



OFFICE OF FINANCIAL MANAGEMENT

STATE OF WASHINGTON

WASHINGTON STATE FERRIES INSURANCE BUSINESS PLAN

RISK MANAGEMENT DIVISION
FEBRUARY 2010

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WASHINGTON STATE FERRIES INSURANCE BUSINESS PLAN

EXECUTIVE SUMMARY

This business plan was developed in response to a proviso in the 2009–11 transportation budget, which directed that:

“The Office of Financial Management, after consultation with the transportation committees of the legislature, must present a business plan for the Washington state ferry system’s insurance coverage to the 2010 legislature. The business plan must include a cost-benefit analysis of Washington state ferries’ current commercial insurance purchased for ferry assets and a review of self-insurance for noncatastrophic events.”

To meet the requirements of this proviso, the Office of Financial Management (OFM) asked the state’s current insurance broker, Wells Fargo Insurance Services Northwest, to perform a risk assessment of Washington State Ferries (WSF) marine operations under its existing contract with OFM. OFM and Wells Fargo both evaluated options to finance those risks.¹ Wells Fargo subcontracted with an independent marine operations expert, Hornblower Marine Service, Inc. (Hornblower), and consulted with its own marine experts and independent London intermediaries.

OFM also requested an estimate of the amount of additional premium that would have been charged to the Washington State Department of Transportation (WSDOT) during the current biennium if WSF had been a participant in the state’s Self Insurance Liability Program. Under existing contract with OFM, PricewaterhouseCoopers prepared this report from loss information available from its most recent actuarial report and from premiums allocated to agencies for the current biennium.

Wells Fargo concluded that, compared to other operations in WSDOT and state agencies, WSF has a unique risk profile that increases the potential risk of loss. The profile includes these points:

- WSF carries a much larger number of passengers than other transit services. For example, a vessel on a commuter run from Bainbridge and Bremerton has a 2,500 passenger capacity.
- Transportation over water (compared to land) has unique risks such as sinking, grounding and fuel spills.
- The value of the vessels is many times higher than the value of vehicles. For example, a Jumbo Mark II ferry is insured for \$67 million (half of its replacement value) compared to a \$100,000 replacement value of a passenger bus.
- The ferry system has been identified by the FBI and U.S. Department of Homeland Security as a high-profile terrorist target.
- The ferry system could be uniquely affected by an earthquake or tsunami, which could severely damage terminal infrastructure and ferries moored there.

¹ Wells Fargo receives a broker fee, not a commission, on the amount of insurance purchased for WSF.

Hornblower concluded that WSF operations have inherent risk, but they are within the risk level generally accepted in the maritime industry. Current claim liabilities show most of WSF's losses are routine in nature, such as damage to passenger vehicles, minor injuries to passengers and crew injuries. Hornblower indicates that the area of risk exposure can easily be overlooked due to the routine nature of these losses. While WSF has not had a high-consequence event to date, it has experienced numerous "near miss" accidents that have the potential for significant losses.

OFM evaluated options to insure against WSF's risks. One option is to increase the deductible on the marine insurance policy from \$1 million to \$10 million. Wells Fargo estimated this would reduce the state's premium by 15 percent (\$450,000) a year. These cost savings are only an estimate because each year the state completes a competitive process for purchasing marine insurance based on WSF requirements. Any loss experienced by WSF between \$1 million and \$10 million would require funding in WSF's budget. It currently does not have a reserve account to pay for losses.

A second option for reducing costs would be to not insure ferry terminals, which are now insured at replacement value. The last incident involving a terminal was in 2007, when the MV Cathlamet ran into the Mukilteo dock, which resulted in more than \$1 million in damages to the ferry and terminal. In general, state buildings are not insured against damage. One exception is buildings for which Federal Emergency Management Agency (FEMA) funds are used to rebuild or repair, as the federal government requires all buildings replaced or repaired with FEMA funds to be insured.

A third option would be to move WSF from its current marine insurance policy to the state's Self Insurance Liability Program (SILP) for third-party losses for the first \$10 million. In addition to paying a SILP premium for this third-party loss coverage, WSF would continue to purchase a marine policy that would cover hull and machinery, terminals, docks, quays, war and terrorism risk, and third-party liability greater than \$10 million. The marine policy carries a \$1 million deductible, while SILP has no deductible.

The actuarial study reviewed claims filed against WSF in the past five years. Based on this time period, it estimated that WSF could save \$275,000 a year by switching to SILP for all third-party liability up to \$10 million. It is important to note that there was a \$2.5 million claim just prior to this five-year review period. If the claim had been made in this review period, the estimated savings likely would be less.

CONCLUSION

Insurance is a transfer of risk from one party to another. As a carrier of large numbers of passengers and cargo in a marine environment, WSF incurs substantial risk. Based on the information provided to OFM by the state's insurance broker and independent consultants, it is our conclusion that the potential for loss is too great to discontinue a separate marine insurance policy for WSF, and it should not be included in the state's Self Insurance Liability Program.

INTRODUCTION

The Office of Financial Management (OFM) prepared this report in response to the following proviso in the 2009–11 transportation budget:

“The Office of Financial Management, after consultation with the transportation committees of the legislature, must present a business plan for the Washington state ferry system’s insurance coverage to the 2010 legislature. The business plan must include a cost-benefit analysis of Washington state ferries’ current commercial insurance purchased for ferry assets and a review of self-insurance for noncatastrophic events.”

This report also addresses the following recommendations related to Washington State Ferries (WSF) insurance contained in the Joint Transportation Committee’s “WSDOT Ferries Division Financing Study II – Management and Support Costs” report:

- *Self Insurance:* OFM should examine whether WSF should put a portion or all of its risk in the state’s self-insurance program. For example, it may be possible for the state to self-insure up to a catastrophic level, beyond which an insurance policy would be in effect.
- *Terminal Property Coverage:* The continued need for terminal property coverage should be reviewed in light of the change in terminal structures from wood to concrete and steel, with consequent reductions in risk of property damage.
- *Machinery and Hull Coverage:* OFM should examine whether it is cost effective to maintain hull and machinery coverage on boats that are in a non-active status most of the year and on older vessels, given the relatively low claims activity.
- *War Risk Coverage:* Only 13 of WSF’s 20 auto-passenger vessels have war risk coverage. Should this coverage be extended to other vessels?
- *Deductible:* The \$1 million deductible has been in effect since at least Fiscal Year 1991. OFM and WSF should review whether it would be cost-effective to increase the deductible or acquire only catastrophic coverage.

CURRENT COVERAGE

WSF operations currently are insured through a broad master marine commercial insurance policy that covers the following components:

- Vessels
 - Hull and machinery insurance: Covers damages up to the insured limit for each vessel. The insured limit has been set at 50 percent of the replacement value of the auto-passenger vessels.
 - Protection and indemnity (P&I) insurance: Covers third-party liabilities, such as passenger injuries, up to \$250 million per occurrence.
 - Pollution: Covers a spill emanating from a ferry or from a vessel (e.g., tank barge) struck by a ferry during a collision.
 - War risk: Covers acts of war or foreign or domestic terrorism. This coverage is extended to specific vessels and specific routes in the ferry operating system.

- Terminals, docks and quays
 - Property damage: Covers property damage to terminals. The total insured value of the terminals and Eagle Harbor is \$400 million, which is 100 percent of the estimated replacement value. Coverage is provided for facilities owned by WSF and for those that are leased (five terminals).
 - Terminal operators liability: Covers third-party liabilities (i.e., for accidents and injuries) occurring at the terminals or at Eagle Harbor.

- Deductible - WSF currently retains the first \$1 million of any loss in its budget. The insurance policy reimburses WSF for all claims exceeding \$1 million up to a maximum limit of \$250 million. One unique feature of the policy is the single \$1 million deductible for all types of coverage related to a single event. For example, if an accident such as a “hard landing” results in damage to a vessel, damage to the dock, injury of crew, injury to passengers or damage to their property, or pollution discharge, WSF pays only a \$1 million deductible for all claims.

Every year between March and June, OFM’s Risk Management Division works with the state’s insurance broker to establish requirements for the marine policy and participates in a competitive process for procuring a new policy. The current marine insurance policy (for Fiscal Year 2010) costs \$3 million. As shown below, this represents a reduction of \$1.85 million from the prior year.

Insurance Premium Comparison		
	FY 2009 Coverage	FY 2010 Coverage
Vessels		
Hull & Machinery	\$2,800,000	\$1,500,000
Protection & Indemnity*	250,000	970,000
Pollution**	0	
War risk***	0	120,000
Terminals		
Property Damage	1,350,000	325,000
Operators Liability	450,000	85,000
Total	\$4,850,000	\$3,000,000

* The cost of the first \$25 million of P&I in the previous coverage was included in hull and machinery amount.

** Pollution insurance was added with the current coverage. This cost is included in hull and machinery amount.

*** War risk recently was added to the marine insurance policy. This coverage is extended to specific vessels and specific routes in the ferry operating system. The FBI and U.S. Department of Homeland Security have identified the WSF system as a high-profile terrorist target.

BACKGROUND

WSF historically has purchased a marine insurance policy. During development of the state’s Self Insurance Liability Program (SILP), a decision was made that certain agency-specific exposures, such as marine and aviation, should not be covered by the program. Because commercial insurance was available at a reasonable cost, the state concluded it was not appropriate to require all agencies to share in potentially catastrophic risks specific to other agencies. Since WSF deals exclusively in

marine activities, it was excluded from the SILP program, and no premium for its risk was charged to WSDOT.

Other agencies have marine exposure (such as the Department of Corrections, Department of Fish and Wildlife, and certain colleges and universities) and participate in the SILP, but losses due to marine incidents are not covered.

The inherent risk in the maritime industry has traditionally been addressed by developing methods to transfer or share financial risk through insurance. Today, 95 percent of the world's vessels are insured for liability in mutual protection & indemnity associations commonly referred to as P&I Clubs. The P&I Clubs mutually share shipowner risks and provide efficient vehicles for the purchase of high limits of liability. At one time, the P&I Clubs provided unlimited liability on the premise that, however large a claim, it would be shared proportionately among the thousands of shipowners insured in the clubs.

As vessels have grown larger and now carry more cargo and passengers, and as environmental sensitivities have increased, the risk of large catastrophic claims has increased exponentially. This greater possibility of large claims could lead to the insolvency of a P&I Club. Thus, P&I Clubs have agreed to a "cap" or limit on claims. These limits are currently \$1 billion for pollution discharge and \$3 billion for crew and passenger claims. Over time, some vessel owners have chosen to purchase insurance from the market rather than becoming a member of a P&I Club. This is similar to the decision the state made to not include WSF in SILP because of the liability WSF represents in the case of a catastrophic event.

British Columbia Ferries is a member of the Standard P&I Club, and has limits of \$1 billion for pollution discharge and \$3 billion for crew and passengers. The Alaska Marine Highway System, concerned about its risk, recently increased its limit of insurance to \$500 million.

SILP COVERAGE

The state's Self Insurance Liability Program (SILP) covers general (third party) and auto liability claims up to \$10 million for each incident. The WSDOT is covered in SILP, but WSF is excluded because of its unique risk profile. If WSF were added to SILP, coverage would not include the loss of vessels or other ferry assets.

SILP has an "excess" insurance policy for claims greater than \$10 million and up to \$40 million. However, the state has an \$18 million deductible in this program for the Department of Social and Health Services and Department of Corrections because they are a high risk. Because it is likely WSF also would be considered high risk, OFM is concerned that WSDOT's current \$10 million deductible would increase if WSF were added to the "excess" policy.

In addition, as with any self insurance program, an element of SILP is risk sharing among all state agencies. This means that all state agencies would have to share in WSF risk, and WSF would also share in other state agencies' risk.

An example would be if WSF were to have an incident that caused \$5 million damage to a boat, \$2 million damage to the dock and \$2 million in passenger/crew claims.

The chart below shows what would be covered in SILP and in the current master marine insurance policy.

	SILP Coverage	Marine Policy Coverage
Boat damage of \$5,000,000		\$5,000,000
Dock damage of \$2,000,000		\$2,000,000
Third-party claim of \$2,000,000	\$2,000,000	\$2,000,000
Deductible		(\$1,000,000)
Total	\$2,000,000	\$8,000,000

Here, under SILP, the cost of the boat damage (\$5 million) and the dock damage (\$2 million) would be borne by WSF. If there were no funding in the budget, WSF would have to request additional appropriation authority from the Legislature. Under the marine insurance policy, WSF would be responsible only for the first \$1 million, with insurance paying \$8 million.

RISKS FACED BY WSF

The maritime insurance industry is a highly specialized field. To complete the requirements of the proviso, OFM asked the state’s current insurance broker, Wells Fargo Insurance Services Northwest, to perform a risk assessment of WSF’s marine operations under its existing contract with OFM. OFM and Wells Fargo then evaluated options to finance those risks.² Wells Fargo subcontracted with an independent marine operations expert, Hornblower Marine Service, Inc. (Hornblower), and consulted with its own marine experts and independent London intermediaries.

The types of casualties and losses that can occur in the maritime industry include grounding, collision, allision (the striking of a moving vessel against a stationary vessel or fixed object such as a pier, wharf or dock), fire, flooding/sinking, pollution discharge, act of sabotage, act of terrorism, mechanical failure, cargo damage, or crew or passenger injury.

The most common causes of maritime casualties/losses are extreme weather, mechanical failure and human error. While the precise percentage varies among studies, there is no dispute that human error is the most frequently identified factor leading to casualties/losses in the maritime environment, which ultimately is the reason that risk will never be eliminated and must be continually managed.

Hornblower assessed how WSF mitigated its risk through the use of: (1) professional managers and crews; (2) an active risk management program; (3) a certified safety management system used throughout the fleet; (4) extensive and special training programs, such as vessel and route simulation development, electronic navigation aids, video communication and training, monthly safety series and Web-based training; (5) outside training contracts, such as medical training, WSF simulator and fire academy; (6) drills and exercises; (7) security plans; (8) emergency operations center; and (9) Washington State Patrol services, including uniformed officers and a canine unit. It also participates in the area maritime security committee and contracts with the Washington State Maritime

² Wells Fargo receives a broker fee, not a commission, on the amount of insurance purchased for WSF.

Cooperative for oil spill contingency planning and spill response. The review by Hornblower also included recent loss history for WSF and incidents with significant risk potential.

Hornblower concluded that WSF operations have inherent risk, but they are within the risk level generally accepted in the maritime industry. Current claim liabilities show most of WSF’s losses are routine in nature, such as damage to passenger vehicles and minor injuries to passengers and crew. Hornblower indicates that the area of risk exposure can easily be overlooked due to the routine nature of these losses. While WSF has not had an event of high significance to date, it has experienced numerous “near miss” accidents with the potential for significant losses.

Wells Fargo concluded that, compared to other operations in WSDOT and state agencies, WSF has a unique risk profile that increases the potential risk of loss. The profile includes these points:

- WSF carries a much larger number of passengers than other transit services. For example, a vessel on a commuter run from Bainbridge and Bremerton has a 2,500 passenger capacity.
- Transportation over water (compared to land) has unique risks such as sinking, grounding and fuel spills.
- The value of the vessels is many times higher than the value of vehicles. For example, a Jumbo Mark II ferry is insured for \$67 million (half of its replacement value) compared to the \$100,000 replacement value of a passenger bus.
- The ferry system has been identified by the FBI and U.S. Department of Homeland Security as a high-profile terrorist target.
- The ferry system could be uniquely affected by an earthquake or tsunami, which could severely damage the terminal infrastructure and ferries moored there.

RECENT MARITIME LOSSES

Recent accidents involving ferry and/or passenger vessels in the Pacific Northwest are listed below. This chart does not reflect third-party liability loss because it is not available to the public.

Vessel	Date	Property Loss
Alaska ferry Columbia fire	June 2000	\$2,000,000
Alaska ferry Laconte grounding *	May 2004	\$3,000,000
Empress of the North grounding	May 2007	\$5,500,000
Cruise ship Queen of the West fire	April 2008	\$3,900,000
B.C. Ferry Queen of the North sinking **	March 2006	\$70,000,000

* Alaska’s risk manager reports that the grounding of the Laconte led to serious danger of hull fracture, which would have caused a nearly total loss to the vessel.

** The B.C. ferry sinking resulted in two passenger fatalities.

While WSF has not incurred a catastrophic loss, these reports highlight the unavoidable exposure presented by ferries operating in Puget Sound.

Below is a partial list of WSF “near miss” incidents in recent years, any one of which could have resulted in a major loss.

Vessel	Damage	Date	Cause	Comments
Snohomish	Dock	Sept. 2008	Allision	5 passengers injured
Yakima	Dock	Feb. 2008	Allision	Damage exceeded \$1 million deductible
Sealth	Cargo	Feb. 2008	Extreme weather	Damage to 6 vehicles
Snohomish	Vessel	Feb. 2008	Extreme weather	Vessel partially flooded
Cathlamet	Dock/ Vessel	June 2007	Allision/hard landing	Damage exceeded \$1 million deductible
Quinault	Keystone	Dec. 2005	Allision	
Chelan	Cargo	July 2004		Passenger drove off ferry into water
Kingston Terminal	Ramp	June 2001	Failure	Crew member plunged into water
Sealth	Vessel	May 2001	Grounding	Vessel damage

COST BENEFIT

In addition to the risk assessment and evaluation of options to finance those risks, OFM requested an estimate of the amount of additional premium that would have been charged to WSDOT in the current biennium if WSF had participated in the Self Insurance Liability Program. Under existing contract with OFM, PricewaterhouseCoopers prepared this report from loss information available from its most recent actuarial report and premiums allocated to agencies for the current biennium. This report is attached as Appendix C.

While the actual premium for commercial insurance is subject to marketing and negotiation each year, for the purposes of this analysis, Wells Fargo assumed the ability to renew the current commercial insurance policy at the premium amount paid during the last renewal. We believe this is realistic because the continuing worldwide financial situation for maritime concerns has kept marine insurance markets relatively stable.

Wells Fargo requested “market indication” quotes from participants in the current master marine policy to estimate the amount of premium reduction that could be expected if the state opted to increase its deductible from \$1 million to \$10 million. While not binding, the response was that in general, the state could expect a 15 percent reduction in premium (an annual dollar reduction of \$450,000) in exchange for accepting the additional \$9 million risk for each incident.

A breakout of the possible reductions by line of coverage is shown below.

Type of Coverage	Current Premium		Potential Savings	New Premium
Hull and Machinery	\$1,500,000	15%	(\$225,000)	\$1,275,000
Terminals, Docks and Quays	\$325,000	15%	(\$48,750)	\$276,250
War and Terrorism	\$120,000	15%	(\$18,000)	\$102,000
Protection and Indemnity	\$970,000	15%	(\$145,500)	\$824,500
Terminal Operator’s Liability	\$85,000	15%	(\$12,750)	\$72,250
Total	\$3,000,000		(\$450,000)	\$2,550,000

If this option were implemented, the additional \$9 million for state-owned vessel and shore side assets and pollution liability would be retained in WSF’s operating budget. The additional risk for third-party liability could be financed by including WSF in the current SILP, which is discussed below.

SELF INSURANCE OPTION

Including WSF’s risks for liability in the SILP would save WSDOT approximately \$158,250 in commercial insurance premium for liability coverage and eliminate the need to fund the cost of defense and the first \$1 million for each liability claim from WSF’s budget. It would, however, result in an increased self-insurance premium for WSDOT.

Covering the first \$10 million of liability loss through the SILP would add a degree of certainty for the WSF budget by replacing current expenditures for defense costs and claim costs up to the first \$1 million with a self-insurance premium. According to the actuarial estimate attached as Appendix C, this would increase WSDOT’s self insurance premium by \$3,450,000 in Fiscal Year 2011, but would eliminate direct payments for claim and defense costs, which have averaged approximately \$3,570,000 annually over the most recent five years. Therefore, moving WSF risk to SILP would save a projected \$275,000 in the next fiscal year.

Commercial insurance premium savings from increased deductible	\$158,250
Savings from direct payments for defense and claim payouts less than \$1 million	\$3,567,825
Projected increase in SILP premium for WSDOT	(\$3,451,518)
Net Annual Savings	\$274,557

However, future SILP premiums may well exceed the current estimate, nullifying the savings beyond the current biennium. Future self-insurance premiums will relate directly to the cost of defense and claim payments. As noted by the PricewaterhouseCoopers report, the projection of self-insurance premium used above did not fully consider the largest liability loss (\$2.5 million for a single claim) incurred by WSF during the most recent five years because the date of the loss falls outside the date parameters of the allocation formula used to distribute premium to state agencies. It is reasonable to assume that if the projection had included this \$2.5 million loss, the premium would have been higher, thus negating the projected savings from moving WSF to SILP.

Because the SILP premium allocation relies solely on loss history, any increase in losses will have a direct impact on premium. An increase in premium for the state as a whole may also increase WSF’s premium because the nature of the SILP itself assumes some level of loss sharing among the state agencies.

While commercial insurance premiums are subject to increases based on losses and market conditions, they are also subject to annual negotiation with a variety of potential carriers. Negotiations allow the state to use competition, coupled with low claim rates, to hold down premium costs.

The Joint Transportation Committee study pointed out that the state does not insure most buildings. However, the federal government requires the state to purchase insurance for any building for which

FEMA funds have been used to repair or rebuild after a disaster. The last incident involving a ferry terminal occurred in 2007 when the MV Cathlamet ran into the Mukilteo dock, resulting in more than \$1 million damage to the ferry and terminal. The cost of the marine insurance policy could be reduced by only insuring docks and quays, and not the ferry terminals. Savings would be based on the value of the remaining property to be determined when the marine insurance policy is renewed.

CONCLUSION

There is inherent risk in operating a marine service such as the ferry system. Many factors increase the potential for loss, including environmental issues related to the sensitive nature of Puget Sound waters; the busy waters in which the ferry system operates; and the sheer volume of crossings each day and the number of passengers (23 million a year) and vehicles (10 million a year) carried by WSF. While WSF has not had a catastrophic incident, it has had several accidents that could have easily turned into major incidents.

The marine insurance policy is one way to transfer increased liability and risk to a third party. For example, in 2003, the MV Andrew J. Barberi, a New York City passenger-only ferry working under normal conditions, collided with the dock. There were 11 deaths and at least 70 injuries. A class action claim is still pending, but to date, New York City has paid \$53 million in settlements, with estimates for ultimate losses at \$100 million. New York City did not carry insurance for its ferry system. Under the marine insurance policy model, the insurer would have been responsible for the claim.

OFM believes there could be savings by increasing the marine insurance policy deductible from \$1 million to \$10 million and removing terminals as one of the insured assets of the policy. These changes come with increased risk that would have to be assumed by WSDOT and ultimately the state. WSF would need additional funding in its budget to pay for costs incurred between \$1 million and \$10 million. We cannot predict exactly how much funding is needed due to the fact that claims against the ferry system for the next year are unknown. A single incident could far exceed any estimation based on previous history.

An organization's decision to purchase insurance is based upon how much risk it is willing to assume versus transferring that risk to a third party. Based upon our review of the information provided by Wells Fargo, OFM concludes that it is more efficient and cost effective for the state to continue to purchase marine insurance through the world markets. While there may be some savings in the short term for transferring to SILP, those savings could easily be negated by a single large claim against the ferry system.

Washington State Ferries Insurance Risk Assessment



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Assignment / Scope of Work

The Washington State Legislature¹ (Legislature) has asked the Washington Office of Financial Management (OFM) to analyze whether savings can be realized by the State of Washington (State) if it changes the manner in which Washington State Ferries² (WSF) insures its risk. The Legislature asked the OFM to provide the 2010 Legislature with a Business Plan detailing WSF insurance coverage. This Insurance Risk Assessment is a companion document to that Business Plan.

This Insurance Risk Assessment is limited to the following topics:

- Unique nature of marine operations
- Types of casualties / losses encountered in the maritime industry
- Standard industry practices for mitigating risk
- Overview of WSF operations
- Types of casualties / losses encountered by WSF
- How WSF mitigates its risk
- Observations and conclusions regarding WSF risk

Information and data for this Insurance Risk Assessment was collected by:

- Direct interviews with key WSF personnel³
- Review of certain WSF policies and procedures
- Review of WSF loss history as provided by OFM
- Review of risks identified by OFM
- Industry research

This Insurance Risk Assessment does not include / address:

- Risk Assessment simulation or modeling
- Any predictions regarding the likelihood or probability of future WSF losses
- Any predictions on the magnitude of future WSF losses
- Physical surveys of vessels, terminals or other WSF assets
- Audits of WSF policies, practices and procedures
- Participation in regulatory inspections
- Interviews with other managers, terminal employees, maintenance personnel or vessel crew, unless noted herein
- Conclusions and recommendations on specific policies, practices and procedures of WSF

The Global Maritime Industry and Shipping

Shipping is perhaps the most international industry, serving over 90% of global trade carrying cargo and passengers safely and efficiently in an environmentally conscientious manner.

¹ Washington State Legislature Transportation Committee.

² State of Washington, Department of Transportation, Division of Marine Transportation.

³ Senior Port Captain, Director of Safety and Security, Director of Legal Services and Contracts.

The combination of ownership and management for any ship can embrace various countries and jurisdictions. As a result, there is a need for one set of international standards to regulate shipping that can be adopted and accepted by all.

The maritime industry is multi-faceted, but the common denominator is that shipping, whether international, domestic, ocean, coastwise or inland, is the catalyst of all manner of social and economic activity.

WSF is a prominent member of the maritime industry and, like other shipping companies, subject to many compulsory and non-compulsory rules and standards. These unique requirements lie outside normal State governmental consideration.

Key
Point

No review or analysis of WSF is complete without understanding there are international laws, treaties, norms, obligations and practices that WSF must adhere to.

Types of Casualties / Losses Encountered by the Maritime Industry

Key
Point

There are inherent risks associated with the operation of vessels in the marine environment. And while major maritime accidents may be relatively low in frequency they can be catastrophic in magnitude.

The types of casualties and losses that can be encountered within the industry include:

Grounding

When a ship (while afloat) touches the bed of the sea, or goes "aground."

Collision

The striking of two vessels that are afloat and in motion.

Allision

The striking of a moving vessel against a stationary vessel (at anchor, aground or at a dock), or a fixed object (such as a pier, wharf or dock).

Fire

The rapid oxidation of a combustible material (and / or substance) releasing heat, light and various reaction products such as carbon dioxide and water.

Flooding / Capsizing / Sinking

The intrusion of water into the the water-tight hull of a vessel, the extreme progression of which can result in the capsizing and / or sinking of the vessel. Flooding, capsizing and sinking can take place after a serious grounding, collision, allision or fire.

Pollution Discharge

The inadvertent and uncontrolled release of pollutants into the environment. Such discharges may be fuel, oil, waste oil, sewage or emissions.

Act of Sabotage

Sabotage is a deliberate action aimed at weakening another entity through subversion, obstruction, disruption or destruction. In a workplace setting, sabotage is the conscious withdrawal of operation or efficiency generally directed at causing a negative impact on workplace conditions.

Sabotage can be carried out by passengers, employees or enemy combatants.

Act of Terrorism

Common definitions of terrorism refer to those violent acts which are intended to create fear, are perpetrated for an ideological goal, and deliberately target or disregard the safety of civilians.

Terrorist attacks are generally perpetrated in such a manner as to achieve maximum destruction.

Piracy

Piracy is an aggressive act or attack committed by private parties (not affiliated with any government or political ideology) that engage in acts of robbery and / or criminal violence at sea.

Mechanical Failure

Major mechanical failure or breakdown of machinery associated with the safe operation of the vessel. In many cases a mechanical failure precedes one or more of the casualties or losses listed above.

Cargo Damage

Cargo damage covers any damage to customer / client property carried on board the vessel.

Crew Injury

Crew injury is any injury to the crew regardless of the nature or cause. The most common shipboard injuries are slips, trips and falls.

Passenger Injury

Passenger injury is any injury to passengers regardless of the nature or cause. The most common shipboard injuries are slips, trips and falls.

Common Causes of Maritime Casualties / Losses

Common causes of maritime casualties / losses include:

- Human error
- Mechanical failure
- Adverse environmental conditions such as heavy (extreme) weather

While the percentage varies between studies, human error is the most frequently identified factor leading to casualties / losses in the maritime environment. This is why risk must be continuously managed and will never be eliminated from the maritime industry.

Examples of Significant Casualties / Losses

Examples of some of the types of casualties / losses encountered in the maritime industry are summarized below. This section is meant to present a sample of the type, magnitude and cause of maritime casualties. The examples emphasize combination vehicle / passenger ferries since this is generally the category of vessel operated by WSF. The study team focused on American, North American, or European ferries that share similar regulatory standards and requirements, as opposed to “third-world” ferries that operate under arguably lower standards.

While limited in scope, the examples portray a range of the hazards that ship owners and managers must be prepared to encounter. Official reports are provided in Appendix B.

Queen of the West		Fire
Vessel Name	Queen of the West	
Type of Vessel	Cruise Ship (Small)	
Flag	United States	
Type of Accident	Fire	
Location	Columbia River, near Rufus, OR	
Date	April 8, 2008	
Owner	Majestic America Line	
Property Damage	\$3.9 million	
Injuries / Deaths	1 injury	
Cause	Mechanical - deterioration of insulation material in generator	
Report	NTSB	

Note: Casualty / loss occurred on the vessel's normal route, under routine conditions.

Cosco Busan		Allision and Pollution Discharge
Vessel Name	Cosco Busan	
Type of Vessel	Container Ship	
Flag	Hong Kong	
Type of Accident	Allision and pollution discharge	
Location	San Francisco Bay, CA	
Date	November 7, 2007	
Owner	Regal Stone Ltd, Hong Kong	
Property Damage	\$3.6 million (vessel and bridge)	
Other Damage	\$70 million in environmental clean up	
Injuries / Deaths	None	
Cause	Human Error	
Report	NTSB	

Note: Casualty / loss occurred while vessel was preparing to depart SF Bay and struck the Bay Bridge in heavy fog. The vessel was under the command of a Bay Pilot.

BC Ferries Queen of the North		Striking and Sinking
Vessel Name	Queen of the North	
Type of Vessel	Passenger and Vehicle Ferry	
Flag	Canada	
Type of Accident	Striking and Sinking	
Location	Gil Island, Wright Sound, BC	
Date	March 22, 2006	
Owner	BC Ferries	
Property Damage	C\$70,000,000 Total Loss	
Injuries / Deaths	2 fatalities	
Cause	Human Error	
Report	CTSB	

Note: Casualty / loss occurred on the vessel's normal route, under routine conditions.

AMHS LeConte		Grounding
Vessel Name	LeConte	
Type of Vessel	Passenger and Vehicle Ferry	
Flag	United States	
Type of Accident	Grounding	
Location	Near Sitka, AK	
Date	May 10, 2004	
Owner	State of Alaska	
Property Damage	\$3 million	
Injuries / Deaths	1 injury	
Cause	Human Error	
Report	NTSB	

Note: Casualty / loss occurred on the vessel's normal route, under routine conditions.

Staten Island Ferry		Allision
Vessel Name	Andrew J. Barberi	
Type of Vessel	Passenger and Vehicle Ferry	
Flag	United States	
Type of Accident	Allision with dock	
Location	Staten Island, NY	
Date	October 15, 2003	
Owner	NYDOT	
Property Damage	\$8.3 million	
Injuries / Deaths	70 injuries 11 fatalities	
Cause	Human Error	
Report	NTSB	

Notes:

- 1) The Staten Island ferry Andrew Barberi was designed and operated as a passenger / vehicle ferry until the terrorist attacks of September 11, 2001. Since then, operations have been limited to passengers only.
- 2) Casualty / loss occurred on the vessel's normal route, under routine conditions.
- 3) The Staten Island ferries make 33,000 crossings per year.

Estonia		Flooding / Capsizing / Sinking
Vessel Name	Estonia	
Vessel Type	Passenger and Vehicle Ferry	
Flag	Estonia	
Type of Accident	Capsizing	
Location	Baltic Sea en route to Stockholm	
Date	September 28, 1994	
Owner	Estline Marine Company Ltd.	
Property Damage	\$85,000,000 Total Loss	
Injuries / Deaths	852 fatalities	
Cause	Failure of bow door ("visor") locking mechanism	
Report	Joint Accident Investigation Commission	

Note: Casualty / loss occurred on the vessel's normal route, under regularly encountered conditions.

Ecstasy		Fire
Vessel Name	Ecstasy	
Vessel Type	Passenger Cruise Ship (Large)	
Flag	Liberian	
Type of Accident	Fire	
Location	Port of Miami, FL	
Date	July 20, 1989	
Owner	Carnival Cruise Lines	
Property Damage	\$17 million (vessel)	
Injuries / Deaths	14 Crew - Minor Injury 8 Passengers - Minor Injury	
Cause	Human Error	
Report	NTSB	

Notes:

- 1) While the Carnival Cruise Line vessel Ecstasy is registered in Liberia, the vessel must comply with stringent U.S. Coast Guard inspections.
- 2) Casualty / loss occurred on the vessel's normal route, under routine conditions.

Exxon Valdez		Grounding and Pollution Discharge
Vessel Name	Exxon Valdez	
Type of Vessel	Oil Tanker	
Flag	United States	
Type of Accident	Grounding and pollution discharge	
Location	Bligh Reef, Prince William Sound, AK	
Date	March 24, 1989	
Owner	Exxon Corporation	
Property Damage	\$25 million (vessel) \$3.4 million (cost of lost cargo)	
Other Damage	1.85 billion cost of oil clean-up	
Injuries / Deaths	None	
Cause	Human Error	
Report	NTSB	

Note: Casualty / loss occurred on the vessel's normal route, under routine conditions.

Herald of Free Enterprise		Capsizing
Vessel Name	Herald of Free Enterprise	
Vessel Type	Passenger and Vehicle Ferry	
Flag	British	
Type of Accident	Capsizing	
Location	Departing the Port of Zeebrugge, Belgium	
Date	March 6, 1987	
Owner	Townsend Car Ferries Ltd.	
Property Damage	\$51,000,000	
Injuries / Deaths	38 Crew fatalities 150 Passenger fatalities Numerous injuries	
Cause	Human Error	
Report	UK DOT	

Note: Casualty / loss occurred on the vessel's normal route, under routine conditions.

Standard Industry Practices for Mitigating Risk

Over the centuries, the maritime industry has developed many formal and informal practices to mitigate various risks associated with operating ships in an often hostile and always unpredictable environment. A summary of some of the methods and practices used to mitigate maritime risks follows.

Maritime Insurance

One method used by the maritime industry to mitigate its inherent risks is the transfer of financial exposure through maritime insurance. Most commercial vessels are insured for liability in the mutual Protection & Indemnity associations. These “P&I Clubs” distribute individual ship owner risk amongst the thousands of “members” insured with the Clubs.

At one time the Clubs provided unlimited liability based on their ability to share the loss across all members. Today, however, the risk of large catastrophic claims has increased to the point where this is no longer possible, and the P&I Clubs have established a \$1 billion limit on pollution claims and \$3 billion for crew and passenger claims. Without these limits, a catastrophic event could produce a claim that resulted in the bankruptcy of the P&I Clubs.

Some owners are deterred from joining P&I Clubs due to the demands of “mutuality” that require additional premium calls during periods of high claims activity. Instead, those vessel owners purchase insurance from the market at levels they can afford and believe provide adequate coverage.

Making this determination can be difficult.

International Standards / Treaties / Conventions

The 1912 sinking of the Titanic is widely recognized as the catalyst for the development and adoption of the first international shipping safety standards. Known as the Safety Of Life At Sea (SOLAS) Convention, it remains the most significant treaty addressing maritime safety.

In 1948 another international convention established the International Maritime Organization (IMO) which first met in 1959. Since then, the IMO's main focus has been to develop and maintain a comprehensive regulatory framework for shipping which today includes safety, the environment, legal matters, technical collaboration and maritime security.

Key international maritime treaties that directly impact American shippers include the SOLAS Convention (mentioned above), the MARPOL convention for the prevention of pollution by ships and the STCW convention on standards of training for seafarers.

Domestic Regulatory Inspections and Certification

Countries that are signatory to the treaties and conventions of the IMO are required to enforce certain industry standards upon the vessels “flagged” (registered) in those countries. In the United States, the entity charged with carrying out these duties is the U.S. Coast Guard (USCG).

USCG

The USCG is a branch of the United States Armed Forces and one of seven uniformed services. The Coast Guard is a maritime, military, multi-mission service unique among the military branches for having a maritime law enforcement mission (with jurisdiction both domestically and in international waters) and a federal regulatory agency mission. The USCG operates under the Department of Homeland Security during peacetime, and can be transferred to the Department of the Navy by the President or Congress during time of war.

The USCG has three board duty missions: 1) Maritime Safety, 2) Maritime Security and 3) Maritime Stewardship. Accordingly, the USCG monitors and enforces a range of international and domestic laws, rules and regulations on shippers. These include:

- Vessel design and construction
- Mariner licensing, manning standards and training
- Ongoing vessel inspections
- Maritime security programs
- Pollution prevention and response

Classification Societies

A classification society is a non-governmental organization in the maritime industry. These “Class” Societies establish and maintain additional standards for the construction and classification of ships and offshore structures.⁴ They also inspect and ensure that initial construction meets these standards and then conduct periodic surveys of ships in service to ensure ongoing compliance.

The Classification Society system was originally established in the 1700s by the underwriters of sea voyages as a means of establishing a vessel’s condition and the risk associated with it undertaking a voyage. To avoid liability, Class Societies explicitly take no responsibility for the safety, suitability for purpose, or seaworthiness of the ship.

Safety Management System

The International Safety Management (ISM) Code, part of the SOLAS (Safety of Life at Sea) Convention (and associated amendments), is an international standard for the safe management and operation of ships and for pollution prevention. The ISM code applies to those vessels required to adhere to SOLAS and / or the High Speed Craft (HSC) code. It is not compulsory for all U.S. operators and only applies to certain routes.⁵

When the ISM Code applies, there is a requirement that a functional Safety Management System (SMS) be developed for vessel operations. The SMS covers vessel and shore-side activities and must contain certain key elements, such as:

- A commitment from top management
- Written policies and procedures
- A system of reporting, tracking and correcting deficiencies and non-conformities

⁴ Class standards are in excess of those required by the USCG and are not required by regulation. Generally, when a vessel is built to “Class” it is recognized to be of high quality.

⁵ For WSF, SOLAS and the ISM Code only apply to international voyages (Anacortes to Sydney, BC).

- A designated person to serve as a link between the vessels and office and to help champion the SMS
- Third party verification and certification
- Procedures for conducting both internal and external audits
- Management review and ongoing system improvement

In sum, the Safety Management System requires the shipping company to say what it will do, then do it - with both internal and external verification.

Security Programs

Following the terrorist attacks of September 11, 2001, the IMO established and adopted international security protocols. The International Ship and Port Facility Security (ISPS) Code is an amendment to the SOLAS Convention and describes minimum security requirements for ships, ports and government agencies.

This was followed by the development of the U.S. Maritime Transportation Security Act (MTSA) of 2002. The MTSA is the U.S. implementation of the ISPS Code and requires vessels and port facilities to conduct vulnerability assessments and develop security plans that may include passenger, vehicle and baggage screening procedures; security patrols; establishing restricted areas; personnel identification procedures; access control measures; and/or installation of surveillance equipment.

The MTSA is administered by the U.S. Coast Guard.

Best Management Practices

Best Management Practices (BMP) describe the process of developing and following a standard way of performing tasks that multiple organizations can use for management, policy, and operational practices.

In this context, Best Management Practices are not compulsory. Rather, they are voluntarily adopted industry norms that are widely recognized as requisite for safe and efficient operations.

BMP can take many forms and are generally considered "Industry Standards."

Risk Management

Risk Management is the identification, assessment, and prioritization of the risk of detrimental events followed by a coordinated and financially efficient application of resources and actions to minimize, monitor, and control the probability and / or impact of those detrimental events.

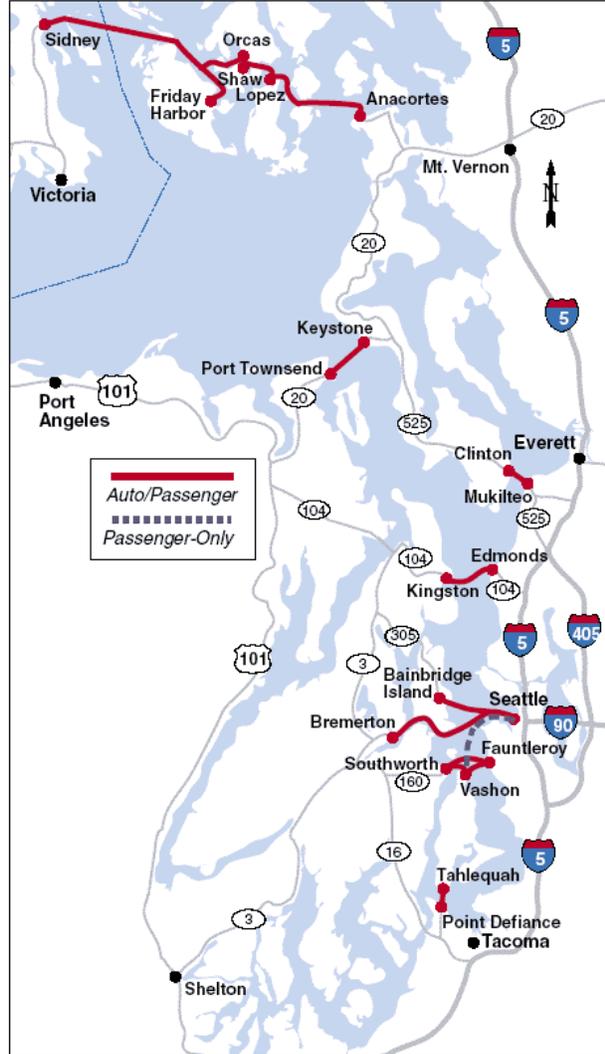
Risk management activities include the development and management of:

- Methods to monitor and measure detrimental events
- Safety and training programs
- Emergency response planning and training
- Interagency collaboration and coordination
- Programs of collaboration with underwriters to monitor and reduce risk

Overview of WSF Operations

WSF is the largest ferry system in the United States, serving eight counties within Washington and the Province of British Columbia in Canada. Counties served include Pierce, King, Snohomish, Kitsap, Skagit, Island, San Juan, and Jefferson. WSF's existing system includes 10 routes and 20 terminals served by 22 vessels.⁶ In 2009, WSF carried 10,064,294 vehicles and 22,737,710 passengers.

WSF operates 7 days a week, 365 days a year under all manner of conditions.



Washington State Ferries Route Map

Risk as it Relates to WSF

“Several factors that contribute to risk propensity in large scale systems are present in the Washington State Ferry system - navigation, vessel loading, arrivals and departures - are distributed across a large geographical area, are time-critical, and contain elements of embedded risk (vessel navigation in congested waters, in reduced visibility, carrying passengers on time critical schedules). The technology used in the system - vessels, equipment, lines, etc. - is also inherently risky. Human and organizational error is present in the system, and organizational structures which result in limited physical oversight and contact can make risk mitigation difficult.”⁷

Key Point

Types of Casualties / Losses Encountered by WSF

WSF is one of the largest ferry systems in the world and operates in an inherently risky environment. This risk propensity has its roots in a number of factors. These include task, technology and human and organizational issues.

⁶ WSF is currently chartering a ferry from Pierce County to operate on the Port Townsend to Keystone run. This vessel is not counted as part of the WSF fleet.

⁷ Assessing Risk in the Washington State Ferry System, John R. Harrald, Institute for Crisis, Disaster and Risk Management, The George Washington University. July 1999.

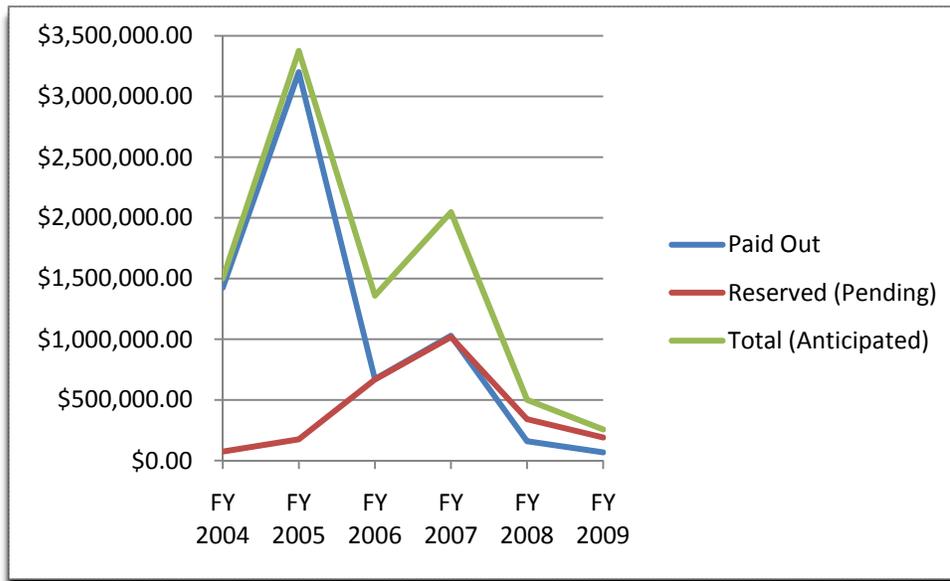
Recent Loss History

The recent (FY 2004 – FY 2009) loss history of WSF is summarized below.⁸

	Paid Out (Claim Closed)	Reserved (Claim Pending)	Total Currently Anticipated	Claims Pending
FY 2009	\$ 67,401.93	\$ 189,736.93	\$ 257,138.12	27
FY 2008	\$ 159,998.34	\$ 340,000.00	\$ 499,998.34	8
FY 2007	\$1,029,216.19	\$1,017,504.00	\$2,046,720.19	10
FY 2006	\$ 670,772.51	\$ 668,002.00	\$1,358,774.51	6
FY 2005	\$3,201,136.42	\$ 175,000.00	\$3,376,136.42	2
FY 2004	\$1,424,002.00	\$ 75,000.00	\$1,499,002.00	1

A complete report can be found in Appendix A.

Chart of WSF Recent Loss History



The Bulk of Losses

In the last 6 years, the bulk of recent losses encountered by WSF are relatively low value (under \$500,000) with only one claim exceeding \$1,000,000. WSF losses are generally categorized as follows:

- Property damage to vessels or cargo (e.g. vehicles)
- Passenger injury occurring on the vessels
- Crew injury occurring on the vessels
- Property damage to / or occurring at the terminals
- Injuries occurring at the terminals

⁸ Office of Financial Management "All DOT Marine – General Liability Report"

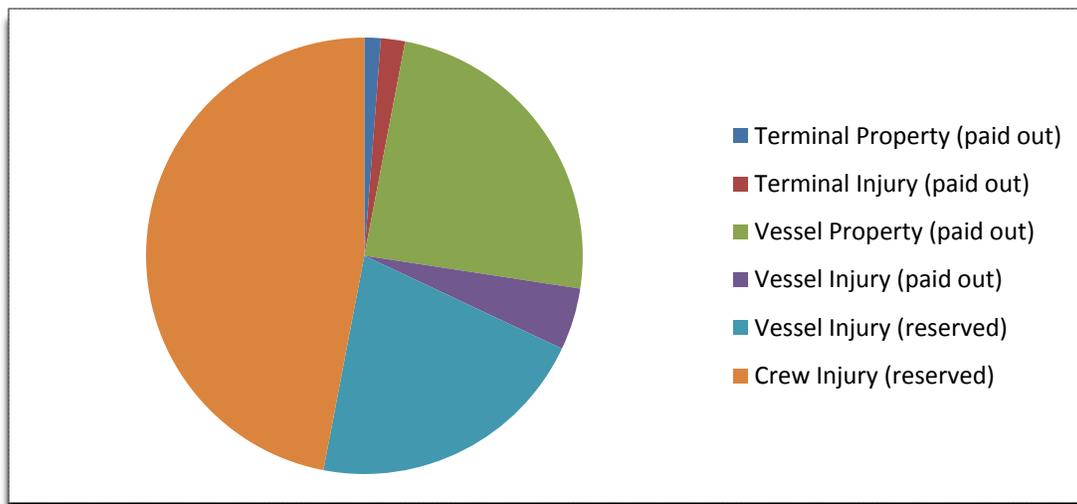
Note-worthy

In a typical year, the highest value of claims / losses occurs under the category of Crew Injury occurring on the vessels.

Utilizing FY 2008 data, the distribution of claims is as follows:

WSF Loss Category	Distribution
Terminal Property (paid out)	1.2%
Terminal Injury (paid out)	1.8%
Vessel Property (paid out)	24.4%
Vessel Injury (paid out)	4.6%
Vessel Injury (reserved)	21%
Crew Injury (reserved)	47%

Chart of WSF Distribution of Losses in FY 2008



Examples of WSF Incidents With Significant Risk Potential

While the bulk of WSF current losses / claims outlined above and in Appendix A are relatively minor, this should not lead one to conclude that WSF enjoys a low risk profile or that WSF risk is decreasing. On the contrary, WSF is exposed to significant inherent risk every day. What follows is an example of incidents endured by WSF that had the potential for becoming significant or extreme losses.

Key Point

This list can be viewed as examples of WSF “near-misses,” the outcome of which could have been much more severe.

2009

Hard Landing / Allision (August 30, 2009) – The Wenatchee ran into the Colman Dock, resulting in the vessel’s removal from service and the accumulation of approximately \$327,000 in costs.

2008

Hard Landing / Allision (February 11, 2008) – The Snohomish ran into the Bremerton passenger-only ferry dock, injuring five passengers.

Allision (February 8, 2008) – The Yakima ran into a floating breakwater near the Bremerton ferry dock, resulting in damage to the vessel's hull and service disruption.

Heavy Weather / Cargo Damage (February 5, 2008) – The Sealth encountered high winds and waves between Lopez Island and Anacortes. Waves crashed over the vessel, damaging six vehicles.

Heavy Weather / Vessel Damage (February 7, 2008) – The Snohomish was partially flooded by a massive wave while operating between Port Townsend and Keystone.

2007

Hard Landing / Allision (June 1, 2007) – The Cathlamet ran into the Mukilteo dock, resulting in over \$1M in damage to the ferry and terminal. The Master was fired for "grossly negligent actions."

2005

Allision (December 30, 2005) – The Quinault ran into a piling as it arrived at the Keystone Harbor ferry terminal. Minimal damage.

2004

Cargo Damage / Passenger Injury (July 5, 2004) – A passenger on the Chelan inadvertently drove off the ferry and into the water at the Anacortes ferry terminal.

2001

Terminal Ramp Failure (June 9, 2001) – The Terminal vehicle ramp at the Kingston terminal collapsed and plunged a WSF employee into the water - rescued by a by-stander.

Grounding (May 29, 2001) – The Sealth ran aground en route to Friday Harbor and sustained substantial structural damage to the vessel's fuel tanks and the engine cooling system.

Passenger Injury / Loss (April 15, 2001) – A passenger fell or jumped from the Puyallup as it neared Eagle Harbor.

1999

Allision (September 8, 1999) – The Elwha ran into the Orcas Island ferry terminal. Both terminal wing walls were damaged.

1998

Hard Landing (July 28, 1998) – The Chinook made a hard landing at the Bremerton ferry dock. Light damage.

Allision (June 12, 1998) – The Sealth ran into the Coleman Dock causing significant damage to the wing walls and injuring 7 people.

1996

Grounding (September 18, 1996) – The Kitsap ran hard aground in Rich Passage and was stranded for 90 minutes resulting in \$300,000 in damage. Master charged by USCG with negligence and misconduct.

1994

Allision (October 1994) – The Issaquah ran into the terminal wing wall at the Vashon Island ferry terminal. Limited damage, but three days were required to repair the damage and resume service.

Mechanical Failure / Allision (January 1994) – The Elwha lost power in the fog and had an allision with the Anacortes ferry dock.

1993

Allision (September 22, 1993) - The Klahowya ran into the Fauntleroy ferry dock damaging the north wing wall.

Collision (February 14, 1993) – The Spokane collided with a 32-foot pleasure boat while en route to Bainbridge Island.

1991

Collision (September 6, 1991) – The Sealth and Kitsap collided in Rich Passage in heavy fog. Approximately \$38,000 in damage was sustained and both Masters were charged by USCG.

Collision (January 28, 1991) – The Skagit collided with a buoy off Alki Point, damaging the vessel's propellers and hull.

Ways WSF Mitigates Risk

Like all vessel operators, WSF is subjected to significant risk. As a prudent operator, WSF takes deliberate steps to mitigate its risk on a daily basis. Some of the actions WSF takes include:

Professional Managers and Crew

The WSF recruits and hires maritime professionals to manage and operate its fleet. Fleet managers have extensive maritime experience and are fluent in the unique aspects of the maritime industry.

Risk Management Program

WSF actively seeks to define and manage its risk. It has established extensive programs to achieve this, and established the following positions:

- Safety Systems Manager
- Emergency Management and Security Coordinator
- Exercise and Training Program Coordinator

Safety Management System

A certified Safety Management System (SMS) is compulsory for WSF ferry operations between the U.S. and Sydney, BC. The SMS is audited and certified by a third party Classification Society - Det Norske Veritas (DNV).

A SMS is not compulsory on WSF's other vessels but WSF voluntarily implements the program throughout its fleet as a Best Management Practice (BMP). WSF utilizes an internal audit team to verify that it is in compliance with the policies, programs and practices laid out in its SMS program.

Training Program

WSF has developed a comprehensive training program and actively works to integrate all aspects of training. The training program is designed to be consistent with organizational needs, priorities and timelines.

Specific training topics, schedules and budgets have been developed for:

- The Deck Department
- The Terminal Department
- The Engine Department
- Eagle Harbor
- Administration

Special Training Initiatives

In addition to the WSF training program described above, several special training initiatives are being implemented by WSF. These include:

- Vessel and Route Simulation Development (route and bridge team training in the Pacific Maritime Institute (PMI) bridge simulator)
- Electronic Navigation Aids (new Furuno radar training)
- Video Communication and Training (organization, update and utilization)
- WSF Safety Series (monthly safety modules)
- Training Website Development (will provide web-based training, tracking and management)

Outside Training Contracts

WSF has outside training contracts with:

- Medical Training Associates
- Pacific Maritime Institute (WSF simulator)
- Fire Academy

Drills and Exercises

WSF designs, trains for and conducts numerous mandated drills and exercises, including:

Safety

- Sub-Chapter W (life saving)
- SMS - Emergency response procedures

Security

- Vessels
- Terminals

Environment

- State
- Federal

Interagency (Joint) Coordination

Many of the exercises and drills conducted by the WSF include federal, state and local agencies. Conversely, WSF participates in drills and exercises conducted by other agencies.

Security Plans

As required under the Maritime Transportation and Security Act (MTSA) WSF has developed comprehensive USCG – approved security plans for its vessels and terminals. These plans and the associated systems are routinely audited by the USCG and required drills and exercises are conducted.

Emergency Operations Center

WSF has designed and developed an Emergency Operations Center (EOC) to function as base of operations during emergencies. The facility is laid out and equipped with the appropriate technology and resources. WSF personnel are trained on the use of the EOC.

Members of the Area Maritime Security Committee

WSF is an active member of the Puget Sound Area Maritime Security Committee. The AMS Committee brings together experienced representatives of a range of port activity to continually assess port security risks and determine appropriate risk mitigation strategies, and develop, revise, and implement the Area Maritime Security Plan.

Washington State Patrol

The Washington State Patrol (WSP) operates a Homeland Security Division that encompasses Vessel and Terminal Security (VATS) for the entire WSF fleet and security for the terminals in Western Washington counties.

This Division also has command of the four WSP inter-agency Explosives Units (bomb squads), the Canine Training Unit (for explosives and narcotics), and the agency Homeland Security Coordinator which provides agency-wide homeland security coordination.

The WSP is the security force for WSF.

Contract with Washington State Maritime Cooperative (MSMC)

WSF is a member of the Washington State Maritime Cooperative (MSMC) for oil spill contingency planning and spill response.

WSMC utilizes the services of a primary contractor, NRC Environmental Services Company, to maintain a response network of equipment and personnel. Communications and administrative services are provided under contract by the Marine Exchange of Puget Sound.

Observations and Conclusions

The Maritime Industry is Unique

The maritime industry has its own unique laws, treaties, practices and challenges. As a member of this community, WSF adheres to many compulsory and non-compulsory programs and practices.

The Maritime Industry is Inherently Risky

There is inherent risk in ship operations and accidents can be catastrophic.

WSF's risks originate primarily from the tasks, technology and human and organizational aspects associated with its operations.

The Maritime Industry Has Adopted Formal and Informal Practices to Mitigate Risk

The maritime industry faces unavoidable risk and has adopted many formal and informal practices to mitigate the various risks associated with operating ships.

These standard practices are driven by tradition, regulation, technology and economics. These practices can be considered industry benchmarks.

WSF Operations are Inherently Risky

WSF operations are inherently risky, yet no more than what is generally accepted within the maritime industry.

WSF Meets Industry Benchmarks and Standards

WSF employs prudent maritime professionals and support staff and its policies, practices and procedures for risk identification and management meet or exceed industry standards.

WSF manages its considerable and complex risk appropriately.

Most of WSF Losses “Routine”

A review of current WSF claims liabilities shows that most of WSF's losses are routine in nature. These losses generally include:

- Damage to passenger vehicles

- Minor injuries to passengers
- Crew injuries

Most of these claims / losses are relatively low with the highest volume (and cost value) occurring in the area of crew injuries.

Things Still Go Wrong

While WSF is effectively managing its considerable and complex risk, things can still go wrong. When they do, there is high potential for a high consequence outcome.

Low Frequency - High Consequence

The true risk exposure for WSF lies in the area of low frequency - high consequence events. This area of exposure can be easy to overlook when the majority of WSF losses fall into the “routine” categories discussed above.

WSF has not had a high consequence event, yet it has experienced numerous “near miss” incidents that had the potential to be far worse.

The State needs to consistently and diligently consider how to safeguard itself from a catastrophic ferry event / loss.

Distribution of Risk Through Marine Insurance

For centuries the maritime industry has addressed its inherent risks by developing methods to transfer financial risk through insurance.

Given the nature and extent of WSF’s operations and today’s operating environment, WSF is more likely to be under insured than over insured.

Conclusion

WSF is managing its operational risk in a prudent manner consistent with industry practices and regulatory requirements.

However, the risk of a catastrophic ferry incident still remains.

Appropriate levels of marine insurance are Washington State’s final line of defense to safeguard from this financial risk.



Washington State Ferries

Risk Assessment and Financing Analysis

Submitted By:

Wells Fargo Insurance Services USA, Inc.

Seattle Office

601 Union Street, Suite 1300

Seattle, WA 98101

February 5, 2010



Introduction

The decision by OFM and WSF to transfer risk to the commercial insurance market has been based on the following conclusions:

1. The risk of a large catastrophic loss to either a ferry or a terminal is unavoidable even with the stringent loss control measures taken by WSF. This conclusion is supported by statistical evidence that the cause of over 50% of maritime losses is human error. Please refer to the companion Risk Assessment for further analysis of the ferries exposure to risk.
2. The operations of the ferries results in a regular frequency of liability claims either from crew or passengers. While the frequency of claims can be reasonably predicted, the severity cannot. To address this uncertainty the Department of Transportation has elected to retain the first \$1,000,000 of any single loss in its budget.
3. The Department of Transportation cannot accrue within its budget adequate reserves to fund a single catastrophic loss. As shown elsewhere in this report, there is the potential for losses in excess of \$10,000,000 to be incurred.
4. That commercial insurance has been readily available for a competitive premium.
5. The commercial insurance market has been stable and has not imposed large premium increases in response to a single large loss year. This compares favorably with Washington State's Self-Insured Liability program which would require bi-annual funding adjustments directly related to claim experience.

Washington State Ferries – Exposure to Catastrophic Risk

The transportation of a large number of passengers in high value vessels across environmentally sensitive waters has unavoidable endemic risks. Our report will focus on the method of transferring risk through the purchase of insurance. A companion report will provide a risk assessment which systematically quantifies the operational risks faced by WSF.



Wells Fargo Insurance Services USA, Inc. ■ 601 Union Street, Suite 1300 ■ Seattle, WA 98101 ■ 206.892.9200

First, we would briefly identify the principal risks and the causes which could lead to a catastrophic loss (catastrophic being defined for the purpose of this report as a loss exceeding \$1,000,000) as follows:

	Vessel Damage	Bodily Injury	Pollution	Terminal Damage	Third Party Property Damage
Collision	x	x	x		x
Allision	x	x	x	x	x
Grounding	x	x	x		x
Fire	x	x	x	x	x
Terrorism	x	x	x	x	x

Notes

- Vessel Damage: The highest insured ferry value is \$67,000,000 for the Jumbo Mark II's.
- Pollution: the risk of pollution is extremely severe in the environmentally sensitive waters of Puget Sound. This includes a spill emanating from a ferry or from a vessel (e.g. tank barge) struck by a ferry during a collision.
- Bodily Injury includes both crew and passengers.
- Third Party Property damage to passenger vehicles and possessions.
- Terminal Damage includes risks of hard landings, fire, earthquake, flood, and tsunami.
- Terrorism: Ferry systems have long been identified as terrorist targets due to the operational vulnerability and concentration of passengers. Washington State Ferries acknowledges this threat with the implementation of K-9 units at ferry ramps and heightened awareness training of potential threats for both the crew and passengers.
- Allision is a maritime term that describes a vessel striking a fixed object such as a pier or dock.

The unique risk profile of WSF

The Washington State Ferry system has a unique risk profile in comparison to other Department of Transportation operations and State agencies. The elements to this unique profile include:



- Large passenger concentrations. When compared to a bus service, the passenger concentration is far higher. On a commuter run to Bainbridge and Bremerton the ferries have the capacity to carry 2,500 passengers.
- Transportation over water compared to land has its own unique risks such as: sinking, grounding, and pollution.
- The value of the vessels compared to those of vehicles is many times higher. For example a Jumbo Mark II ferry is insured for \$67,000,000 compared to the value of a passenger bus worth approximately \$ 100,000
- The ferry system has been indentified by the FBI and the Department of Homeland Security as a high profile terrorist target.
- The ferry system could be impacted by a natural disaster, either earthquake and/or tsunami, which could severely damage the terminal infrastructure and also ferries moored at the terminals at the time of loss.

Quantifying the severity of risks that arise from WSF operations

As previously described, marine transportation has endemic risks which are unavoidable. The maritime industry has responded to these risks for centuries by developing methods to insure those risks. The most famous example being the ship owners and merchants that first met at Lloyd’s coffee house in the 17th century to share in each other risks.

Liability

The following table illustrates examples of liability losses involving passenger losses. These provide a benchmark against which to measure the potential severity of risks faced by WSF.

Vessel	Date of Loss	Cause	Total Liability Loss From Ground Up
Estonia	28-Sep-94	Sinking	\$85,000,000
Sea Diamond	5-Apr-07	Sinking	\$55,600,000
Crown Princess	Jul-06	List	\$32,000,000
Star Princess	23-Mar-06	Fire	\$7,500,000
Al-Salan Boccaccio 98	Feb-06	Sinking	\$60,200,000
Seven Seas Voyager	Mar-09	Cruise Cancellation	\$7,700,000
Majesty of the Seas		Crew Injury	\$11,000,000
Herald of Free Enterprise	6-Mar-87	Sinking	\$51,060,000
Royal Pacific	Jun-05	Sinking	\$6,500,000



Of particular note in recent years has been the Staten Island Ferry accident. In October 2003 the ferry "Andrew J. Barberi" allided with the Staten Island Ferry Terminal. The allision resulted in the death of 11 passengers and injury to a further 70. New York City did not insure the ferry at the time of loss. The loss resulted in over 170 lawsuits many of which remain unresolved. One case involving the paralysis of a passenger was settled in Federal Court for \$18,300,000 and the City has paid at least an additional \$54,000,000 in out of court settlements. It is therefore reasonable to estimate that once the class action lawsuits have been resolved that the total loss to the City of New York will be in excess of \$100,000,000.

Hull Physical Damage

In the Pacific Northwest there have been the following examples of large losses:

Vessel	Date of Loss	Cause	Value of Loss
Alaska Ferry "Columbia"	6-Jun-00	Engine Room Fire	\$2,000,000
Alaska Ferry "Le Conte"	10-May-04	Grounding	\$3,000,000
"Empress of the North" *	14-May-07	Grounding	\$5,500,000
"Queen of the West" *	8-Apr-08	Engine Room Fire	\$3,900,000
BC Ferry "Queen of the North"	22-Mar-06	Sinking	C\$70,000,000

* Vessels of independently owned cruise and ferry lines.

Note: All of these losses also gave rise to liability claims. The sinking of the "Queen of the North" resulted in the death of two passengers.

Pollution

Since the "Exxon Valdez" struck Bligh reef on March 23, 1989, the maritime industry has been subject to increasingly stringent penalties and liability laws. Although the ferries only carry a relatively small amount of fuel compared to the cargo of a tank vessel, the



impact of even a minor spill in Puget Sound would be significant. In addition, the greater risk exists of a ferry striking a tank vessel and thereby be the cause of a much larger spill.

A recent spill on the West Coast provides a benchmark of how large the cost of clean-up and restoration can be. In November 2007 the container vessel "Cosco Busan" strayed off course and struck the Oakland Bay bridge breaching the vessel's fuel tanks and releasing 53,500 gallons of fuel oil into San Francisco Bay. The spill contaminated 26 miles of shoreline, killed more than 2,500 birds, closed a fishery and delayed the crab-fishing season. Claims relating to this spill are still being settled and it is expected that the final cost will be in the region of \$70 - \$100 million.

Amount of risk currently retained by WSF

WSF currently retains the first \$1,000,000 of any loss in its budget. Claims insured under their liability policy are covered excess of the \$1,000,000 deductible up to a maximum limit of \$250,000,000.

The amount of physical damage coverage insured for the ferries is set at 50% of their current estimated replacement cost. Therefore a Jumbo Mark II ferry with an estimated replacement cost of \$134,000,000 is only insured to \$67,000,000. In the event of a total loss of a ferry the State would therefore have to bear the additional cost of building a replacement vessel.

Washington State Ferries also currently retains the following risk:

Bodily injury and vessel damage arising from terrorist attack using conventional weapons on selected ferries. Terrorist attacks using chemical, biological or bio-chemical weapons are retained risk for all ferries.

WSF retains in its budget the risk of business interruption / extra expense in the event that a ferry is taken out of service. Lost revenue and additional expense is incurred to provide a substitute service.

All liability losses that may exceed the current limit of \$250,000,000 are retained.



Maritime industry standard levels of coverage for liability and physical damage

There is an important distinction between the liability exposure of non-US vessel owners when compared to US owners. It is a widely held principal of maritime law that a vessel owner can limit their liability to an amount equal to the value of their vessel. This provides owners with some level of certainty as to their liability. However, the US legal system has regularly refused owners the benefit of any limitation. This combined with the open ended nature of the “Jones Act” compensation laws which apply to crew, has meant that quantifying the potential liability of a US vessel operator is extremely problematic.

95% of the world’s vessels are insured for liability in the mutual Protection & Indemnity associations (commonly referred to as P&I Clubs). The Clubs mutually share ship owners’ risks and provide efficient vehicles for the purchase of high limits of liability. At one time the Clubs provided unlimited liability on the basis of however large a claim, it would be shared proportionately amongst the thousands of ship owners insured in the Clubs.

As vessels have become larger and the risk of large catastrophic claims has increased particularly in the areas of pollution or bodily injury there have been set limits agreed by the Clubs. These limits are currently \$1 billion for pollution and \$3 billion for crew and passenger claims. These are very large amounts, but are reflective of the risk that a vessel or multiple vessel catastrophe could produce a claim which, if it were not capped, would result in such a large loss that it would push the Clubs into insolvency. The high limits provided by the Clubs are therefore considered to be the benchmark by which liability limits are measured including the limits procured by many passenger vessel owners.

Some ship owners, including WSF, are deterred from joining P&I Clubs due to the demands of mutuality that has meant additional premium calls have been required during periods of high claims activity. For those vessel owners not insuring with the P&I Clubs, the alternative has been to purchase insurance limits from the insurance market up to levels that they believe are adequate and economically feasible.

The levels of insurance purchased for physical damage to vessels has been based on the market value of a vessel and not the new replacement cost. The principle being that



a vessel owner be reimbursed by insurance to an amount that allows the purchase of a substitute vessel of like kind and condition. For owners of specialist vessels such as the ferries the calculation of market value is problematic due to the absence of any secondary market for the sale and purchase of similar vessels. Instead, WSF has with their underwriter's agreement, elected to insure the ferries to an amount equivalent to 50% of the new replacement value of the vessels. This basis of valuation is predicated on the expectation that even severe damage to a ferry would not result in a total loss and that there would be a salvageable vessel that could be repaired.

The ferry terminals are insured to an amount equal to 100% of replacement cost. Insurance coverage for the terminals includes risks of earthquake, tsunami, and flood. The total insured value of the terminals is \$400,000,000 and the premium \$325,000 per annum, a rate of 0.08125% of value.

How other ferry and passenger vessel operators retain or transfer risk

The majority of ferry and passenger vessel operators maximize their ability to purchase insurance through membership of one of the International Group of Protection & Indemnity Clubs previously mentioned.

BC Ferries are currently members of the Standard P&I Club and therefore have limits of \$1 billion for pollution, \$3 billion for crew and passengers with an overall limit of \$6 billion.

At their last renewal in July 2009 the Alaska Marine Highway System made the decision to increase the limit they purchase by insuring with British Marine Limited which provides a limit of \$500 million.

Financial predictability through insurance versus self-insurance.

Insurance allows for the economic control of risk through the transference of risk from one party to another in return for the payment of premium. By transferring risk to the insurance market the WSF removes a high level of uncertainty from their financial planning. The WSF does not have to accumulate reserve funds to pay for the financial loss arising from e.g. a major vessel or terminal loss, or liability claim.



If the WSF were to participate in the State’s Self-Insured Liability Program (SILP) they would need to contribute a premium that would reflect their recent losses. This may give rise to a situation that having sustained a large loss the WSF would have to pay in the following year a large increase in the contribution to the self-insurance program. The commercial insurance market however has the benefit of providing their insureds with a premium that reflects their long term claims history and which can be negotiated to discount one-off type claims that are anomalies.

In the case of WSF it has maintained a strong credit balance with underwriters for over the past 25 years. For example in the 10 year period of 1997 to 2007 WSF maintained a loss ratio of premium to claims of 29%. However, within this same 10 year time period, the loss ratio deteriorated to 121% during the 4 years 1997-2001. Due to underwriters having accumulated a credit balance over time there was no significant increase in premiums as a result of these poor performing years. This however would not be the case under the State’s SILP.

Recommendations

Reviewing the current marine insurance program including premium and the historical claims experience of WSF we believe the following comparison is valid:

(Note figures are per annum)

Marine Insurance Cost:	\$3,000,000	SILP Premium Allocation:	\$3,450,000
		Prop Damage / Hull Premium:	\$2,000,000
Tort / Defense Costs:	<u>\$3,570,000</u>	Liability Premium:	<u>\$850,000</u>
Total Est. Annual Cost	6,570,000		\$6,300,000

Notes

- Marine Insurance cost of \$3,000,000 contemplates a \$1,000,000 Self Insured Retention for both liability and property damage.
- The self insured premium liability program contemplates a \$10,000,000 Self Insured Retention for liability only.



Given the above numbers it is our recommendation to maintain the current marine liability program to:

- Smooth out the costs to WSF by removing the variable of the yearly actuarial premium allocation.
- Continue to save premium and self insured costs due to the lack of a significant premium credit for an increased liability SIR of \$10,000,000.
- Protect WSF against the catastrophic exposures outlined in our report at reasonable cost to the State.
- Take advantage of the \$1,000,000 self insured retention applying to both Liability and property damage claims.

We have not included estimates for the amount of retained property damage claims (either ferry or terminal damage) as these costs would be consistent regardless of whether the liability for WSF was insured under the SILP.

We would also make the following recommendations:

1. Compared to their peers WSF is underinsuring their liability exposure. We would recommend that consideration be given to purchasing an additional \$50,000,000 of coverage for an estimated premium of \$50,000 per annum as estimated by the London broker, Price Forbes.
2. That the ferries insure all of the ferries against terrorist attack and not just those considered to be on high profile routes. The additional premium is estimated at \$75,000 per annum.

January 29, 2010

Ms. Betty Reed
Risk Management Administrator
Office of Financial Management
State of Washington
210 11th Avenue SW
Olympia, WA 98504

Dear Ms. Reed,

Pursuant to Task Order No. 2 to OFM Contract No 4-25 between PricewaterhouseCoopers LLP (PwC) and the Office of Financial Management of the State of Washington, PwC was asked to perform the following duties:

1. Using information from the most recently completed actuarial study, and the allocation formula used when premium was last allocated among the various agencies, provide an estimate of the amount of premium that would have been attributed to the Washington State Transportation, Ferries Division in Fiscal Years 2009-10 and 2010-11 if they had been a participant in the Self Insurance Liability Program.
2. Compare the total amount paid by the Department of Transportation Ferries Division to fund tort payments in Fiscal Year 2009-10 to the projected premium.
3. Compare the total amount of estimated payments in Fiscal Year 2010-11 with the premium estimate for Fiscal Year 2010-11.

Background

The Department of Transportation Ferries Division currently does not participate in the Self-Insurance Liability Program. Their losses are separately analyzed as part of the regular actuarial evaluations and separately funded without any risk sharing amongst the other departments and agencies. There has been some consideration at the State of having the Ferries Division participate in the Self Insurance Liability Program. As part of this process, PwC has been asked to calculate the amount of premium that would have been attributed to the Ferries Division for the 2009-2011 biennium.

Results

The amount of premium that would have been attributed to the Ferries Division in Fiscal Years 2009-10 and 2010-11 if they had been a participant in the Self Insurance Liability

Program would have been \$6.9 million for the biennium or \$3.45 million per year. This \$6.9 million premium estimate is broken out by component on Exhibit 1. The estimated premium compares to projected payments in fiscal year 2009-10 and 2010-11 of \$3.8 million and \$4.3 million, respectively. A key assumption in the premium calculation is that the overall biennium funding requirement of \$151.6 million would not change.

Other Considerations

1. The comparison being made is limited in scope and may not be representative of what will likely happen in the future. The following table compares the actual payments over an extended period of time with the 2009-10 and 2010-11 hypothetical premium.

Year	Payments	Premium
1999-00	\$3,151,518	
2000-01	6,730,891	
2001-02	5,134,499	
2002-03	6,992,230	
2003-04	2,923,866	
2004-05	1,545,513	
2005-06	2,645,932	
2006-07	3,771,272	
2007-08	3,302,022	
2008-09	6,574,388	
2009-10	3,770,867	\$3,451,518
2010-11	4,301,000	3,451,518

2. There may be some mutual benefit to both the Ferries Division and the Self Insurance Liability Program with the Ferries Division participation due to greater risk sharing. The annual premium cost for the Ferries Division will tend to be more stable than their annual payments as the annual premium is based on multiple loss years.
3. From the consolidated State viewpoint, there is no cost reduction by funding certain claims from a different funding source.
4. In this situation, there could be some net savings due to a reduction in the Ferries Division commercial insurance assuming the retention level is increased. Such savings has not been considered in this analysis.
5. In the table above, the large payments in 2008-09 are partly due to payments of \$2.5 million for claim number 40556787. This case occurred in August 2002, was reported in January 2005, and was valued at \$304,000 as of December 31, 2007. The premium calculation for the 2009-11 biennium was based on the value of claims as of December

2007. Thus, the large recent payments of \$2.5 million were not considered. Under the current allocation formula for the 2011-13 biennium, the recent payments would be partially considered since the report date, but not loss date, would fall within the five year experience window.

Description of Analysis

In calculating the premium, the current allocation formula was used. This formula primarily utilizes 5 years of losses on both an accident year and report year basis. Exhibits 1 through 5 detail these calculations.

For the 2009-10 year, actual payments between July 1, 2009 and December 15, 2009 were combined with projected payments for the period December 16, 2009 through June 30, 2010 to determine the estimated fiscal year 2009-10 payments. For fiscal year 2010-11, the estimated payments of \$4,301,000 included in the actuarial report were utilized.

Qualifications of Actuary

Kevin Wick is a Managing Director with PricewaterhouseCoopers LLP. He is a member of the American Academy of Actuaries and a Fellow of the Casualty Actuarial Society. As such, Kevin meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We appreciate the opportunity to provide consulting services to State of Washington Office of Financial Management. If you have any questions regarding this letter, please call me at 206-398-3518.

Sincerely,
PricewaterhouseCoopers LLP



Kevin L. Wick, FCAS, MAAA
Managing Director

STATE OF WASHINGTON
 Self Insurance Liability Program

Estimated Allocation of 2009-2011 Biennium Premium Requirement to the Ferries Division

	2009-2011 Biennium
(1) GL Indemnity	\$4,103,006
(2) AL Indemnity	61,457
(3) GL Defense	2,663,713
(4) AL Defense	74,861
Total	\$6,903,037

1. Line (1) is from Exhibit 2.
2. Line (2) is from Exhibit 3.
3. Line (3) is from Exhibit 4.
4. Line (4) is from Exhibit 5.

STATE OF WASHINGTON
Self Insurance Liability Program

General Liability Indemnity Cost Allocation
2009-2011 Biennium

<u>Agency</u>	5-Year Unlimited Indemnity Loss Using <u>Accident Yrs</u> (1)	Distribution of Accident Yr <u>Losses</u> (2)	5-Year Unlimited Indemnity Loss Using <u>Report Yrs</u> (3)	Distribution of Report Yr <u>Losses</u> (4)	Weighted Distribution <u>.50x(2)+.50x(4)</u> (5)	General Liability Indemnity <u>Funding</u> (6)
Ferry	\$6,936,355	4.250%	\$8,076,047	3.573%	3.911%	\$4,103,006
All Other Agencies	156,287,401	95.750%	217,940,055	96.427%	96.089%	100,795,439
Total	\$163,223,756		\$226,016,102			\$104,898,446

1. Columns (1) and (3) for "All Other Agencies" is from PwC's May 13, 2008 Actuarial Review, Exhibit 8-3, page 3 of 3.

STATE OF WASHINGTON
Self Insurance Liability Program

Automobile Liability Indemnity Cost Allocation
2009-2011 Biennium

<u>Agency</u>	5-Year Unlimited Indemnity Loss Using <u>Accident Yrs</u> (1)	Distribution of Accident Yr <u>Losses</u> (2)	Auto Liability Indemnity <u>Funding</u> (3)
Ferry	\$173,824	0.912%	\$61,457
All Other Agencies	18,888,085	99.088%	6,678,009
Total	\$19,061,909		\$6,739,465

1. Column (1) for "All Other Agencies" is from PwC's May 13, 2008 Actuarial Review, Exhibit 8-4, page 3 of 3.

STATE OF WASHINGTON
Self Insurance Liability Program

General Liability Defense Cost Allocation
2009-2011 Biennium

<u>Agency</u>	5-Year Incurred Defense <u>Costs</u> (1)	<u>Distribution</u> (2)	General Liability Defense Cost <u>Funding</u> (3)
Ferry	\$2,472,300	7.09%	\$2,663,713
All Other Agencies	32,412,278	92.91%	34,921,734
Total	\$34,884,578		\$37,585,447

1. Column (1) for "All Other Agencies" is from PwC's May 13, 2008 Actuarial Review, Exhibit 8-5, page 3 of 3.

STATE OF WASHINGTON
Self Insurance Liability Program

Automobile Liability Defense Cost Allocation
2009-2011 Biennium

<u>Agency</u>	5-Year Incurred Defense <u>Costs</u> (1)	<u>Distribution</u> (2)	General Liability Defense Cost <u>Funding</u> (3)
Ferry	\$62,356	3.10%	\$74,861
All Other Agencies	1,948,868	96.90%	2,339,692
Total	\$2,011,224		\$2,414,553

1. Column (1) for "All Other Agencies" is from PwC's May 13, 2008 Actuarial Review, Exhibit 8-6, page 3 of 3.

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