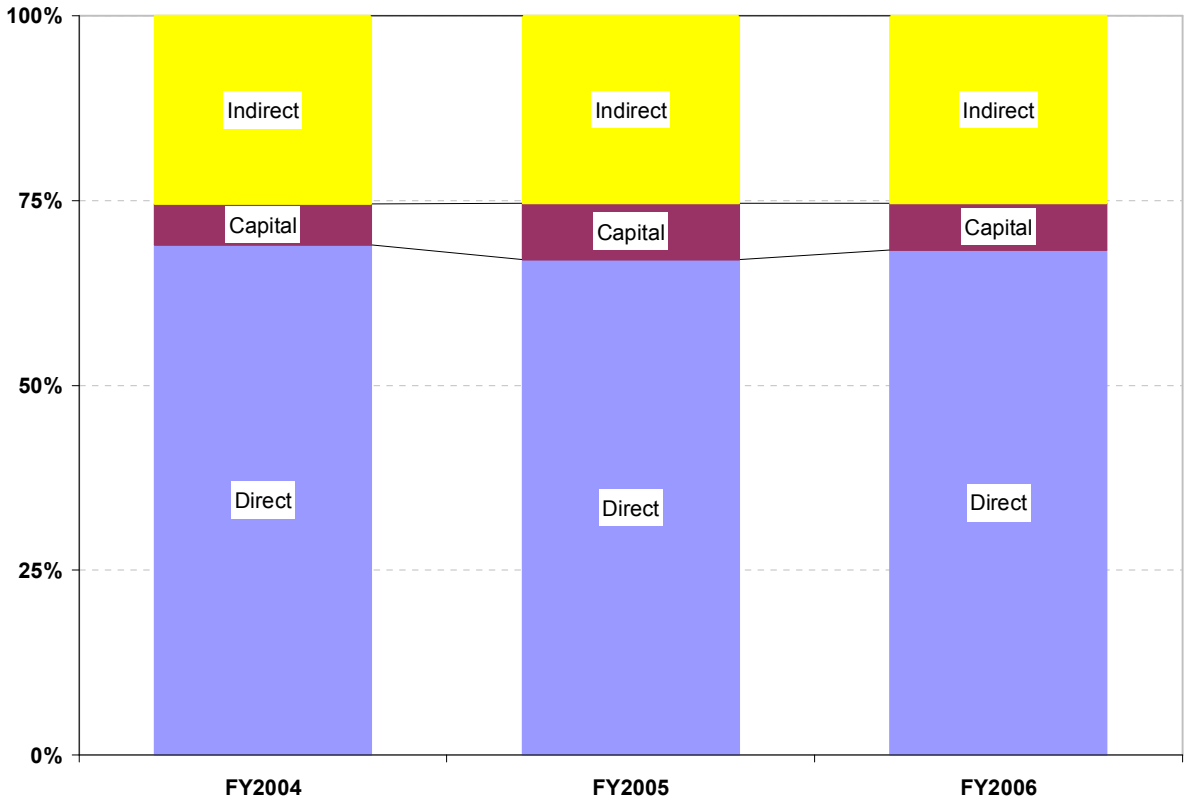
FINDING 2

Eagle Harbor could reduce the amount of time charged to indirect work codes.

Time charges for Eagle Harbor employees are made up of direct labor charges for maintenance work on vessels and terminals and indirect labor charges for administrative time, shop time for cleanup, and time charged to the Eagle Harbor facility for its maintenance. Current CBAs dictate that the hours of the normal workday are from 7:00 am to 3:30 pm. Tradesmen receive a full eight hours pay for being at the facility, regardless of whether or not there is direct vessel or terminal work to be completed. Therefore, timesheets must indicate eight hours of work charged to job codes. When there are not eight hours of direct work in the normal shift for an employee, then indirect work codes are charged. These indirect charges have been sustained at 25 percent of total labor charges for the past three fiscal years. It should be noted that time charged to training, which is a valuable and worthwhile expenditure, is included in the indirect charges;

however, it only accounts for 1 percent of total labor charges. Figure 2 shows the distribution of all labor charges for Eagle Harbor.

Figure 2 – Distribution of Labor Charges by Eagle Harbor, FY2004 - 2006

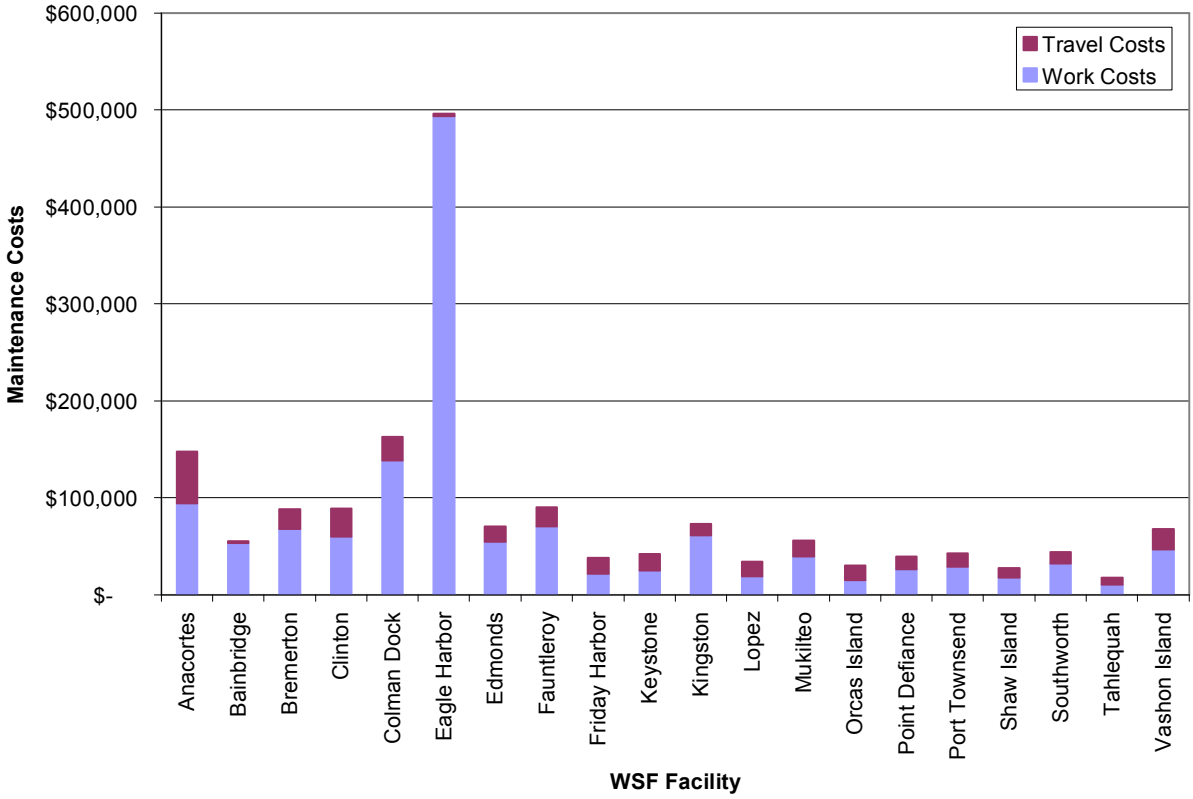


Source: WSF Marine Labor System.

One-fourth of all indirect charges are to the Eagle Harbor facility for its maintenance. It should be noted that the Eagle Harbor facility is not a terminal, so some costs are not comparative, although it is coded as a terminal for timekeeping purposes. Therefore, in a comparison of labor charges for maintenance work on all the terminals, the Eagle Harbor facility maintenance charges are three times higher than the largest and most costly terminal, Colman Dock in Seattle. Because of nonstandard timekeeping practices, detailed in Finding 7 below, it is difficult to rely on the data solely to draw conclusions. However, Eagle Harbor staff stated in interviews that the Eagle Harbor facility does not require any more time to maintain than the Seattle terminal. Together, this information indicates the possibility that the indirect time charges for Eagle Harbor maintenance may be disproportionate.

Figure 3 shows the comparative labor costs incurred by WSF for maintaining each of its facilities.

Figure 3 – Breakdown of Maintenance Costs Charged to Each WSF Facility, FY2006



Source: WSF Marine Labor System.
Note: The Sidney BC terminal is not maintained by WSF.

The figure shows that the costs related to direct maintenance costs for Eagle Harbor are three times as much as those at Colman Dock, the system's busiest terminal.

Criteria

Leading business practices include minimizing overtime and administrative costs, and aligning the supply of resources to the demand of work. We note that while Eagle Harbor is not a production facility, the majority of the maintenance is mostly predictive in nature and is planned and scheduled to a certain level of detail. Discussions with BC Ferries indicated they have moved to multi-shift operations in order to perform the maintenance work when the vessels are more available, namely during non-operating hours. This has allowed for improved alignment of resources to the supply of the work. BC Ferries has two advantages in its ability to implement a maintenance model: a single union representing all staff at BC Ferries and its subsidiary, Deas Pacific Marine, and a larger ferry fleet, granting it more flexibility in taking vessels off-line to perform maintenance.

While specialization has been a watchword for several years, in many industries, specialization is preventing management from making appropriate decisions regarding staffing mix and sizing. A more nimble, flexible workforce that can perform multiple tasks is required to control costs and

improve efficiency. Furthermore, competitive business operations tend to set goals to reduce non value-added costs or unproductive charges such as administrative or internal costs in order to improve bottom line reporting.

Cause

Historically, Eagle Harbor has operated as a one-shift maintenance facility, in part due to the needs and concerns of the local community regarding working during the night at Eagle Harbor. Ship repair can be a noisy activity; with a condominium property adjacent to the repair facility, complaints have been made.

Another cause for this finding is the terms of the CBAs, which have established that maintenance staff's regular business hours are when vessels and terminals are most active. Furthermore, Eagle Harbor employees, although hourly, are guaranteed by the CBA eight hours of pay each workday. This is paid regardless of whether or not there is enough direct vessel or terminal work to keep employees busy with productive work. When work demand falls outside the normal shift's time, overtime and call-outs are used.

Finally, current Eagle Harbor performance measures are to manage maintenance hours to the budget for both straight time and overtime. There are no incentives or initiatives to reduce costs and work more efficiently.

Effect

The existing single-shift business model is designed to provide support during daytime business hours. WSF vessels and terminals are mostly busy during the daytime hours, and therefore there is little time to perform the daily corrective maintenance work on these assets except during the evening. Some work is performed onboard vessels during operating hours, but these activities typically impact the operating efficiency of the vessels and terminals. Work completed outside of the day shift is charged at overtime rates, incurring both overtime costs and in some cases administrative leave costs.

By not aligning maintenance resources with maintenance demand, WSF incurs higher maintenance costs than necessary. WSF incurs other unnecessary costs when there is not enough direct vessel or terminal work to consume the full eight hours guaranteed by the CBA. In such cases, employee time is charged to indirect labor codes such as administrative, shop cleanup, and the Eagle Harbor facility. These charges total over $2 million, which is 25 percent of all Eagle Harbor labor costs.

Recommendation for Findings 1 & 2

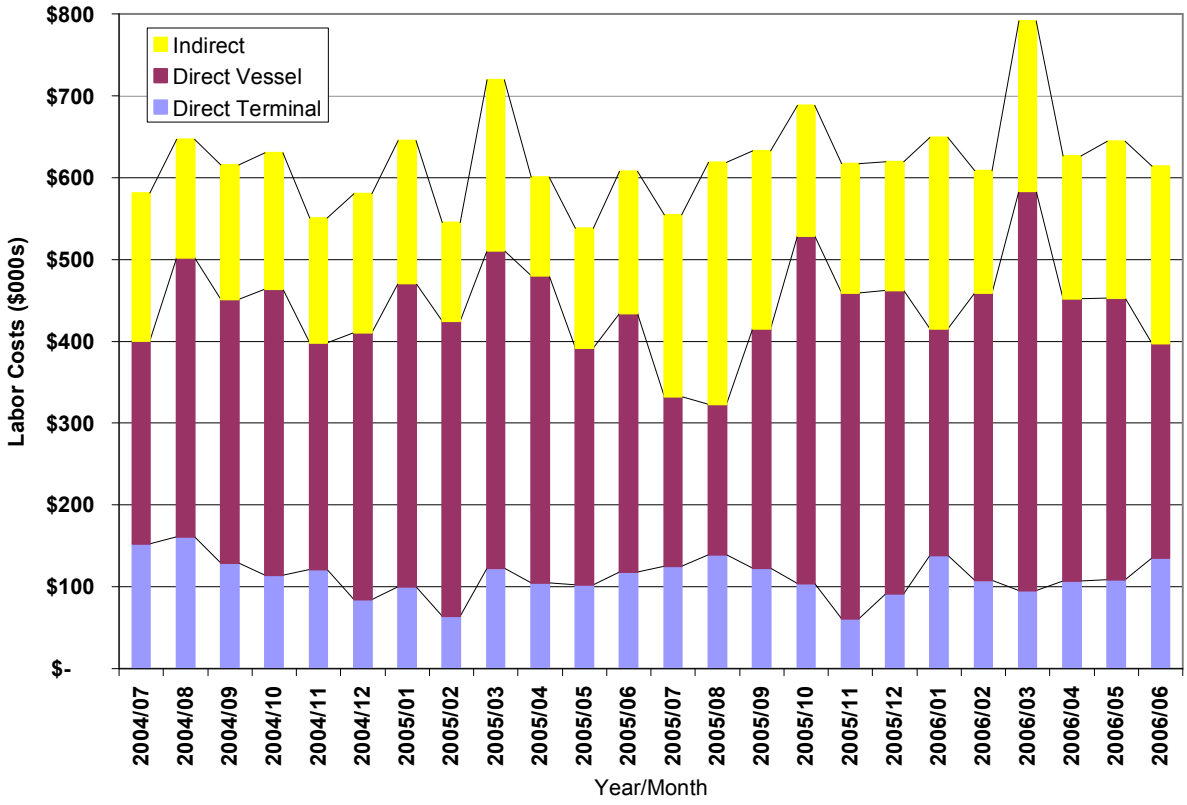
Recommendation 1

Reduce Indirect and Overtime Charges by Eagle Harbor Staff.

We recommend a two-shift labor model that reduces overtime costs through better alignment of maintenance labor supply to demand. This second shift would operate Monday through Friday immediately following the current first shift. In conjunction with a two-shift labor model, a lower performance measure target for indirect labor charges is recommended. The new target for indirect charges is based on Eagle Harbor's own performance data during the months of high direct labor work, thus using Eagle Harbor's own performance to benchmark a new level of

efficiency to achieve. Figure 4 below shows that during the months of February and April of fiscal year 2006, Eagle Harbor achieved indirect charges of 20 percent. In the remaining months, higher indirect charges were incurred, possibly the result of overstaffing in relation to maintenance demand. Based on the number of full-time equivalents (FTEs) at Eagle Harbor used in this analysis, the implementation of a second-shift with a reduction of indirect charges would not result in a reduction in staffing. The savings therefore would be a result of the near elimination of overtime charges and efficiency in staffing alignment.

Figure 4 – Monthly Eagle Harbor Labor Costs by Work Type, FY2005 - FY2006



Source: WSF Marine Labor System.

Analysis of the labor data shown in Figure 4 indicates that Eagle Harbor staff average 25 percent of their time engaged in activities that are not attributed to direct maintenance activities based on their current charge code practices and policies.

Implementing this recommendation will cause WSF to incur a marginal amount of additional administrative and planning costs. However, the following benefits will be incurred by WSF:

- Reduced indirect and overtime costs

In determining the potential savings of a two-shift maintenance operation, we calculated staff allocations in two scenarios: a first and second shift staff allocation of 70 percent/30 percent and a 60 percent/40 percent allocation. As a result, we estimate that a two-shift operation could save WSF between $368,000 and $445,000 annually while providing better alignment of maintenance service with maintenance demand.

Shift-to-shift communication and project coordination is assisted by our recommendation for maintenance task standardization and documentation, particularly that of a quality control and quality assurance (QC/QA) process. Furthermore, each shift is eight hours, with ½ hour for lunch, which means there is a half hour of overlap between the two shifts that would be used for project management communications of carry-over work. In addition, any added administrative charges necessary for managing a two-shift maintenance operation are offset by the reduction in administrative charges previously needed to manage call-outs and overtime scheduling.

- Reduced out-of-service periods for vessels

  Switching to a multiple work shift format will have the potential to reduce the length of time that ferries are out of service for repairs during their seasonal and annual inspection periods. With tradesmen working multiple shifts, WSF can reduce the out-of-service periods. This would depend on the resources available, what work is required, and order of priority for completing repairs.

- Faster turnaround time between work order requisition and completion

  As an extension to WSF's continuous maintenance program, a two-shift operation can perform more maintenance work on vessels. This benefit directly ties to our recommendation to reduce the operating hours that vessels run, in order to reduce operating costs (see Audit Area 2 below). With ferry routes running for fewer hours, the vessels are available at terminals, giving more time for Eagle Harbor tradesmen to perform minor maintenance work orders on the vessels. Concurrently, shorter operating hours provide more time for repairs to be accomplished on terminal facilities when the facilities are closed.

- Improved condition of the fleet and terminals

  WSF's existing model of continuous maintenance involves regular out-of-service periods to complete a backorder of work order requests. At the end of the out-of-service period, the ships return to the fleet with a high level of service (replaced and painted steel structures, new equipment, replaced worn equipment, etc.). Cosmetically, they look new. However, there are typically many work order requisitions that were not completed (not started and completed). Applying a regular multi-shift approach, the uncompleted work requests would be another set of work requests schedule for completion the following night/week.

Key constraints to this recommendation are existing business practices and CBAs. However, in order to survive as a cost-effective state agency, WSF should consider being creative and adopt efficient business practices for performing its service to the public. As such, WSF will need to work with labor negotiators to change the CBAs where necessary to support recommendations to establish a more cost-effective work schedule that minimizes overtime and increases productive work periods.

Management Responses to Finding 1

Finding 1: Eagle Harbor's hours of service do not efficiently match the needs of WSF vessel and terminal maintenance demands.

Recommendation 1: Reduce indirect and overtime charges by Eagle Harbor staff.

WSDOT Response

The Department appreciates the auditor's suggestions to improve the efficiency of our Eagle Harbor Maintenance Facility. As described below, we will conduct further analysis to determine the costs and any potential savings of adding a second shift for this facility. WSDOT's Eagle Harbor facility currently operates with a single shift comprised of crew from nine separate trades. While the facility is organized to be responsive to both maintenance and emergency repair needs of the fleet, we welcome suggestions for improvement. Reducing overtime charges is a sound recommendation, as long as the outcome still provides for addressing both emergent needs and required maintenance of our system.

The bulk of Eagle Harbor overtime is incurred in response to emergent needs, which often occurs both late in the evenings and on weekends. Therefore, it does not appear that a second shift during the week ending at 10:00 or 11:00 p.m. would eliminate a significant portion of typical overtime. However, we will analyze historical overtime patterns to determine a more precise estimate of reduced overtime from a second shift, including any potential added supervision and support costs, and determine what savings are achievable.

Action Steps and Timeframe:

- Analyze historical overtime patterns and determine possible savings. We have already begun work on this action step. Prepare evaluation by April 2008.
- Work with the Governor's Office, OFM, and Legislature, as appropriate, to further evaluate this recommendation and to weigh the projected benefits against the costs. Complete by April 2008.

OFM Response

While we agree that optimizing cost-effective work schedules to minimize overtime and increase productivity is a sound business practice, more extensive analysis is needed to determine that moving to two shifts is a better way to meet these goals than working within the existing single shift model.

Eagle Harbor staff generally work from 7:00 a.m. to 3:30 p.m. With twelve vessels operating 16 hours a day and five vessels operating 22 hours a day, two shifts might make sense if there is sufficient work to do during those hours. However, the initial assessment that WSF could save from $368,000 to $445,000 per year does not appear to consider the additional costs that dual shifts would generate, including: (1) shift differential pay, (2) manning a safety office and store room, and (3) providing the needed supervisory and planning staff.

To assess whether or not dual shifts would result in savings, it is necessary to evaluate the costs of two shifts in comparison with a single shift model, with overtime. In particular, a number of

questions would need to be addressed, including: (1) would a multiple shift format reduce the amount of time ferries are out of service during their seasonal and annual inspection reports? (2) would there be faster turnaround time between work order requisition and completion? (3) would it improve the condition of the fleet and terminal? and (4) would overtime costs be sufficiently reduced or eliminated after accounting for overtime related to emergencies. Once completed, an analysis of this type would need to be fully vetted to reliably determine which staffing model is most cost effective.

Auditor's Comments

WSF's point that overtime work often happens when Eagle Harbor is currently closed illustrates the need to shift the working schedule of the facility to a period of the workday when vessels are more likely available and when traffic at the terminals is at a minimum. A second shift would accommodate this and transfer overtime charges into straight time. The analysis conducted to determine the potential savings in a two-shift work schedule does account for shift differential pay.

Management Responses to Finding 2

Finding 2: Eagle Harbor could reduce the amount of time charged to indirect work codes.

Recommendation 1: Reduce indirect and overtime charges by Eagle Harbor staff.

WSDOT Response

We agree that reducing the amount of time charged to indirect work codes is an important goal. In analyzing the costs and benefits of making improvements in this area, we will be faced with limitations of Eagle Harbor's outdated computerized time-keeping system. The limitations of this system and its inability to provide a more detailed charge coding is a major cause of work being charged as indirect. Actual indirect time charged by Eagle Harbor craftsmen includes numerous productive tasks, such as rebuilding vessel components in the various Facility's shops, mobilization, training, and cleaning up.

Recording additional details on time worked by staff at Eagle Harbor and potentially reducing the amount of time charged as indirect is a sound recommendation. The department will look at ways to make changes in the detail recorded in our current time-keeping system or assess the costs of moving to a new time-keeping system. We are pleased that the audit report recognizes the limitations of this outdated system.

Action Steps and Timeframe:

- Evaluate the current time keeping system's ability to record additional details on indirect time. Determine whether modifications of current system are possible. Evaluation will follow the schedule for any evaluation of a new agency-wide timekeeping system.
- Evaluate costs and business needs of a new timekeeping system in alignment with Department needs. This evaluation will consider an agency-wide timekeeping system, rather than a separate system for separate divisions or work units. Evaluation is dependent upon results of previous action and guidance from OFM.

- Review history of indirect charges at the Eagle Harbor Maintenance Facility and assess whether efficiencies can be achieved in indirect charges. Complete by April 2008.
- Work with OFM Accounting to identify the correct allocation of charges. Complete by April 2008.

OFM Response:

The audit finds that indirect charges have been sustained at 25 percent of total labor charges for the past three fiscal years, implying that 25 percent indirect charges is too high. It is unclear whether the indirect charges are related to system shortcomings, accounting practices, or the nature of the work. This finding, along with finding number seven, suggests the need for improved recordkeeping for labor charges. WSF management has started to work on improving their labor reporting process. They should also continue to develop cost accounting improvements to reduce the amount of labor charged to indirect time codes.

WSF lacks sufficient management oversight of the Eagle Harbor Repair Facility

There are three audit findings to support the above conclusion.

Condition

FINDING 3

Less than 2 percent of the positions at Eagle Harbor are filled by WSF management.

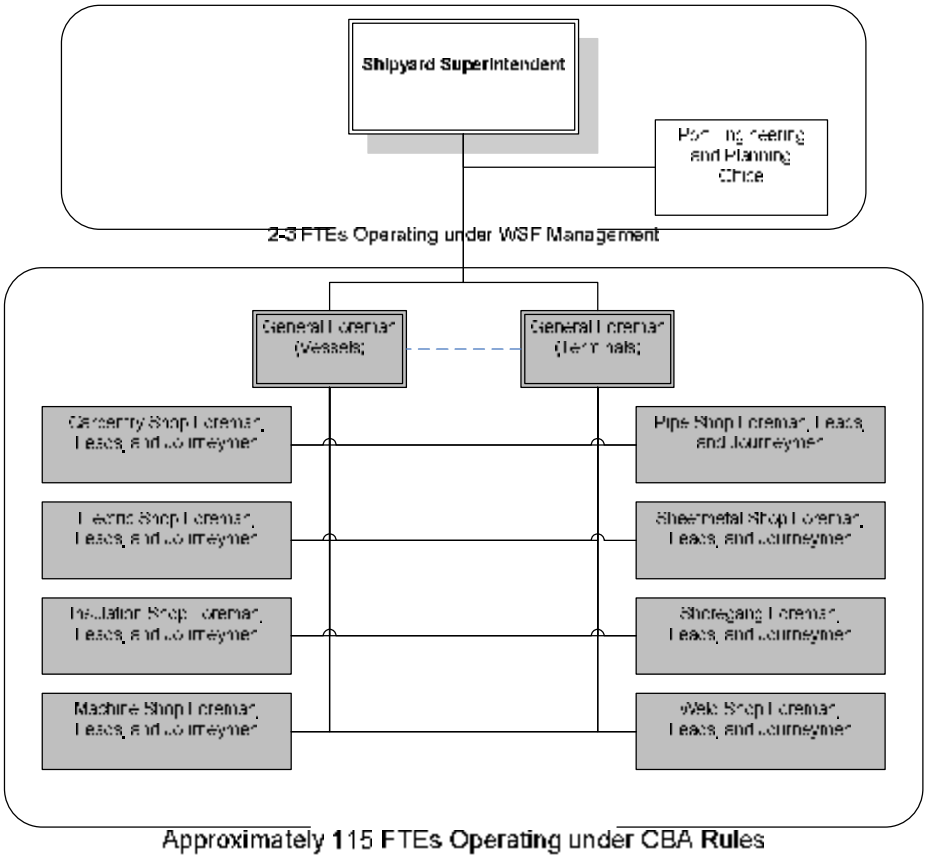
Only two of approximately 115 FTEs at Eagle Harbor are management positions, the Superintendent and Senior Port Engineer. These two positions are not part of the metal trades CBA that makes up the workforce at Eagle Harbor.

The language in the collective bargaining agreement does not allow positions to have "management" duties, but rather "supervisory" duties. However, the General Foremen and Shop Foremen, all metal trades union members, are in reality performing management duties, and as such, should be making decisions that meet overall WSF goals and objectives. Figure 5 below presents an organizational structure for the management and staff at Eagle Harbor.

The figure illustrates how much of the facility's management work is left to staff that are not designated as and do not view themselves as managers. Conversations with the Maintenance Department illustrated this point: WSF considers the Shop Foreman and General Foreman positions to be supervisory in nature.

CBA terms state that decisions regarding job assignment are the responsibility of WSF, meaning management; however, many personnel decisions that impact cost management are left to Shop Foremen and the two General Foremen. Our assessment of key business processes through discussions with Eagle Harbor General and Shop Foremen is that they are responsible for conducting project management duties. The roles and responsibilities of these positions are essentially management in nature.

Figure 5 – Eagle Harbor Organizational Chart, with Union/Management Affiliation



Criteria

Leading business practices support devolving decision-making down to the lowest levels possible, based on the skills and abilities of the individuals employed within an organization. Management decisions always consider the financial costs associated with those decisions. Leading project management practices also include managing the scope, schedule, budget, cost, and quality of the work performed. A project manager must balance all these factors while managing the execution and completion of a project. Project management and team sizing studies suggest leading practices for span of control of staff management is six people. Beyond six, communication begins to break down and unintended sub-teams form.

Cause

The cause for the finding and condition is historical precedent. Management and operation of Eagle Harbor was historically left to the yard itself, without much supervision and direction coming from WSF and WSDOT headquarters.

A performance audit conducted by the Washington Joint Legislative Audit Review Committee in 1998 highlighted the same issue. That audit recommended, and WSF subsequently implemented the recommendation to elevate the Maintenance Division to its own Department. Fieldwork for the 1998 audit noted the generally weak management structure and oversight of Eagle Harbor. While the position of Maintenance Director has been well established, the strength of the

position was not concurrently translated down to the shipyard superintendent and other managers in the facility, including the General Foremen and Shop Foremen. It is noted that WSF has continued to improve the business processes for maintaining ships and vessels by adding more port engineering positions to provide project management on major vessel service periods and miscellaneous maintenance projects.

Effect

The key effect of an unbalanced organization structure is an increased risk that costs are higher than necessary. Management decisions are made by non-management personnel and are not necessarily made in the best interest of cost controls and efficiency. As shown by the organizational chart, the Superintendent's span of control appears to be 1:2, in reality the span is much greater (one WSF manager, 115 tradesmen). The span of control is too much for the position to adequately manage the day-to-day activities of each shop and make appropriate management decisions in the best interest of WSF. Management activities are left up to shop foremen and the general foremen, who have traditionally not been part of WSF or WSDOT management, nor have they gone through WSDOT management training.

Condition

FINDING 4

Eagle Harbor work practices allow considerable flexibility in managing maintenance staff, creating weaknesses in control and accountability of staff performance and costs.

The CBA governing the tradesmen at Eagle Harbor includes Article V, which describes the roles of shop foremen and leads, and identifies the number of such positions, based on the number of tradesmen in each shop. Article V, Section 4 identifies the procedure for assigning staff to temporary lead and foreman positions when absences exist. The section states that temporary promotions are not necessary, and that the positions are filled based on the recommendation of the employer. The employer is defined as WSF.

An analysis was completed on the frequency that Eagle Harbor tradesmen were given temporary promotions. The data source for the analysis is the WSF Marine Labor System payroll data, with labor hours, dollars, by employee and job title, by fiscal month, for fiscal years 2004 through 2006 inclusive. Data was queried by employee position, and the number of job classification changes was tallied. The number of hours charged in a given month by employee by job change was segmented into four ranges: less than or equal to eight hours, between eight and 16 hours, between 16 and 24 hours, and greater than 24 hours per month.

For example, if a journeyman charged 140 hours in a month at journeyman level, four hours in the month as a lead, and two hours in the month as a foreman, then the frequency of occurrence is two, and the changes were either eight hours or less. Only those staff that charged to more than one job title in a fiscal year were included in the analysis and make up the sample size. The results of the analysis are presented in the Table 8 below.

Table 8 – Frequency of Changes of Job Title for Temporary Promotions by Eagle Harbor Tradesmen, FY2004 – FY2006

	FY2004		FY2005		FY2006	
Sample Size (number of staff with temporary promotions per year)	46		40		40	
Duration of Charges at Different Job Title	Freq.	Dist.	Freq.	Dist.	Freq.	Dist.
- Between 16 and 24 hours per month	24	12%	27	13%	38	15%
- Between 8 and 16 hours per month	37	19%	38	19%	39	15%
- Eight hours and less per month	47	24%	48	24%	72	29%
Total Position Shifts	200		204		252	

Source: WSF Marine Labor System.

The table illustrates that in a given year, 40 or more staff members changed their job titles temporarily within their shops, effectively getting temporary raises. For the sample size examined, in total over 200 changes occurred. In fiscal year 2006 alone, almost 60 percent of the changes (149 of the 252 changes) were of 24 hours in total duration or less. Most changes occurring were for eight hours or less.

Based on information gathered from interviews with Eagle Harbor staff, changes may be occurring more frequently. Time sheet data only indicates total hours within a position by pay period; the data on total hours by pay period and position selected from the Marine Labor System does not provide the detailed information needed to show if the frequency of occurrence is higher and/or if the duration of the temporary promotions is short-term.

Overall, the analysis of payroll data indicates that temporary promotions occur regularly and do not just occur in single-step increments. In some instances, journeymen were promoted to foreman-level positions. Our review of Eagle Harbor's business processes indicates that temporary promotions are made and decided upon not by the Superintendent, but by general foremen and shop foremen. The activity occurs on a regular basis. While the practice is conducted out of tradition, the necessity of the practice is questionable. WSF stated in interviews that the temporary promotion practice is to provide for training opportunities.

Criteria

Leading business practices include providing the necessary training for skills building, personnel growth, and opportunity for advancement. In a merit-based organization, ability outweighs seniority, and ability is shown through demonstrated performance and career development and goal plans. Leading practices for promotions are based on one's ability to perform the work, demonstrated through education and training and potentially by apprenticing with the staff being replaced. Temporary staff vacancies can be handled through oversight by positions of higher authority. If these all are not occurring to a sufficient and measurable degree, then the promotions should not be occurring.

Succession plans, like all plans, should be well documented and supported by sound business practices. While some temporary assignments are necessary to fill a vacancy for an extended period, many of the temporary promotions are of relatively short duration.

Cause

The CBA states that management is to approve temporary promotions or assignments. However, management has delegated this authority to the union members who use this practice frequently.

Effect

The following are effects resulting from having an overly flexible organizational structure:

- The frequent and short-term promotion/demotion process inhibits WSF from providing effective training to staff.

  The staff is not provided a sufficient amount of structured apprenticeship in management skills, and the frequent shifting of positions likely does not allow all staff an appropriate amount of time to absorb and use the skills.

- The frequent changes in job positions prevent effective project and program management of maintenance work requests.

  There is an impact on cost control and quality of work due to the Eagle Harbor staff not being trained or working with a consistent, standardized set of maintenance policies and procedures. The frequent switching of jobs also influences identifying and tracking accountability (in terms of cost and quality of work performed); a more rigid hierarchy establishes strong lines of communication, authority and control, and accountability for actions taken.

- Minor cost increases are incurred by WSF for maintenance work on specific work requests.

  Overall costs for one year (fiscal year 2006) were only $10,000. However, WSF incurs additional administrative costs to check and approve of the promotions/demotions as recorded in the payroll/time accounting system. This complicates the management and completion of the WSF payroll process.

- Staff (journeymen) are given temporary authority to approve overtime and time charges by coworkers.

  Due to lack of flexibility in job position management, several staff members have charged to the General Foreman job code while not specifically performing that function. Technicians are given positions of responsibility for quality control and quality assurance of coworkers. Payroll data shows that in the past, journeymen have had temporary assignments as leads, foremen, and even as the general foreman of the facility. However, in reality, the workers are not actually working as the general foreman, but in other roles. WSF management lacks the capability and ease to setup pay codes to appropriately match staff to positions.

Condition

FINDING 5

Eagle Harbor has insufficient performance indicators and metrics for assuring appropriate management of resources.

Overall, WSF has several performance measures they track and publish to illustrate how well they deliver services to the public. These measures are published with many others in WSDOT's Grey Notebook on a quarterly basis. WSF's measures include:

- Number of customer complaints.
- Trip reliability (average missed trips per commuter).
- Missed trips for mechanical issues (vessel and terminal)
- On-time performance measures by route (percent of trips within 10 minutes of schedule, average delay of all trips).
- Vessel and terminal equipment preservation ratings.

This last measure helps WSF identify and plan for needed maintenance work. However, fieldwork and interviews have identified that there are few indicators used at the department level and below at WSF for indicating how well the organization is performing and conducting its work. It is noted that several data points for measuring performance are collected and put into the Maintenance & Productivity Enhancement Tool (MPET), a system that documents, prioritizes, and aids the maintenance process for vessels and terminals. However, the data is not being used to measure and report performance against any department or shop-level goals of achieving greater efficiency and performance (higher quality, lower cost, quicker turnaround, less rework).

The only performance indicators identified by audit fieldwork related to adherence to budget. Eagle Harbor is provided a budget in terms of hours for each fiscal year. These hours are distributed over the year and by shop. The Superintendent tracks these figures to identify when variances in actual man-hours to budget occur. There is no indication that the measures are used to manage overall costs and cost performance of the facility. In turn, interviews with shop foremen uncovered that the primary performance measures they track are overtime hours in order to ensure that the hours are equitably distributed among the tradesmen as stated in the CBA (Article V, Section 8).

Other specific issues regarding performance measurement usage at Eagle Harbor include the following:

- Eagle Harbor manages all work against a rolled-up budget for the entire facility. The budget includes straight and overtime man-hours.
- Work orders are not managed to the budgeted allotment provided in preliminary scoping estimates.

- Performance measures are not tracked for shop time or administrative time to ensure that they are minimized.

Criteria

Performance measures are tools used to ensure that organizations are operating efficiently and effectively, as well as to identify where process problems, such as cost or quality, occur before the cost to fix the problem become excessive. A robust performance measurement system includes measures that work at all levels of the organization: Executive-level measures examine overall costs and performance against strategic goals and objectives; department/division measures examine/assess the performance of the individual department/division against its stated goals and objectives.

Cause

The following are two causes for a lack of useful performance measures at Eagle Harbor:

- Lack of performance improvement goals.

  A key cause for the lack of performance measures is the absence of shop and department-level goals and objectives in the Maintenance Department. Adhering to an annual budget is important, but it should not be the only or primary measure of facility performance. This lack of measures may be caused by insufficient management resources, lack of management capabilities, and historical precedence of collective bargaining units being opposed to using metrics as a means of measuring performance.

- Focus on customer satisfaction, not managing costs.

  Another cause for lacking measures is WSF's general focus on doing what is necessary to please its customers. Being customer focused without also focusing on the costs to achieve those goals is not always appropriate. This is especially true for a government agency that receives 100 percent of capital funding and 20 percent of its operational funding from the tax-paying public, the majority of whom are not users of the ferry system.

Effect

The following are identified effects resulting from not having a complete set of performance measures for managing WSF maintenance:

- Eagle Harbor does not maximize the utilization of resources to directly maintain the WSF fleet and terminals.
- Eagle Harbor can do more to effectively manage and control costs for maintaining the WSF fleet and terminals.
- The Maintenance Department does not effectively document and demonstrate the costs necessary for delivering specific levels of service to WSDOT, the Governor's Office, the Legislature, and the taxpayers of the state.

Recommendation for Findings 3, 4, and 5

Recommendation 2

Improve and Strengthen Overall Management of Eagle Harbor.

The following recommendations are being made for findings 3, 4, and 5:

- Increase management oversight of Eagle Harbor activities by establishing project management policies and procedures with clear lines of authority. Increase the level of Port Engineer presence at Eagle Harbor by expanding the project planning office to a project management office. Establish consistent project management policies and procedures, and implement improved tools for managing the maintenance program and projects. The Maintenance Director and Port Engineers should make more site visits to the Eagle Harbor Repair Facility to review and inspect the work performed. They may also get feedback from and directly communicate with maintenance staff regarding issues and problems that need to be addressed.
- Rewrite position descriptions for executive and mid-level management positions (superintendent, general foreman, and shop foreman) to include requirements for experience in management, supervision, and project management, financial cost management, formalized training, and certifications. It may be necessary to make these positions part of a separate CBA from the positions they would manage and supervise.
- Establish a robust training program for management and project management. WSF terminal engineering staff has been taking project management courses through local colleges. WSF should expand this program to include maintenance staff and tradesmen. This will provide general foremen and shop foremen the training and tools necessary for moving into management positions.
- WSF should better leverage the terms of the CBAs to manage maintenance operations and reduce unnecessary costs. Renegotiate CBAs to eliminate unnecessary costs to the state. Strictly follow the CBAs whereby the Superintendent of the facility makes decisions about the temporary promotion of staff.
- Establish performance-based accountability standards for Shop Foremen and General Foremen that encourage decision making to reduce costs (overtime and straight time) and improve productivity and quality of work. Establish a performance measurement system that identifies key performance indices for each shop and within each shop.
- Review and improve performance measure usage at Eagle Harbor and WSF in general. Establish cost accounting and control measures, and establish decision-making policies that support rationalizing of service supply to the actual demand for services.

Although these recommendations do not have associated estimated cost savings, there is a monetary benefit in the management of resources through better efficiency.

Management Responses to Finding 3

Finding 3: Less than two percent of the positions at Eagle Harbor are filled by WSF management.

Recommendation 2: Improve and strengthen overall management of Eagle Harbor.

WSDOT Response

We appreciate the auditor's recommendation and agree that sound business processes and practices are essential to a productive and efficient facility. We believe we have adequately provided management and supervisory oversight for Eagle Harbor work activities. There is a broad spectrum of work performed at the Eagle Harbor facility and the Ferries Division has taken a balanced approach to its existing organization that distinguishes between management of the facility, management of projects, and the supervision of staff members. The facility is managed by the Senior Port Engineer. Eagle Harbor project management duties, such as scope, schedule, and budget for the many vessel and terminal projects, are established and monitored by project managers who are either Maintenance Department Port Engineers or Terminal Engineering Department Project Managers. Eagle Harbor Foremen are journey-level tradesmen, who work alongside their colleagues, with supervisory responsibility for completing work.

Action Steps and Timeframe:

- Continue work on improving business practices. Ongoing.
- Work with the Governor's office, OFM, and Legislature to determine whether re-organizing or adding additional management positions is a priority in their budget deliberations. This will include an evaluation of the inter-relationship of the maintenance and preservation program's project management. Review for next legislative session.

OFM Response

We agree with the observation made in the report that "devolving decision-making down to the lowest level possible based on the skills and abilities of individuals employed by the organization" is a desirable business practice. The audit criteria applied here are drawn from "best practices" as noted in business literature. This literature asserts a one-to-six span of control (management to line staff) can lead to better alignment with the goals of the agency and increased financial cost containment and oversight. However, the audit does not provide evidence that either of these issues are problematic at Eagle Harbor. This seems to indicate that the work performed at Eagle Harbor Maintenance Yard is meeting the needs of the Ferries Division. A more thorough review of the dispersed management functions will be evaluated to determine whether increased efficiencies can be gained by a different management structure. Given the unique nature of the Ferries Division's maintenance and preservation operations, a review of the inter-relationship of the tiered management functions will be performed.

Auditor's Comments

We do not expect that WSF and Eagle Harbor need to increase the number of management positions at the facility, but instead reclassify positions and change job descriptions to improve

the overall management and control of projects, in terms of scope, schedule, budget, cost control, and quality.

Management Responses to Finding 4

Finding 4: Eagle Harbor work practices allow considerable flexibility in managing maintenance staff, creating weaknesses in control and accountability of staff performance and costs.

Recommendation 2: Improve and strengthen overall management of Eagle Harbor.

WSDOT Response

We believe that the temporary promotion of journey level craftsmen into foremen roles is a good business practice. Costs and benefits of this practice are an important consideration. The primary benefit a foreman provides is a single point of communication. This is critical because operating assets move constantly, over a wide geographic area. The temporary promotion of journeymen to lead positions also provides on-the-job leadership training, helping to develop the Ferries Division workforce, and provides additional flexibility in assuring that work is completed under proper supervision.

Action Steps and Timeframe:

- Work with the Governor's office, OFM, and Legislature to determine whether re-organizing or adding additional management positions is a priority in their budget deliberations. Review for next legislative session.
- Review temporary promotions (OFM action step).

OFM Response

Although we recognize advantages to temporary promotions, including inherent leadership training opportunities, we will review this practice.

Management Responses to Finding 5

Finding 5: Eagle Harbor has insufficient performance indicators and metrics for assuring appropriate management of resources.

Recommendation 2: Improve and strengthen overall management of Eagle Harbor.

WSDOT Response

We agree, and believe that developing and tracking of performance measures at the individual shop level is a sound business practice.

Action Steps and Timeframe:

- Explore additional performance measures as recommended by February 2008.

OFM Response

We agree performance measures are necessary for Eagle Harbor. The Ferries Division will develop performance measures that target efficient resource utilization, and cost containment, as well as identifying a means for assessing the costs of providing different levels of service.

Some general business processes followed by WSF and Eagle Harbor particularly are inefficient

The above conclusion is based on four audit findings.

Condition

FINDING 6

Except in emergencies, WSF maintenance personnel lack priority-loading privileges while traveling to perform maintenance tasks. This may require them to wait for a later boat and thus incur unnecessary time charges.

Eagle Harbor maintenance activities require personnel to travel from Eagle Harbor to work on terminals and vessels spread out across Puget Sound. In many cases, Eagle Harbor maintenance personnel must use the ferries to reach their worksite. Prior to March 2001, Eagle Harbor had priority loading rights, which allowed WSF maintenance personnel to board the next available vessel rather than wait in the queue for general boarding. In the event of an emergency maintenance task however, Eagle Harbor personnel are given priority boarding, but first they must contact the respective terminal agents to gain approval for priority vessel loading.

Ferry traffic volumes peak as expected during rush hours and at other times of the day depending on the route. During these peak times, the ferry system experiences boat waits. Boat waits are when a ferry is full and passenger have to wait for the next available ferry. Because Eagle Harbor personnel do not have priority boarding, which would allow them to board the current vessel first, they have to wait in line and therefore can experience boat waits. This time spent waiting in line for an available ferry is paid time costing the state lost productivity time and in some cases overtime charges. WSF's payroll accounting system does not classify or track employee time spent waiting for a boat. Since WSF does not track these costs, we cannot determine the costs incurred by following this policy; however, the policy does support inefficiency that undoubtedly has a cost factor.

Criteria

Leading business practices support maximizing the utilization of personnel and minimizing unproductive time and costs.

Cause

The cause for this finding is WSF's dedication to its customers. Customer opinions, complaints, and requests are a priority for WSF. In this finding, responding to customer complaints takes priority over cost-effectiveness and productivity. Furthermore, this policy is supported by language in the Washington Administrative Code that gives preferential loading to emergency vehicles and public utility vehicles, but not to vehicles owned/operated by WSF and WSDOT.

Effect

The no-priority boarding policy has caused Eagle Harbor staff to incur unnecessary time needlessly waiting for an opportunity to return to Eagle Harbor to work, close up the shop, or complete other administrative duties. Furthermore, costs are increased in cases where a boat wait results in maintenance employees incurring overtime.

Recommendation for Finding 6

Recommendation 3

Eliminate the No-Priority Boarding Policy for Eagle Harbor Staff.

If or when complaints or issues arise that may increase costs or reduce productivity, WSF should communicate the reasoning for the current process and what additional costs or inefficiencies would be incurred with the requested change. WSF should add a "frequently asked questions" page to its website to help customers understand policies and procedures.

In support of this recommendation, WSDOT should make the appropriate modifications to Section 468-300-700 of the Washington Administrative Code to include language that gives WSDOT vehicles priority-loading privileges. If WSDOT does not make the appropriate modifications, then the Washington Legislature should take action.

Management Responses to Finding 6

Finding 6: Except in emergencies, WSF maintenance personnel lack priority-loading privileges while traveling to perform maintenance tasks. This may require them to wait for a later boat and thus incur unnecessary time charges.

Recommendation 3: Eliminate the no-priority boarding policy for Eagle Harbor staff.

WSDOT Response

WSDOT's existing policy of not providing priority boarding for maintenance personnel in all situations is a sound business practice. In our experience, paying customers have little patience when Ferries Division employees receive priority boarding. Moreover, employees have relatively easy access to vessels in off-peak periods, and in urgent situations, priority boarding is provided – based upon the merit of that specific situation. We suspect that the cost savings from giving maintenance crews priority boarding would be quite small. Further, any possible cost savings would likely be reduced by the cost of addressing complaints from regular patrons who would be displaced.

Action Steps and Timeframe:

- Assess further the scheduling of routine maintenance that requires personnel to board ferries during peak commute trips to determine whether reassignment and rescheduling is possible. Complete by December 2007.
- Assess whether existing policies related to priority boarding are impacting service delivery. Complete by December 2007.

OFM Response

OFM will follow up with the Ferries Division to ensure that, to the extent practicable, routine maintenance work that requires Eagle Harbor personnel to board ferries is scheduled off the peak commute periods.

Condition

FINDING 7

The timekeeping process at Eagle Harbor is a manual, labor-intensive, non-standardized, and inefficient process.

WSF's overall timekeeping process involves several steps, including multiple reviews. Several non-value-added steps are duplicative and lengthen the overall process. Focusing on Eagle Harbor, interviews with Maintenance Department staff indicate that the process is so cumbersome that the facility essentially shuts down for an extended period to complete the timekeeping process. WSF management knows this problem exists. WSF, WSDOT, and WSDOT Information Technology previously worked on solutions to the overall timekeeping process; however, WSF's functional and technical requirements were much more complex than estimated by the contractor. WSF's extensive requirements based on current timekeeping practices halted the project.

Timesheets are reviewed and signed off by management on a weekly basis. The Shop Foreman, General Foreman, and Superintendent all review the timesheets for clerical accuracy. This lengthens the payroll process and causes unnecessary administrative costs to the organization.

Each of the workshops at Eagle Harbor follows different policies for time tracking; however, there are five general timekeeping process steps: Tracking, Recording, Reviewing, Authorizing, and Reporting.

- Time Tracking

  Shop Leads and Shop Foremen monitor and track the time spent by individual technicians working on maintenance tasks. Time is tracked in a Daily Completion Log, which includes all of the work order requisitions worked on during the day.

  Each shop has its own way to track time in the Completion Log. Some shops create a mock timesheet for each technician; others keep a running list of work order requisitions worked on during the day, and tally the hours worked; shops also track hours on paper copies of the work order requisitions before including them in the Completion Log.

- Time Recording

  Eagle Harbor staff record time in triplicate at the end of every work week. Using the Completion Log, staff fill out the timesheet, making any corrections necessary. Typically, deviations from the Completion Log on an individual's timesheet include actual travel time, paid time off, and administrative leave, among others. If an individual did not work a full eight hours on one or more work requests (either terminal or vessel work, or both), time is

charged to either the individual's shop or to the general administrative time code. Once the timesheet is completed and signed by the employee, the triplicate timesheet is returned to the Shop Foreman for review.

- Timesheet Reviewing

  Shop Foremen conduct a detailed review of each employee's timesheet for accuracy and agreement to the time tracking logs and Completion Logs developed during the workweek. The detailed review includes verifying the accuracy of time coding (Position, Work Order, Work Requisition, Pay Code, and Reason Code), as well as the actual hours charged to each of the work requisitions. The key problem with this process step is that the Shop Foremen are reviewing work that they have already done.

- Timesheet Authorizing

  The general foremen conduct a review of and approve the timesheets. Their review consists of a check for clerical accuracy of every timecard. The general foremen also review the coding of time for accuracy and the hours charged for reasonableness based on their knowledge of the current maintenance projects underway and past performance. It should be noted that this intellectual knowledge is highly subjective, as it is not information captured in any asset management system at WSF.

  General foremen authorize overtime by signing an Overtime Slip accompanying the timesheets. The written approval happens after the overtime has occurred and the slips are not audited.

- Time Reporting

  Following review and approval of timesheet management, one copy of the timesheet goes back to the shop, one copy stays with the Eagle Harbor project planning office, and one copy goes to WSF headquarters for payroll processing. Payroll clerks manually enter timesheet information into two systems, an unofficial Microsoft Access database and the WSF Marine Labor System. The Eagle Harbor Superintendent uses the Access database to manage facility activities. The manual process of inputting timecard information into the Access database is a time-consuming process that does not provide management accurate data. Management uses this system, although the data is provided in the WSF Marine Labor System.

Criteria

Leading business practices include designing, implementing, and following a core business process that eliminates duplication of effort and manual data entry procedures, to the extent possible. In addition, well-run businesses use standardized templates, forms, business rules, and controls. This is not occurring at Eagle Harbor.

Cause

The primary cause for the overly manual process is an inability of WSF to get a robust timekeeping system implemented. With the system, though, comes the need to make necessary changes to the existing business processes to improve efficiency and better use technology. The cause for the inconsistent methods and procedures for timekeeping is a general lack of

standardization and control of the several shops at Eagle Harbor by WSF management. Establishing a standard business process and codified business rules will reduce this problem.

Effect

Effects from having an inefficient timekeeping process are identified for each of the process steps:

- Inconsistent Time Tracking Procedures:
  - Reduces the ability to perform audits of the procedures to verify that procedures are being performed correctly.
  - Reduces shop supervisors' effectiveness in conducting timesheet reviews of other shops' personnel due to differences in each shop's time tracking procedures.
  - Reduces the ability of WSF to implement and measure performance indicators to track efficiency and effectiveness (i.e., shop time charges, administrative charges, employee utilizations, work order budget-to-actual variance analysis).
- Manual and Duplicated Time Recording Process
  - WSF incurs excessive costs and reduces the amount of time Journeymen and Leads can use to perform maintenance tasks.
  - WSF incurs unnecessary costs and reduces the amount of time that the Shop Foreman, General Foreman, and Superintendent can use to perform other requirements of their positions.
  - WSF incurs unnecessary costs and reduces the amount of time that the administrative assistants can use to perform other tasks.
- Manual Time Reporting Processes
  - All tracking, recording, and reviewing of timesheets is done manually on hard copy timesheets.
  - Eagle Harbor incurs costs for data entry -- three to four days every two weeks to input manually the information that can be extracted in minutes from the Marine Labor System.
  - The risk of time recording errors through multiple manual data entry steps is increased.
  - Eagle Harbor management uses "unofficial" data when planning maintenance tasks and scheduling resources.
  - Costs for hand-delivery of paper timesheets to WSF headquarters are increased.
  - WSF incurs costs to input manually the information on the timesheets into the Marine Labor system.
  - The risk of time-recording errors is increased.

Recommendations for Finding 7

Another audit is looking specifically at WSDOT Administration and Overhead performance and the payroll process at WSF. Consequently, we are confining our recommendations to changes

that can be implemented immediately and with minimal resources while anticipating that a WSDOT enterprise-wide system will be implemented in the near future.

Recommendation 4

Standardize Timekeeping Procedures.

WSF should initiate an improvement project to document timekeeping procedures followed by the several shops, identify the best, most efficient procedures, and develop and implement a policy for how time charges will be recorded based on standard work activities, work rules, and procedures. The policy and procedures should be enforced; compliance with the policy and procedures should be identified as part of performance-based management goals and objectives for managers and supervisors.

WSF should enforce standard time-recording procedures so that all shops capture and code time worked on work requisitions, shop time, and administrative activities in the same manner. Management would have a difficult time trying to implement performance indicators if inconsistencies of how time is recorded exist between shops.

Eagle Harbor technicians should no longer manually input the information from the timesheets into their own Access database; instead, they should receive the needed information from the WSF IT Department through data extraction.

Recommendation 5

Eliminate Dual Entry of Timecard Data at Eagle Harbor.

The information currently manually created by Eagle Harbor staff is obtainable through WSF's IT Department. This would eliminate the need for Eagle Harbor to enter timesheet data independent of the payroll system. The most current information would be updated every two weeks, well within the requirements of Eagle Harbor management to track performance against budget. Additionally, the data retrieved from the payroll system is official, and the data download would eliminate the time and costs spent on Eagle Harbor manually populating its own database.

Management Responses to Finding 7

Finding 7: The timekeeping process at Eagle Harbor is a manual, labor-intensive, non-standardized, and inefficient process.

Recommendation 4: Standardize timekeeping procedures.

Recommendation 5: Eliminate dual entry of timecard data at Eagle Harbor.

WSDOT Response

The Department agrees with the need for a standardized timekeeping process for all shops at the Eagle Harbor Maintenance Facility, and that the dual entry of timesheets is time-consuming.

Action Steps and Timeframe:

- Currently reviewing each individual shop's process for tracking all relevant work requisitions, assignments, and hours worked. Complete by April 2008.
- Create one standardized timekeeping process that will apply to all shops. Complete by June 2008.
- Eliminate dual entry of time data by using payroll data already entered in the computerized payroll system. That payroll data is now transferred electronically to the Access database referred to in this finding. Completed.

OFM Response

We concur that WSF needs a robust timekeeping system and consistent methods and proceeds for timekeeping.

Condition

FINDING 8

WSF lacks a comprehensive set of standardized business processes, policies, and maintenance tasks.

Examination of existing documentation, interviews, and site visits revealed a general lack of standard documentation of Eagle Harbor's specific maintenance tasks. Eagle Harbor also lacks standardization and documentation of business processes and policies. As a result, management can only assign specific personnel to perform certain maintenance tasks. With the exception of the Electrical Shop, documentation for knowledge sharing and standardization at the various Eagle Harbor shops consists primarily of schematic drawings; there is no systematic tool for illustrating what work shops do, and how they do it.

Only the Electrical Shop has initiated and made progress in documenting certain information related to vessels and terminals, such as schematic drawings, tools and parts typically used for a task, and any pertinent experiences or lessons learned with a system. The Electrical Shop documented the information because they often have difficulties finding qualified electricians to fill positions. The lack of resources has forced the shop to hire non-marine certified electricians and train them to complete the necessary maintenance work. Existence of the documented procedures speeds up the learning process and builds a knowledge base for the Electrical Shop. Fieldwork and interviews did not identify other shops following this leading practice. There is no policy in place to document maintenance procedures.

Other key procedures that are not documented and standardized include administrative business procedures such as timekeeping (discussed previously), and key maintenance processes such as quality control and quality assurance (QC/QA). Eagle Harbor management is currently working on improving the QC/QA business process, based on maintenance incidences that occurred early in 2007. The Maintenance Department and Eagle Harbor have a project management process for completing major repairs. However, the tools used and techniques followed by the staff do not follow leading practices. It too requires a more rigorous level of documentation, as well as training to maintenance staff.

Criteria

Leading business practices support standardization of processes for efficiency and easier management oversight. Documentation communicates processes for understanding compliance. Documentation of procedures related to maintenance tasks builds a comprehensive knowledge base and supports succession-planning efforts and efficient resource utilization. It also provides opportunity for all maintenance staff to be cross-trained across multiple maintenance disciplines.

Cause

A key cause for the lack of documentation is that there is no formal policy requiring such information to exist. Eagle Harbor management focuses on daily operations management, scheduling, planning, and reporting, not necessarily on ensuring that work is completed according to leading practices and specification.

Effect

The following are risks and inefficiencies resulting from non-standardized and undocumented procedures:

- Undocumented maintenance procedures allow for specialization of skills rather than the cross-training of tradesmen. Reliance on individuals with specialized skills likely leads to unnecessary overtime charges for maintenance work.
- Non-standardized procedures among shops make management oversight and control more difficult in managing the variations and exceptions.
- Undocumented procedures related to QC/QA process increase the risk of vessel and terminal breakdowns, leading to unplanned down time and increased repair costs.
- Undocumented maintenance procedures lead to the risk of lost intellectual knowledge when personnel leave WSF. Interviews with WSF staff indicate there is no formal succession plan in place to counter the loss of knowledge pending the retirement of senior maintenance staff at Eagle Harbor.
- Undocumented procedures lead to extended training time for new technicians.

Recommendations for Finding 8

Recommendation 6

Document Key Business Processes.

Develop and implement a policy to have shops document and organize key information related to maintenance tasks, such as systematic procedures, system schematics, tools used, and issues encountered during maintenance tasks so that workers can have access to the knowledge gained by others.

Recommendation 7

Develop a Comprehensive Maintenance Training Program.

Use documentation for cross-training staff within the shops. This will help to eliminate the dependence on a select few employees for a particular task. With proper documentation, the

knowledge of select few will be available to everyone, including newer, less experienced personnel. This way, multiple people will be able to have accomplished a broad range of tasks, rather than just one or two people being able to perform certain tasks.

Recommendation 8

Implement a Rigorous Quality Control/Quality Assurance Program.

WSF is commended for acting quickly to implement a quality control program that really works. This effort should be supported by WSF management to provide the public assurance that unnecessary maintenance problems are minimized in both cost and vessel/terminal downtime in the future. WSF should continue the development, documentation, and implementation of the QC/QA review process for critical system maintenance tasks performed by Eagle Harbor personnel. Incorporating accountability into the QC/QA process will assist in compliance with the formalized process. Documenting the completion of a quality control process, and having reviews to verify that the process was followed correctly, will lower the risk of a casualty resulting from a maintenance repair error. Once implemented, audits should be conducted periodically to verify that the process is being followed and functioning as expected.

Management Responses to Finding 8

Finding 8: WSF lacks a comprehensive set of standardized business processes, policies, and maintenance tasks.

Recommendation 6: Document key business processes.

Recommendation 7: Develop a comprehensive maintenance training program.

Recommendation 8: Implement a rigorous quality control/quality assurance program.

WSDOT Response

The Department agrees that documenting key business processes is important. As an example, the Ferries Division has documented its business processes in a division-wide Safety Management System that is consistent with the International Safety Management Code. The use of the M-PET computerized Maintenance Management System has documented the key information for each project management task for both terminals and vessel maintenance activities. Additionally, a library of drawings, schematics, and technical manuals are available to all maintenance personnel. The Ferries Division Maintenance Department also receives technical bulletins from equipment manufacturers that provide updated information on maintenance tasks. These bulletins are distributed to all appropriate staff.

The Department also agrees that a documented cross-training process for its Eagle Harbor staff at the shop level is a worthy goal. Furthermore, the Department agrees that a Quality Control/Quality Assurance program is needed for the Eagle Harbor Maintenance Facility.

Action Steps and Timeframe:

- Continue documenting existing business processes. Efforts are currently underway to rollout remaining Safety Management policies and procedures applicable to both Terminal and Vessel Engineering. Major milestones on these policies and procedures will be completed by June 2009.
- Evaluate our current training program and processes for Eagle Harbor staff. Complete evaluation by July 2008.
- Develop a cost-effective strategy for achieving the goal of a cross-training process that will meet our business needs. A strategy for developing a cross-training maintenance program will be in place subsequent to the evaluation. This will be done in accordance with the development of the training budget (July 2008).
- Implement a Quality Control/Quality Assurance program at the Eagle Harbor facility starting with vessel and terminal critical systems. Management fully supports and is actively involved in the development of this program. Complete by July 2008.

OFM Response

The Ferry Division is working on improving their QA/QC process as well as standardizing their business practices and documenting their business processes.

Condition

FINDING 9

There is a lack of communication and information exchange among departments at WSF, which has the potential for causing financial management risk and business inefficiencies.

In some instances, there has been a lack of communication among departments at WSF. This has affected the Eagle Harbor Repair Facility in several circumstances. Eagle Harbor management has not had access to, or has not known how to obtain, critical information to manage the facility and resources. In the absence of needed information, Eagle Harbor management has either re-created or done without the information. Several examples of this finding include Eagle Harbor's manual creation and maintenance of an unofficial labor charges database when the IT Department already maintained an official database downloaded from the official labor system. At the time of this audit, neither party was aware that the other was compiling and maintaining a labor database. The Eagle Harbor database is used to track actual labor data to budgeted, which is then used to brief the Maintenance Director on variances, even though the database is unofficial and not reconciled to the official labor information.

Another example is evidenced by the fact that Eagle Harbor management had been tracking its financial performance to an outdated budget. This occurred when the employee responsible for providing the budget data to Eagle Harbor left the organization. Since the budget had not significantly changed from previous years, there appeared to be no attempt to obtain or provide the current budget.

Finally, analysis of Eagle Harbor labor data determined that in fiscal year 2006 there had been an organizational change for the warehouse personnel who were now part of the Eagle Harbor budget. This change was unknown to Eagle Harbor management or Maintenance Department management. Because Eagle Harbor manages its budget and actual labor data from an unofficial database, this posed the risk of Eagle Harbor management spending budget hours allocated to the warehouse personnel that could have resulted in an overrun.

Criteria

Leading business practices support open communication among departments within an organization. Open communication fosters knowledge and data sharing, leveraging of organizational resources, and reduction in duplication of efforts and data. Efficient and effective knowledge sharing is supported by official data sources providing appropriate access and change control data management.

Cause

One cause is Eagle Harbor's physical separation from WSF headquarters, located in Seattle. Maintenance Department management must balance their time between the two facilities. Another cause, as observed during the performance audit, is the organizational culture of Eagle Harbor and WSF in general. Eagle Harbor is a relatively self-supporting facility; when the technicians need to make repairs, in many situations, they have the capability to make the parts right on site. This mindset leads them to develop tools and information databases to help them manage their operation instead of identifying who else within WSF might have the tools or data available to readily share with Eagle Harbor. A further cause for the communication gaps is WSF's lack of an integrated knowledge management system to ensure that information is captured, documented, and shared across WSF.

Effect

The lack of communication has led to ongoing duplication of effort, and increased financial management risk of making decisions based on out-of-date or incomplete information.

Without incentives to improve, management tends to focus on its own departmental goals, without regarding how its department contributes to the organization's overall performance. This departmental focus leads to an organization with limited communication among departments.

Recommendation for Finding 9

Recommendation 9

Establish an Agency-Wide Task Force to Facilitate Data Sharing and Exchange.

The objective of the task force is to leverage increased communication, existing resources, and a sense of ownership to create improvements or solutions to various weaknesses and inefficiencies identified in this audit.

The team should have representation from all departments and all strata of WSF. It should not be made up solely of management members. The viewpoints and insights of various levels of

staff are invaluable for addressing issues and fostering communication and ownership. Often, the team members of the task force have enough information and personal experience to provide the necessary insight to fully define the issue, develop recommendations, and facilitate implementation. If not, subject matter experts should be added to the task force for the duration of a particular issue.

It is important that a recommendation for improvement include a detailed implementation plan and clear, measurable goals or objectives for the improvement. Once the recommendation is fully developed, it should be presented to senior management for approval and support. Implementation of the change should be coupled with a communication plan. The change needs to be communicated to all affected employees with an explanation of why change is for the betterment of the organization. Once implemented, the change should be monitored and measured against its performance objectives and adjusted accordingly.

Management Responses to Finding 9

Finding 9: There is a lack of communication and information exchange among departments at WSF, which has the potential for causing financial management risk and business inefficiencies.

Recommendation 9: Establish an agency-wide task force to facilitate data sharing and exchange.

WSDOT Response

The department appreciates the auditor's focus on improving communication. The Ferries Division is a large organization and is spread throughout a reasonably large geographic area and we are constantly striving towards efficiencies and improvements in this area.

Since fieldwork for the audit was completed, the Ferries Division has reorganized and established the position of Chief of Staff/Deputy Executive Director. In an effort to streamline many internal departments and to provide some balanced cooperative work with the Executive Director, there are many functional areas now reporting directly to this position. These moves reflect the overarching organizational importance of these areas and the need to provide a stronger alignment with WSDOT headquarters in Olympia.

WSDOT believes that this organizational realignment will enhance internal communication and foster greater information exchange between departments. We believe that these improvements will address the auditor's concerns in the finding.

Action Steps and Timeframe:

- The reorganization was completed in June 2007.
- Improve communication strategies. Ongoing.

OFM Response

Although Eagle Harbor's physical separation from WSF headquarters may have contributed to its being somewhat isolated, it has also facilitated a highly functional, self sufficient workforce.

Nevertheless, as recommended in this report, it is imperative to have an integrated knowledge management system to ensure that information is captured, documented, and shared uniformly across WSF.

AUDIT AREA 2 – WSF ROUTE SERVICE OPERATIONS

This audit area focused on examining the overall efficiency and economy of ferry operations in providing transportation services to the traveling public from a statewide perspective. Specifically, the purpose was to identify opportunities for reducing operational expenditures in fuel and labor costs on ferry routes.

Background

WSF's Operations Department is the core of the WSF organization, consisting of shoreside staff at headquarters, terminal staff, and vessel crews. Shoreside staff includes management and staff responsible for overseeing and managing day-to-day operations, running the operations center, dispatching terminal and vessel crew personnel to ships and terminals on an as-needed basis, as well as acting as an emergency management and communications center for the Puget Sound.

WSF employs a large staff of terminal and vessel crew to operate the terminals and ferry vessels. Both terminal and vessel staff work a scheduled number of hours per pay period; staffing for terminals is determined based on the hours of operations, the expected staffing requirements to handle traffic volumes, and the job descriptions/restrictions for each terminal position. WSF and the collective bargaining units establish these rules. Terminal crew sizes vary according to historical traffic volumes through individual terminals, terminal designs and configurations, and jobs performed at the terminals. For example, more ticket takers are located on the east side of Puget Sound, since WSF collects tolls from walk-on passengers taking westbound voyages.

WSF crews the vessels using WSF employees, managing the Deck and Engine Room crews separately. Three unions and four collective bargaining units represent these two crews. Like the terminals, WSF manages the manning of ferry vessels based on staff preferences, seniority, vessel schedules, and work rules for deck crews (Masters, Mates, Able Bodied Seamen, and Ordinary Seamen). WSF does not permanently assign deck crew employees to specific vessels; most are assigned to a specific route. However, the vessel engineers have permanent assignments, staying on one vessel regardless of where it operates. Deck crews operate on shifts according to vessel schedules, typically on eight-hour shifts. Engine room crews work on shifts that more closely match sea-going vessels (12 hours on and 12 hours off, seven days on and seven days off), guaranteeing them 84 hours of work per pay period.

Washington State Ferries has underused round-trip runs that should be removed from the schedule

The above conclusion is based on one audit finding.

Condition

FINDING 10

WSF provides a level of service above what traffic volumes demand.

WSF operates eight vehicle ferry routes throughout Puget Sound. The schedule for each route and the capacity of vessels operating on each route are driven by several factors, including: distance between terminals, seasonal traffic volumes, local geographical constraints, vessel speed, past precedent regarding how each route has been operated historically, the number of vessels operating on each route, customer demands, and crew schedule requirements. Most routes have two vessels operating, going in opposite directions, departing about the same time. The Port Townsend – Keystone route has two boats in the late spring, summer, and early fall schedules to adjust for increased traffic during the heavy traffic season, but only one boat operates on this route during the winter. The Anacortes-San Juan Islands-Sidney, BC route has four boats in the winter, spring, and fall schedules and five during the summer schedule. The service hours are reduced during the winter schedule to match reduced demand. Depending on the season, vessels operate between 16 and 22 hours per day; those routes with two vessels typically switch between long days and short days, allowing the short-day vessel downtime so ships' crew and Maintenance Department staff from Eagle Harbor can conduct preventive or small-scale corrective maintenance.

With scheduled service voyages, fixed vessel capacities, and scheduled hours of operation, WSF moves a considerable amount of traffic across Puget Sound. Between fiscal years 2003 through 2006, WSF experienced declining volumes in both passengers and vehicles. WSF believes this trend will not continue and that volumes are leveling off and should increase again. Table 9 provides traffic and cost trends for WSF operations.

Table 9 – Operating Trends for Washington State Ferries, FY2003 - 2006

	2003	2004	2005	2006	AAG[1]
Completed trips*	178,975	171,230	169,411	168,049	-1.5%
Operating Costs**					
- Labor	105.4	103.3	104.4	110.3	1.5%
- Fuel	18.1	20.7	32.8	39.1	29.3%
- Other	30.9	34.6	34.6	36.7	5.9%
Total Operating Costs	**$154.4**	**$158.6**	**$171.8**	**$186.2**	**6.4%**
Total Riders***	24.5	24.4	23.9	23.8	-0.7%
Labor as Percent of Operating Expenditures	68%	65%	61%	59%	

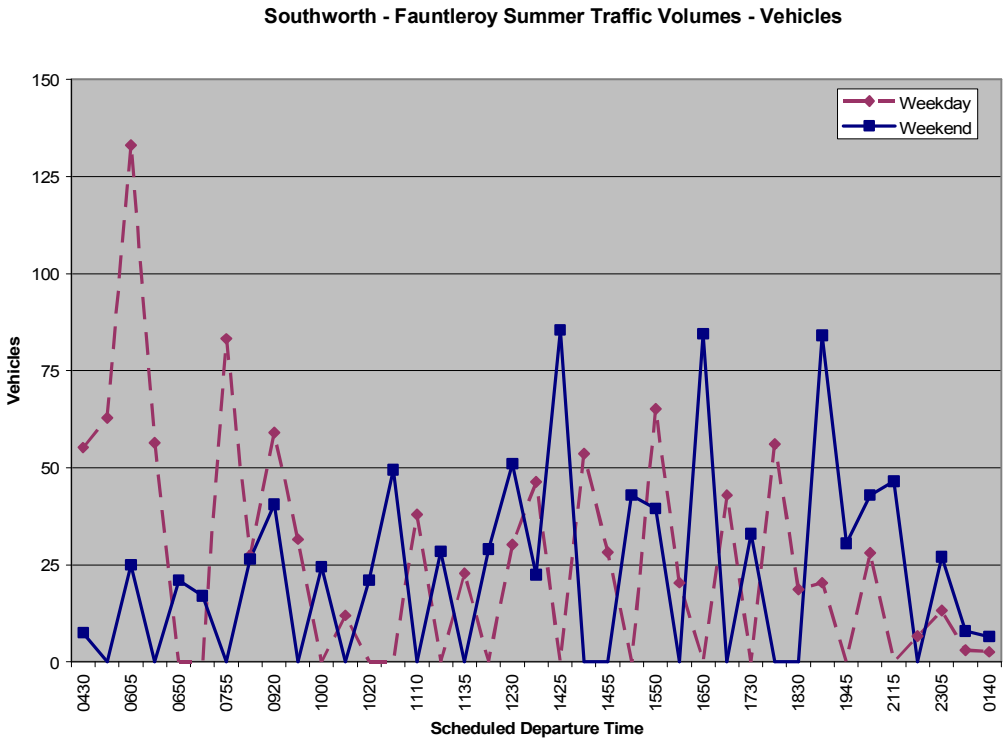
Source: WSF.
Note(1): Average Annual Growth.
Note(*): Includes both revenue and non-revenue trips.
Note(**): Figures in millions. Totals may not add due to rounding.
Note(***): Figures in millions, estimated by WSF.

Table 9 shows that, while general service levels have declined slightly, costs continue to increase. Labor costs make up the bulk of operating costs and have increased moderately. Fuel costs have risen significantly, requiring the state to pass supplemental budgets to pay for the increased costs. WSF has undertaken several studies and initiatives to reduce fuel costs, including slowing vessels down and accelerating vessels at slower rates when leaving the dock. Other studies have looked at running vessels on fewer engines; the larger ferries have four engines geared to run either of two propellers (less engines running and slower speeds equate to some fuel savings, though we have not attempted to quantify those savings).

Like the balance of the state-maintained transportation network, WSF does not operate a system that witnesses constant, steady traffic patterns. Traffic volumes fluctuate considerably during the course of a service day, between weekdays and weekends, and between seasons. Figure 6, on the following pages, provides a sample of the data available illustrating the traffic fluctuation patterns.

Figure 6 – Sample Sets of Average Daily Traffic Volumes for Some WSF Routes

Southworth – Fauntleroy Summer



Fauntleroy – Vashon Summer

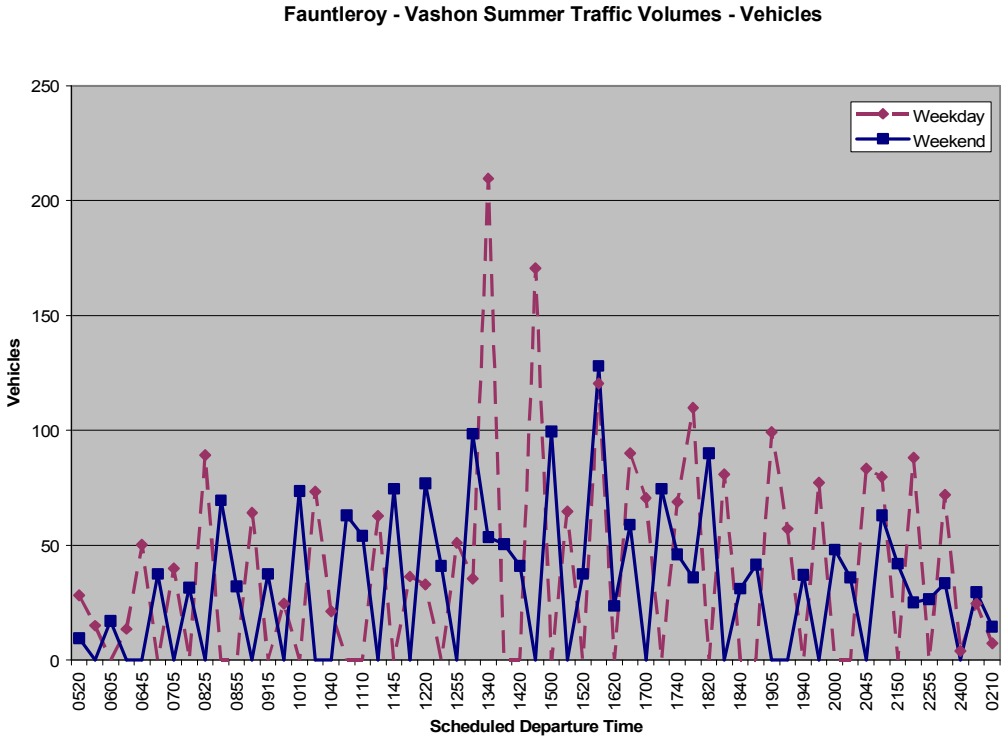
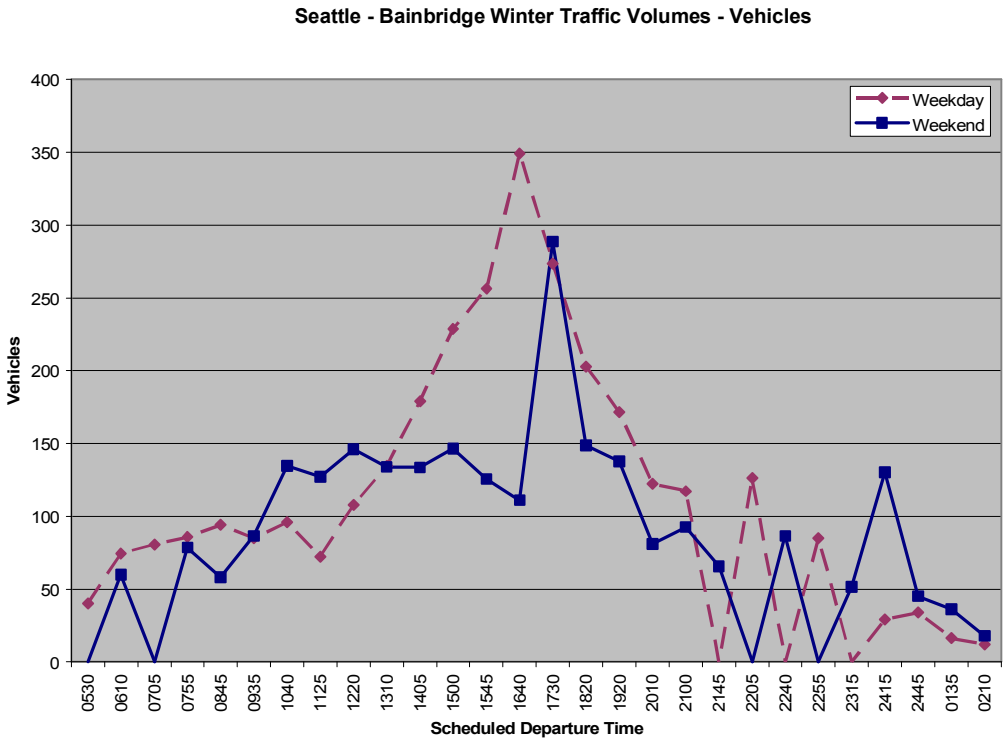


Figure 6 – Sample Sets of Average Daily Traffic Volumes for Some WSF Routes (cont.)

Seattle – Bainbridge Winter



Bainbridge – Seattle Winter

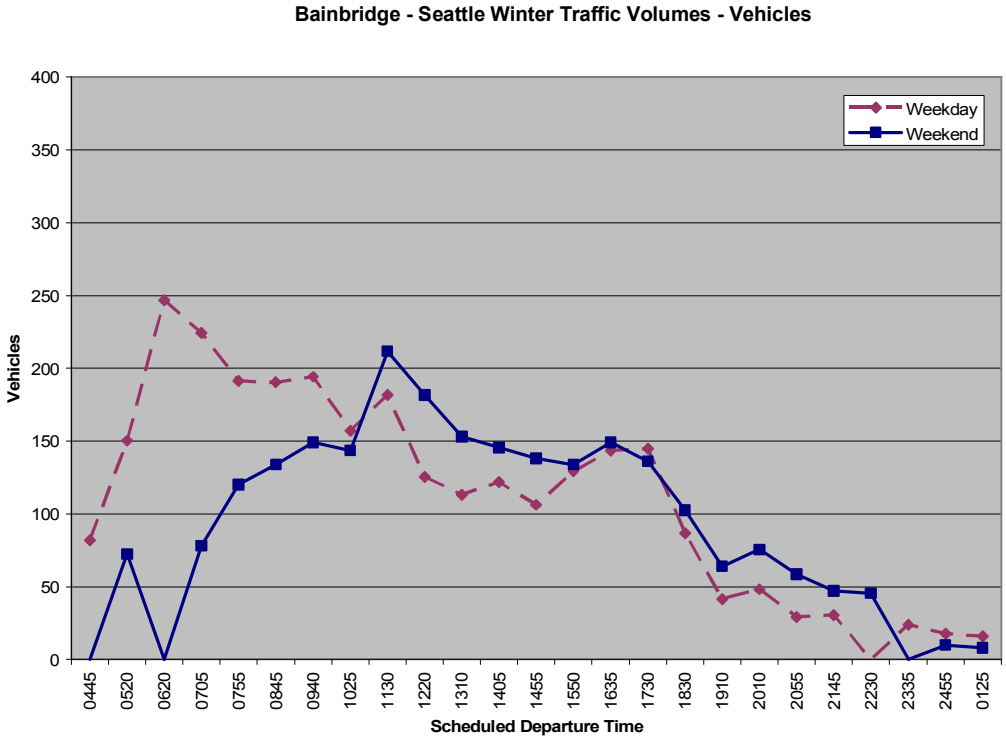
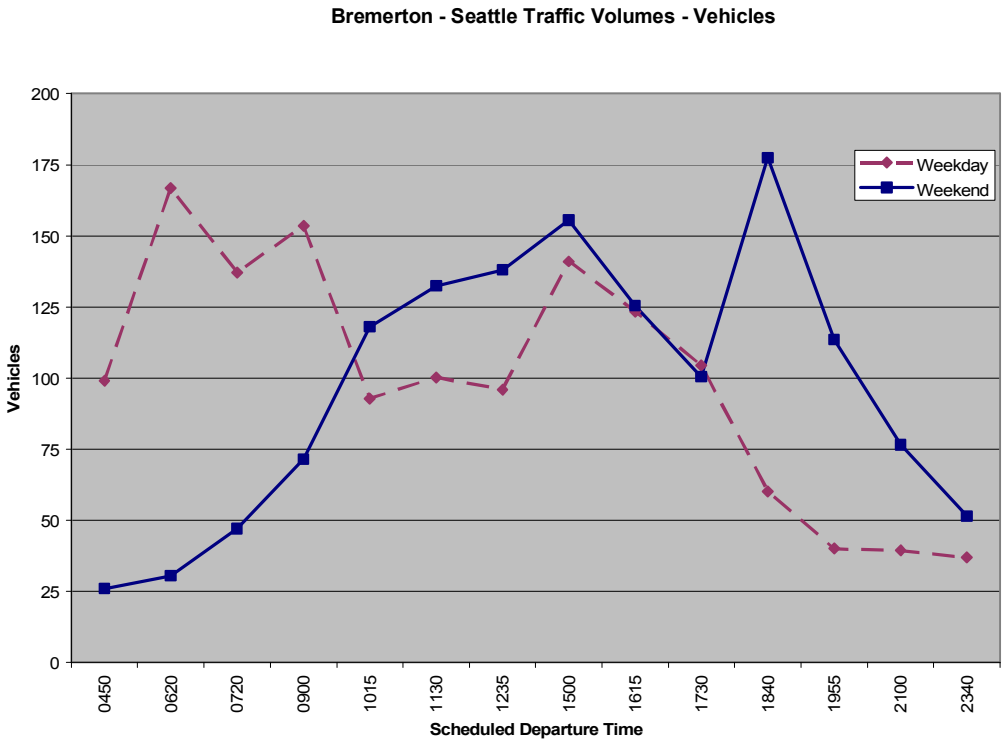
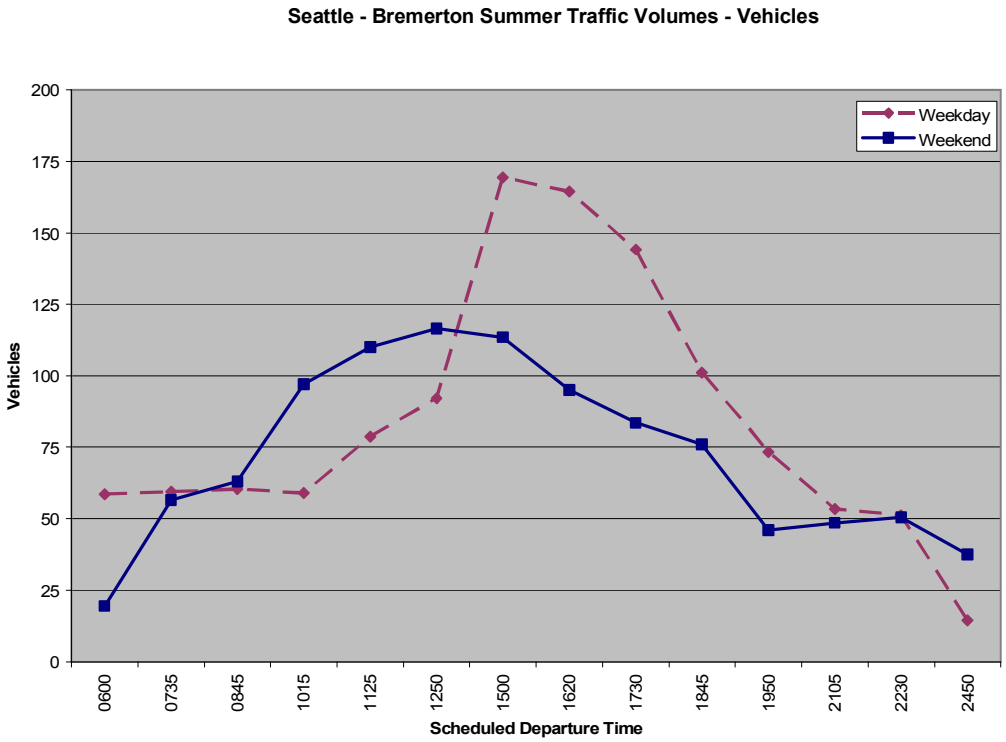


Figure 6 – Sample Sets of Average Daily Traffic Volumes for Some WSF Routes (cont.)

Bremerton – Seattle Summer



Seattle – Bremerton Summer



Source: WSF traffic volume data

WSF collects traffic volume data through a variety of mechanisms, including trip-by-trip sailing data from terminals where WSF collects fares. For planning purposes, WSF also conducts a traffic count survey three times per year on a time-of-day basis, associating periods' traffic volumes to the specific sailing schedule at each terminal. This data was used for conducting analytical work. The data shows the average traffic volumes per scheduled trip, in terms of vehicles. This data is useful for determining the degree that ferry vessels are used in terms of the rated vehicle carrying capacity of vessels that typically operate on each route. Although there is no distinction between vehicle size, WSF's Route Segment report data collected from the farebox information shows that only 3 percent of all vehicles transported by WSF are oversized, indicating that the audit's calculations of vessel capacity and utilization are not materially affected by oversized vehicles. From the vehicle traffic and vehicle capacity data, it is clear that the capacity-utilization ratio is considerably low during non-peak periods. WSF ferries make a large number of trips during non-peak periods with vessels running relatively empty. A primary reason for this operating profile is that, as a vital part of the regional transportation network, WSF is expected to provide a level of service to the community.

Operationally, it is difficult and costly for WSF to switch out vessels of different capacities over the course of the scheduled service day. First, WSF does not have a large fleet of vessels of various capacities tied up and available to use during the non-peak periods. The operational profile followed by WSF is to keep the same-sized vessel operating on a route as much as possible in order to provide some level of predictability to both WSF and the riding customers. Second, shifting vessels in and out of routes causes WSF to make vessel movements and find tie-up space for the non-operating vessels, such as at public/private piers or at Eagle Harbor. This activity would require WSF to incur fuel, crew, and moorage costs.

Criteria

Leading business practices include identifying and implementing actions to eliminate or reduce variable costs to a business' bottom line. Providing the appropriate supply to meet demand enables an organization to use its resources more efficiently and effectively. Other transportation industries fluctuate supply to meet demand in order to reduce costs, especially in the transit and airline industries. For example, passenger airlines cut back operations significantly after September 11, 2001, as air traveler volumes plummeted. If a flight is sufficiently undersold, airlines will cancel the flight and rebook travelers on other flights, though it requires a complex reservation management system and business model that auto-passenger ferries in the United States have never adopted).

BC Ferries service contracts call for a specific number of round trips per day and per year. BC Ferries also manages route capacity such that it achieves upwards of 60 percent utilization on some routes, even during off-peak periods.

Cause

The following is a list of the primary causes for WSF providing an extensive level of service during low traffic periods of the day:

- State transportation business plans and Transportation Commission guidance to achieve a specific level of service.

  These plans and guidance, coupled with WSF internal business rules regarding how and when to operate the ferries, drive the decision-making regarding the size of the operating budget. Economic factors such as rationalizing supply with demand are not included. This inhibits WSF from having the flexibility needed to set service levels to meet the cost constraints that are continuing to impact WSF operations. WSF makes changes to the level of service on a seasonal basis and has made some changes to daily service schedule. However, as presented above in Figure 6, WSF operates roundtrips with very low utilization.

- Labor agreements between the union and the state.

  WSF operates some round trips in order to meet requirements of union contracts. In some instances, the crewing schedules dictate vessel departure schedules in order for WSF to minimize overtime costs or crew travel costs.

- Customer expectations and historical precedence of meeting those expectations.

  WSF has been very successful in reaching the performance goals that its customers want – reliability and availability.

Effect

Table 10 presents WSF's operating performance figures and the costs associated with providing the service to the public. Since 2000, WSF has been proactive in controlling costs to some extent. Terminal and vessel crew costs have been controlled as part of general schedule reductions, and labor costs have grown at a nominal rate. However, fuel expenditures by WSF have increased dramatically, more than doubling between fiscal years 2003 and 2006. WSF's response to the increased fuel costs has been:

- Fare increases – increasing the fares paid by travelers to offset increased costs (fuel).
- Adjusting and slowing vessel speeds to reduce fuel consumption.
- Reducing propulsion power generated during dock time and vessel maintenance periods to reduce fuel consumption.
- Requesting and receiving additional funds from the Legislature to pay for higher fuel prices.

Table 10 shows that costs in general have been increasing by over 5 percent per year.

Table 10 – WSF Operational Expenses, FY 2003 - 2006

	FY2003	FY2004	FY2005	FY2006	AAG
Operations					
Vessels	$92,494,000	$93,562,000	$106,360,000	$114,850,000	6.0%
Terminals	21,030,000	20,940,000	21,493,000	22,516,000	1.8%
Management & Support	7,103,000	7,395,000	7,888,000	9,885,000	9.8%
Total Operations	***120,627,000***	***121,897,000***	***135,741,000***	***147,251,000***	***5.5%***
*- Labor portion**	87,142,000	84,353,000	85,596,000	91,123,000	1.1%
- Fuel portion	18,143,000	20,748,000	32,760,000	39,115,000	28.9%
Maintenance					
Vessels	12,335,000	14,305,000	14,086,000	15,952,000	7.3%
Terminals	7,701,000	7,106,000	6,281,000	7,487,000	-0.7%
Management & Support	4,178,000	4,034,000	3,948,000	3,858,000	-1.9%
Total Maintenance	**24,214,000**	**25,445,000**	**24,315,000**	**27,297,000**	**3.2%**
*- Labor portion**	16,565,000	17,806,000	16,408,000	19,238,000	4.0%
Finance & Administration	4,607,000	5,847,000	5,963,000	7,346,000	14.9%
Executive Management & Support	4,998,000	5,445,000	5,809,000	4,257,000	-3.7%
Grand Total	$154,446,000	$158,634,000	$171,828,000	$186,151,000	5.1%

Source: WSF BEARS.
Note(*): Average Annual Growth.

Recommendation for Finding 10

Recommendation 10

Change WSF's Ferry Service Schedule to Reduce Operational Losses.

Analysis was completed to identify the extent of underused ferry operations and to determine the amount of cost savings to the state by reducing ferry operations during the low-traffic demand periods. The analysis yields two cost savings opportunities through labor and fuel, resulting in potential savings of $9.6 million annually. The summary results of the analysis are shown in Table 11 below. The potential savings calculation was based on opportunities identified at the start and end of the service day, schedule compaction, which included labor and fuel savings, and the remaining mid-day opportunities for additional fuel savings.

Table 11 – Total Potential Cost Savings from Reducing WSF Services during Non-Peak Traffic Periods

Ferry Route	Morning Schedule Compaction (Labor & Fuel)	Evening Schedule Compaction (Labor & Fuel)	Mid-Day Schedule Reduction (Fuel Only)	Total Savings by Route
Seattle-Bremerton	$574,000	$1,475,000	$371,000	$2,420,000
Seattle-Bainbridge	190,000	1,395,000	0	1,585,000
Fauntleroy-Vashon-Southworth	79,000	1,037,000	1,199,000	2,315,000
Point Defiance-Tahlequah	52,000	0	30,000	82,000
Edmonds-Kingston	54,000	663,000	212,000	929,000
Mukilteo-Clinton	0	226,000	0	226,000
Port Townsend-Keystone	23,000	131,000	57,000	211,000
Anacortes-San Juan Islands	598,000	483,000	826,000	1,907,000
Subtotal	**$1,570,000**	**$5,410,000**	**$2,695,000**	
Total Annual Savings				**$9,675,000**

Source: WSF Traffic, Labor, and Fuel Data.
Note: Based on FY2006 cost figures

The cost savings presented above come from a transportation cost analysis model developed for the audit. The model uses several sets of data provided by WSF including fuel usage and costs (by vessel), vessel operational statistics (trips, miles traveled, etc.), operational labor costs (deck, engine crews, and terminal labor costs, by location), as well as traveler statistics by route. Using the data, we determined the costs to operate each route on an incremental basis (round trip and per hour). Using traffic survey data provided by WSF, we identified opportunities where significant under use of each route adversely impacts the overall cost effectiveness of WSF. These opportunities were identified in two components: reducing operational services at the beginning and end of the day (schedule compaction) which would reduce operational and fuel costs incurred by WSF and reducing operational services during the non-peak periods of the day, which would reduce fuel savings.

The recommendation involved analyzing the traffic volume data to identify opportunities for reduction of runs during non-peak travel periods. To accomplish this, the audit compared the capacity levels of the vessels typically operating on each route to the threshold levels established by the audit. The threshold levels of vessel capacity usage were established to avoid a boat-wait created by the consolidation of passengers when a run was eliminated from the schedule. For example, in determining the reduction of one run from two consecutive runs, we set a threshold level of 45 percent vessel capacity usage. Based on the traffic data, two consecutive runs that have a capacity usage level of 45 percent or lower would result in the recommendation of one of those two round-trip runs to be removed from the schedule. The consolidation of passengers to

the remaining run could reach 90 percent vehicle capacity usage and therefore would not create a boat-wait.

The audit used a 60 percent threshold level, which required three consecutive runs to be at or below the threshold level in order to provide the opportunity to reduce one round-trip run. The recommendation of run reductions includes all opportunities identified with a 60 percent threshold level and includes all opportunities identified with threshold levels below 60 percent. Because the transportation cost model worked best with a total operating cost per hour, the round-trip analysis was translated into total service hours cut from the routes, based on the opportunity for reducing round-trips described above.

The analysis presented above works effectively with those routes servicing cross sound traffic where data was readily available in both service directions. However, WSF's traffic survey data only includes traffic going to Vashon Island and the San Juan Islands from mainland terminals (toll collection procedures are for individuals to pay the round trip cost for going to an island since they eventually must come back to the mainland). Therefore, the audit modified its approach in identifying opportunities for reduction by looking at each leg to find trends and calculate average capacity usage. For example, the Southworth – Fauntleroy and the Southworth – Vashon legs' average usage per summer weekday sailings was below 40 percent indicating that possibly half of the trips could be cut. However, the Fauntleroy – Vashon leg had a 65 percent average utilization during the weekdays. As such, one in eight runs or approximately four runs could be eliminated from the schedule for weekday summer season.

Table 12 and Table 13 summarize the potential round-trip runs to be removed from the schedule that support the audit's savings calculations. The tables' data breaks down the selection by route, season, and weekday and weekend. They also indicate the period of a series of underused runs and how many runs to remove.

The recommendation does not specifically identify which round-trip runs in a series should be eliminated from a specific route because the cost savings calculations do not need to distinguish between runs; the cost variable from one run to the next in a series is nominal. For implementations purposes, WSF would have flexibility in selecting the specific runs from a series to eliminate from the schedule. This flexibility could benefit WSF in its concerns to accommodate shift changes, which will likely need to be modified for implementation of this recommendation.

Table 12 – Possible Round Trip Reductions for Schedule Compaction

Route	Season	Possible service hours cut		Time of Day to Remove Trips
		M-F	S-S	
Seattle - Bremerton	Spring/Fall	1	3	M-F: End of service day S-S: Start of service day
	Summer	1	1	M-F: End of service day S-S: Start of service day
	Winter	2	4	M-F: Start and end of service day S-S: Start and end of service day
Seattle - Bainbridge	Spring/Fall	1	3	M-F: End of service day S-S: End of service day
	Summer	2	2	M-F: End of service day S-S: Start and end of service day
	Winter	2	2	M-F: End of service day S-S: Start and end of service day
Fauntleroy - Vashon - Southworth	Spring/Fall	3	3	M-F: Start of service day S-S: Start and end of service day
	Summer	2	2	M-F: Start of service day S-S: Start and end of service day
	Winter	3	4	M-F: Start of service day S-S: Start and end of service day
Pt Defiance - Tahlequah	Spring/Fall	1	2	All week: Start and end of service day
	Summer	0	0	
	Winter	1	2	All week: Start and end of service day
Edmonds - Kingston	Spring/Fall	1	1	M-F: End of service day S-S: End of service day
	Summer	1	1	M-F: End of service day S-S: Start and end of service day
	Winter	1	3	M-F: End of service day S-S: Start and end of service day
Mukilteo - Clinton	Spring/Fall	1	0	S-S: Start and end of service day
	Summer	1	1	S-S: End of service day
	Winter	1	1	S-S: Start and end of service day
Port Townsend - Keystone	Spring/Fall	1	0	M-F: Start and end of service day
	Summer	0	0	
	Winter	1	1	M-F: Start and end of service day
Anacortes - San Juan Islands	Spring/Fall	0	2	F-S: Start of service day
	Summer	2	2	All week: Start of service day
	Winter	0	1	F-S: Start and end of service day

Table 13 – Possible Round Trip Reductions for Mid-Day Service

Route	Season	Possible service hours cut		Period to Remove Trips
		M-F	S-S	
Seattle - Bremerton	Spring/Fall	1	1	All week – 10am to 3pm
	Summer	0	0	All week – 10am to 3pm
	Winter	2	0	All week – 10am to 3pm
Seattle - Bainbridge	Spring/Fall	0	0	All week – 10am to 3pm
	Summer	0	0	All week – 10am to 3pm
	Winter	0	0	All week – 10am to 3pm
Fauntleroy - Vashon - Southworth	Spring/Fall	3	3	All week – 10am to 3pm
	Summer	2	3	All week – 10am to 3pm
	Winter	3	1	All week – 10am to 3pm
Pt Defiance - Tahlequah	Spring/Fall	3	1	All week – 10am to 3pm
	Summer	0	0	All week – 10am to 3pm
	Winter	3	3	All week – 10am to 3pm
Edmonds - Kingston	Spring/Fall	1	0	All week – 10am to 3pm
	Summer	0	0	All week – 10am to 3pm
	Winter	3	0	All week – 10am to 3pm
Mukilteo - Clinton	Spring/Fall	0	0	All week – 10am to 3pm
	Summer	0	0	All week – 10am to 3pm
	Winter	0	0	All week – 10am to 3pm
Port Townsend - Keystone	Spring/Fall	4	0	All week – 10am to 3pm
	Summer	0	0	All week – 10am to 3pm
	Winter	0	0	All week – 10am to 3pm
Anacortes - San Juan Islands	Spring/Fall	1	1	All week – 10am to 3pm
	Summer	0	0	All week – 10am to 3pm
	Winter	3	3	All week – 10am to 3pm

To its credit, WSF has made some progress in reducing fuel expenditures through operational modifications (vessel speed, etc.) and has made some minor changes to schedules for a couple of routes. However, in the interest of greater cost reduction and ferry system sustainability, there needs to be a better alignment between supply and demand.

In support of the cost saving recommendation, the following action items should be considered by WSF, WSDOT, the Governor's Office, and the Legislature:

- Establish new work rules, documented in WSF business plans, policies and procedures, and CBAs, to improve WSF's ability to manage resources and capital assets efficiently and effectively.

- Enact labor agreement terms to guarantee a number of hours per month or quarter for individuals in lieu of weekly or bi-weekly, providing WSF with better tools for establishing and changing the operating schedule to suit traffic patterns.

In support of the cost saving recommendation, the following action items should be considered by WSF, WSDOT, the Washington State Transportation Commission, the Governor's Office, and the Legislature:

- Provide WSF with greater flexibility to remove and add runs in the schedule based on utilization analysis (supply and demand) and cost savings. With the implementation of WSF's electronic fare system, WSF will be able to obtain traffic volume data to assist in utilization analysis.

Management Responses to Finding 10

Finding 10: WSF provides a level of service above what traffic volumes demand.

Recommendation 10: Change WSF's ferry service schedule to reduce operational losses.

WSDOT Response

The Department agrees that some sailings have space available during off peak hours. We appreciate the auditor's review of sailings with lower utilization, and believe that the information, with further data and analysis, may be useful in the work currently underway in Phase II of the Joint Transportation Committee's Ferry Financing Study. However, several factors will affect how the Department addresses this recommendation.

The Ferries Division is defined by the legislature as both an extension of the state highway system and a mass transit provider. As a mass transit provider, there must be a balance in accommodating peak demand periods with providing some level of connection and usefulness to customers in off-peak hours. In the manner that highways are not closed during hours of low utilization, canceling off-peak ferry sailings must consider factors in addition to utilization. Scheduling runs to meet expected service levels requires numerous parties including the legislature, affected local communities, ferry advisory committees, collective bargaining agreements, Puget Sound employers and employees, transit services, and health and social services considerations. Each of these groups have different roles in the process. However, the audit report focused solely on ferry capacity utilization, and in some cases, existing assumptions are based upon very necessary, yet incomplete data. As such, we must balance potential financial savings with the basic principle of providing reliable and predictable service to our customers as a part of the highway system.

Action Steps and Timeframe:

- The Department is engaged in an effort with the Legislature as part of Phase II of the Ferry Financing Study to develop ways of attracting more ridership to less utilized off-peak sailings. If successful, this would enable more revenue to be generated by off-peak trips and still maintain necessary connections for off-peak riders. Current efforts, as part of both the current ferry finance study and processes underway as part of Engrossed Substitute House Bill 2358, are scheduled throughout 2008 and 2009.

- Work with the Legislature, Governor's office, OFM, and other partners to evaluate whether these runs could be cut within the confines of Ferries Division level of service standards. This evaluation will also include the savings projected by Ernst & Young. We will also consider changes required to collective bargaining agreements, traffic data on island routes not considered in the auditor's conclusions, and changes that would be required to crew schedules. Pending the results of this analysis, and based on direction we receive from these parties, we will further evaluate the savings projected by Ernst & Young in this report.

OFM Response

While this finding is worthy of further consideration, it is premature to assume cost savings of almost $10 million from service cuts. The audit report suggests that eliminating at least one of three consecutive underutilized routes could theoretically enable the ferries system to honor the current one-boat wait service level standard. A problem with the theory, however, is not all passengers will catch the next boat. This, in turn, means revenue decreases. Another problem with the theory is that it does not consider the value of time for those that must wait for the next run. The report suggests, for example, eliminating the first sailing on the Seattle-Bremerton run which would mean those sailing on the 6:00 a.m. trip would be accommodated instead on the 7:35 a.m. sailing. Such schedule adjustments would be highly controversial, even though they could potentially generate fuel and labor savings.

Determining the optimal level of service is complex as noted in the WSDOT response to this finding. The report's recommendation of eliminating some runs that have 60 percent utilization or below, although intuitive, does not account for such complexities. It is worth noting, however, that more could be done to increase the utilization on some sailings. Unfortunately, this was not addressed in the report. Level of service discussions need to include such variables as (1) the ability to shift demand away from peak travel periods, (2) the potential impact of using different pricing strategies such as reservation systems or time of day pricing, (3) the specific market characteristics of individual routes, (4) the tolerance for different fare thresholds, and (5) operating strategies such as one point versus two way toll collection. These issues are currently being considered by the Joint Transportation Committee, in the second phase of its Ferry Financing Study.

Like other transit systems, the Ferries Division is heavily dependent on ridership forecasts. As the report points out, there has been a trend over the last few years of declining volumes in both passengers and vehicles in the wake of increased fares, due in large part to the loss of state subsidy that resulted in 1999 when Initiative 695 passed. I-695 reduced car tabs to a flat $30 fee and eliminated a significant source of Ferries Division revenue. Recommending elimination of service based on these forecasts seems to be premature given out-year forecasts that show ridership growth. The report did not sufficiently include consideration of these forecasts.

Auditor's Comments

The audit used all the compiled traffic survey data provided by WSF. The data includes all the service routes; however, the traffic survey data available only includes traffic going to Vashon Island and the San Juan Islands from mainland terminals; it does not include inner-island traffic data or data on traffic coming off the islands. WSF captures that data manually. WSF has not compiled, analyzed, or incorporated this data into the traffic survey data. It was not the

responsibility of the audit to compile this raw data. Therefore, we could not rely upon this data for the purposes of this audit. As a result, we identified underutilized runs in these cases as explained above in the finding.

The overall scope of the audit excluded any aspect of fare structure. Further scoping of the audit by Phase 2 did not include identifying potential opportunities that may increase ridership utilization.

APPENDIX A

Appendix A provides a chart showing each I-900 element and where each is addressed in the performance audit findings.

I-900 Element	Finding 1	Finding 2	Finding 3	Finding 4	Finding 5	Finding 6	Finding 7	Finding 8	Finding 9	Finding 10
1. Identification of cost savings.	X									X
2. Identification of services that can be reduced or eliminated.		X								X
3. Identification of programs or services that can be transferred to the private sector.										
4. Analysis of gaps or overlaps in programs or services and recommendations to correct them.	X		X	X	X		X	X	X	X
5. Feasibility of pooling the entity's information technology systems.							X		X	
6. Analysis of the roles and functions of the entity and recommendations to change or eliminate roles or functions	X	X	X	X			X			X
7. Recommendations for statutory or regulatory changes that may be necessary for the entity to properly carry out its functions.						X				X
8. Analysis of the entity's performance data, performance measures and self-assessment systems.	X	X		X	X					
9. Identification of best practices.	X	X	X	X	X	X	X	X	X	X

Note: The audit did not make recommendations pertaining to outsourcing because of the significant opportunities within the Ferry system for improved efficiency, effectiveness, and

economy. The audit report contains recommendations to institute these opportunities and improvements. However, if these recommendations are not put in place, the Legislature should consider transferring these services to the private sector.

APPENDIX B

Appendix B contains a list of the recommendations provided in this report that require legislative action in support of implementation or will require changes to the collective bargaining agreements.

Legislative Action

- **Recommendation 3:** Eliminate the No-Priority Boarding Policy for Eagle Harbor Staff, if WSDOT fails to make appropriate modifications to WAC 468-300-700..
- **Recommendation 10:** Change WSF's Ferry Service Schedule to Reduce Operational Losses, if WSF, WSDOT, the Washington State Transportation Commission, and the Governor's Office are unable to do so.

Collective Bargaining Agreement Changes

- **Recommendation 1:** Reduce Indirect and Overtime Charges by Eagle Harbor Staff
- **Recommendation 2:** Improve and Strengthen Overall Management of Eagle Harbor.
- **Recommendation 10:** Change WSF's Ferry Service Schedule to Reduce Operational Losses.

APPENDIX C

Appendix C summarizes the action items listed in WSDOT's responses, responsible party for completing the action item, and the scheduled date for completing the action item.

Findings	WSDOT Action	Who	When
1	Analyze historical overtime patterns at Eagle Harbor and determine possible savings.	WSDOT	April 2008
1	Work with the Governor's Office, OFM, and Legislature, as appropriate, to further evaluate the recommendation to reduce indirect and overtime costs, and weigh the projected benefits against the costs.	WSDOT	April 2008
2	Evaluate the current timekeeping system's ability to record additional details on indirect time.	WSDOT	Consistent with schedule for any evaluation of a new agency-wide time keeping system.
2	Evaluate costs and business needs of a new timekeeping system in alignment with Department needs.	WSDOT, OFM	Consistent with agency-wide efforts on a new time keeping system and based on direction provided.
2	Review history of indirect charges at the Eagle Harbor Maintenance Facility and assess whether efficiencies can be achieved in indirect charges.	WSDOT	April 2008
2	Work with OFM Accounting to identify the correct allocation of charges.	WSDOT	April 2008
3	Continue work on improving business practices at Eagle Harbor.	WSDOT	Ongoing
3 and 4	Determine whether re-organizing or adding additional management positions at Eagle Harbor is a priority in budget deliberations.	WSDOT, OFM, and Legislature	By next legislative session
4	Review temporary promotions at Eagle Harbor.	OFM	
5	Explore additional performance measures at shop-level as recommended.	WSDOT	February 2008

Findings	WSDOT Action	Who	When
6	Assess further the scheduling of routine maintenance that requires personnel to board ferries during peak commute trips to determine whether reassignment and rescheduling is possible.	WSDOT	December 2007
6	Assess whether existing policies related to priority boarding are impacting service delivery.	WSDOT	December 2007
7	Review each individual Eagle Harbor shop's process for tracking all relevant work requisitions, assignments, and hours worked.	WSDOT	Underway, complete by April 2008
7	Create one standardized timekeeping process that will apply to all Eagle Harbor shops.	WSDOT	June 2008
7	Eliminate dual entry of time data by using payroll data already entered in the computerized payroll system.	WSDOT	Completed
8	Continue documenting existing business processes, including rollout of remaining Safety Management policies and procedures applicable to both Terminal and Vessel Engineering.	WSDOT	Major milestones completed by June 2009
8	Evaluate our current training program and processes for Eagle Harbor staff.	WSDOT	In accordance with the development of the training budget: July 2008
8	Develop a cost-effective strategy for achieving the goal of a cross-training process, and subsequently a cross training maintenance program, that will meet our business needs.	WSDOT	July 2008
8	Implement a Quality Control/Quality Assurance program at the Eagle Harbor facility starting with vessel and terminal critical systems.	WSDOT	July 2008
9	Realign organization to enhance internal communication and foster greater information exchange between departments.	WSDOT	Completed
9	Improve communication strategies.	WSDOT	Ongoing
10	Work with the Legislature as part of Phase II of the Ferry Financing Study to develop ways of attracting more ridership to less utilized off-peak sailings.	WSDOT, Legislature	Scheduled throughout 2008 and 2009

Findings	WSDOT Action	Who	When
10	Evaluate whether runs can be cut within the confines of Ferries Division level of service standards. This will include changes required to collective bargaining agreements, traffic data on island routes not considered in the auditor's conclusions, and changes that would be required to crew schedules.	WSDOT, Legislature, OFM, and other partners	Based on direction provided

Overhead and Administrative Costs Performance Audit

Selected Firm and Award Amount

- Ernst & Young
- Award: $510,900

Executive Responsible

- Paula Hammond

Key Project Milestones

- Entrance conference with WSDOT, SAO, and Governor's Office on October 24.
- Define and Design Audit Plan – Completed by 12/15/06
- Execute the Audit Plan – Completed by 2/19/07
- Report Results of the Improve Project – Completed by 2/26/07
- Summarize Executive Management/Audit Committee Communications – Completed by 3/2/07

The audit has the following purposes:

- *Are there potential savings in administrative costs*?
- *Does the organizational structure result in efficient and effective use of resources?*
- *What is the effect of the seven-region organizational structure on resources and services?*

A contract scope document dated October 4, 2006 identifies the following "Areas of Focus:"

▪ Information technology ▪ Human resources ▪ Fiscal and financial services ▪ Office supplies and equipment ▪ Building rent or lease expense ▪ Building, ground and facilities maintenance ▪ Utilities	▪ Training ▪ Records Management ▪ General clerical support ▪ Mail and printing operations ▪ General analytic and/or coordinating support/Research and policy analysis ▪ Legal services Public communications and information ▪ Minority affairs/civil rights/business partnering/small and disadvantaged business.

Overhead and Administrative Costs Performance Audit

Audit Status

Essentially, the audit scope calls for a business process improvement review for WSDOT. An entrance conference with Ernst & Young, the Governor's staff, and WSDOT was held on October 24. At this meeting, WSDOT presented E&Y with a binder of information concerning administrative and overhead operations at WSDOT. This information was prepared in addition to E&Y's initial data request. Both the SAO and E&Y noted their appreciation of WSDOT's efforts.

Terry Hanson, E&Y's lead, is conducting interviews with over 30 WSDOT executives, and will be completed in early December. He has met with or scheduled interviews with executives in the Finance & Administration Division, all executives that report to the Chief of Staff, all Regional Administrators, and four others that report to the Assistant Secretary of Engineering and Regional Operations. WSDOT has arranged to provide space at the Transportation building for five E&Y auditors to work throughout the course of the audit.

Criteria against which WSDOT performance will be assessed has not been identified by SAO at this time. E&Y expect to complete Phase 1 of this audit, and produce a list of issues and opportunities, by December 15, 2006.

At the November 27 bi-weekly meeting SAO also agreed to move the audit of Ferries Administrative costs and functions to this audit of WSDOT Administration. SAO was receptive to our suggesting this change, and agreed that it would make the audit of WSDOT Administration more valuable. Further, E&Y assured us they would keep us informed of the list of audit opportunities as it develops, and welcomed the Department's input on areas of focus that would add value to the audit. We plan to discuss the entire list of opportunities at the December 15th bi-weekly meeting.