

A map of the West Coast of the United States, showing the coastline from Alaska down to California. The land is colored yellow, and the ocean is blue. A dashed horizontal line is drawn across the map, passing through the state of Washington. A white rectangular box with a black border is centered over the map, containing the title and date of the document.

**Five-Year
Implementation Status
Review of the
West Coast Offshore
Vessel Traffic
Risk Management
Project
Recommendations**

October, 2008

**Five-Year Implementation Status Review of the
2002 West Coast Offshore Vessel Traffic
Risk Management Project Recommendations
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SECTION 1: INTRODUCTION and PROJECT BACKGROUND

The West Coast Offshore Vessel Traffic Risk Management (WCOVTRM) Project was co-sponsored by the Pacific States/British Columbia Oil Spill Task Force and the US Coast Guard, Pacific Area. Rick Holly of the California Office of Spill Prevention and Response served as the Task Force co-chair. USCG Pacific Area co-chairs during the project included CAPT Ed Page, CAPT Frank Whipple, and CAPT Glenn Anderson.

From 1999 to 2002, they co-chaired a workgroup of representatives of the following interests: the oil spill agencies in Alaska, Washington, Oregon, and California, and the Province of British Columbia; the US Coast Guard Districts 17, 13, and 11; the Canadian Coast Guard, Pacific Region; NOAA (both Hazmat and National Marine Sanctuaries); Environment Canada; the US Navy; the Canadian Maritime Forces; the Cook Inlet Regional Citizens' Advisory Council; the BC Chamber of Shipping; the BC Council of Marine Carriers; the Puget Sound Steamship Operators' Association; the Puget Sound Marine Exchange; the Portland Merchants Exchange; the Port of Portland; Save Our Shores; the California Coastal Commission; the Western States Petroleum Association; the Council of American Master Mariners; the American Waterways Operators, Pacific Region; Teekay Shipping (for INTERTANKO); and the Pacific Merchant Shipping Association.

The goal of the project was to reduce the risk of collisions or drift groundings caused by vessel traffic transiting 3 to 200 nautical miles off the West Coast between Cook Inlet in the north and San Diego in the south. Vessels of concern included tank, cargo/passenger, and fishing vessels of 300 gross tons or larger, as well as tank barges. Working together from 1999 to 2002, this Workgroup collected and reviewed data on typical coastwise traffic patterns, traffic volume, existing management measures, weather data and ship drift patterns, historic casualty rates by vessel type, the availability of assist vessels, the environmental sensitivity of the coastlines, socio-economic consequences of a spill, and projections of relevant future initiatives. Using the drift and tug availability data, they modeled likely tug response times under both average and severe weather conditions.

The Workgroup then developed a Relative Ranking/Risk Indexing Worksheet that evaluated nine factors: volume of oil/vessel design; drift rates; areas of higher collision hazards; distance offshore; weather/season; tug availability; coastal route density; historic casualty rates by vessel type; and coastline sensitivity. Using this tool, they developed and ranked a total of fifty-two casualty scenarios in all the West Coast jurisdictions. These were then extrapolated into

1,296 additional scenarios on the West Coast, a modeling process which defined both average and "higher risk" areas from Alaska to California.

Workgroup members then addressed four risk factors considered most amenable to change: tug availability, collision hazards, historic casualty rates by vessel type, and distance offshore. They developed a set of draft findings and recommendations using the criteria that the findings and recommendations had to be supported by the data, realistic (capable of being implemented), effective, economically feasible, and flexible enough to allow for incorporation of new technology and changes in policy.

From December of 2001 through March of 2002, the Project Co-chairs, the Task Force Executive Coordinator, and Workgroup members presented these draft findings and recommendations to affected stakeholder groups and at public meetings in Alaska, British Columbia, Washington, Oregon, and California. The draft Findings and Recommendations were also available on the Task Force website. Following this outreach and public comment, the Workgroup members adopted their final Findings and Recommendations in April of 2002. This 2002 WCOVTRM report is available at: http://www.oilspilltaskforce.org/wcovtrm_report.htm

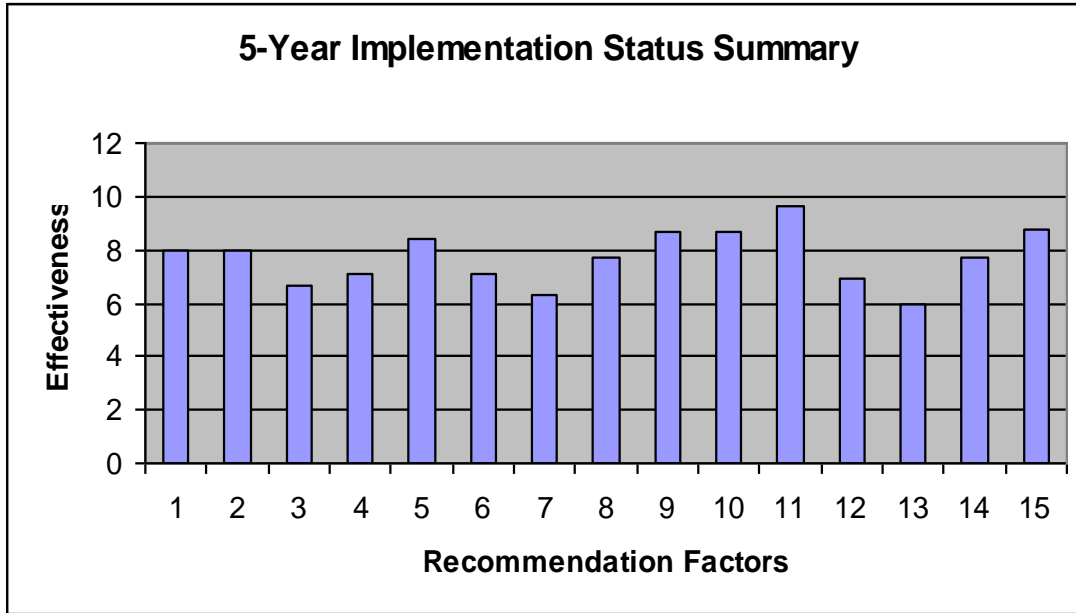
One recommendation in the 2002 report reads as follows: [The West Coast Offshore Vessel Traffic Risk Management Project Workgroup recommends that the Pacific States/BC Oil Spill Task Force work with the US and Canadian Coast Guards in 2007 to review the status of implementation and efficacy of the final recommendations from this project.](#)

In recognition of this recommendation, the Pacific States/British Columbia Oil Spill Task Force adopted tasks in their 2006-2008 Annual Work Plans which outlined a process and timeline to conduct this five-year review. Rick Holly of the Office of Spill Prevention and Response (OSPR) of the California Department of Fish and Game, who had served as the initial Project Co-Chair, and Mr. Steve Danscuk of the USCG Pacific Area, agreed to serve as Co-Chairs on this project. Working with Jean Cameron, the Task Force Executive Coordinator, they reviewed the Recommendations and assigned responsibility to provide status reports.

Since several of the WCOVTRM recommendations were directed to Harbor Safety Committees or their equivalents in West Coast ports, this team drafted a survey which Rick Holly distributed to the California Harbor Safety Committees, and which Steve Danscuk distributed through the USCG Sectors in Oregon, Washington, and California. The replies to this survey are summarized in this report and can also be found in Appendix I.

In May of 2007, a draft summary of the survey replies and implementation assessments was submitted to the original members of the WCOVTRM Project Workgroup (or their current replacements) for review and comment. The Workgroup members were asked to submit edits and comments, as well as numerical rankings of the status of implementation and efficacy, plus any further recommendations for action.

The 2007 WCOVTRM Workgroup members (see Appendix III) were asked to rank the implementation status and effectiveness of this Recommendation on a scale of 1 to 10, with 1 meaning "Nothing effective has been accomplished" and 10 meaning "This Recommendation has been fully implemented and is effective." The chart below compares their rankings by Recommendation:



Section 2 of this project report is organized according to the 2002 Recommendations, and includes the averaged ranking which each Recommendation's implementation status received during the Workgroup review process. Workgroup comments, plus their Recommendations for Further Action, are also summarized for each 2002 Recommendation.

The Workgroup convened on a conference call on September 28, 2007 to discuss the proposed "Recommendations for Further Action." In the final phase of the project, those draft "Recommendations for Further Action" were submitted to the Project Workgroup as well as to the public for comment. Our public outreach involved posting the final draft report on the Oil Spill Task Force website, notifying interested stakeholders, and requesting their comments.

Public and Workgroup comments were then reviewed by the Project Co-Chairs and the Task Force Executive Coordinator and incorporated as appropriate. At the conclusion of this process, this final report has been posted on the Task Force website as well as provided to the 2007 Workgroup members. The Pacific States/British Columbia Oil Spill Task Force has incorporated the recommendations which call for action by the Task Force into their 2008-2009 Annual Work Plan, and will also monitor implementation of all recommendations.

Section 2: Five-Year Status Review of the 2002 Recommendations Including Workgroup Comments and Recommendations

I. RECOMMENDATIONS REGARDING COLLISION HAZARDS ON THE WEST COAST
A. BASED UPON INCREASED TRAFFIC DENSITY AND COLLISION HAZARDS AT PORT ENTRANCES, THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP RECOMMENDS THAT HARBOR SAFETY COMMITTEES OR THEIR EQUIVALENTS IN WEST COAST PORTS CONTINUOUSLY MONITOR THIS RISK AND EVALUATE THE NEED FOR ENHANCED TRAFFIC SAFETY SYSTEMS AT THEIR PORT ENTRANCES.

IMPLEMENTATION STATUS OF RECOMMENDATION I.A

Survey replies were received from San Diego, Los Angeles/Long Beach, San Francisco, Port Hueneme, Eureka, the Columbia River, Washington and Alaska ports, and Transport Canada for British Columbia. These replies outline a number of initiatives which have improved local navigation safety, but it is not clear whether such initiatives were in response to Recommendation I.A. Highlights include:

- The Regulated Navigation Area (RNA) for San Diego Bay, Mission Bay and their entrances was established in December 2005 to give the Captain of the Port greater situational awareness over all vessels 100 GT or greater intending to enter, depart or navigate within San Diego or Mission Bay. Although the RNA was established as a security measure, it also serves to increase navigational safety. Also in San Diego, U.S. Coast Guard Sector San Diego conducted a Waterway Analysis Management System (WAMS) in 2004; this is a review of the nautical chart(s) with annotations indicating traffic patterns and density, a narrative of any and all recommendations for improvement to the Aids to Navigation system, supporting documentation, and public comment.
- Los Angeles/Long Beach reported that their VTS system in LA/LB "has been working flawlessly," noting that the USCG partners with the Marine Exchange to monitor traffic 25 miles out and allows the respective pilot groups to monitor traffic inside the breakwaters.
- VTS San Francisco and the Harbor Safety Committee (HSC) have undertaken numerous initiatives, including the following:
 - an effort to improve and standardize communications between vessels and the Union Pacific Railroad Bridge to address numerous collisions and "close calls";
 - addition of seven watch standers and one training position at VTS San Francisco based on future maritime transportation growth demands;
 - San Francisco HSC, VTS San Francisco, and key stakeholders developed outreach and training initiatives in 2003 to prepare its vessel operators for compliance with AIS carriage requirements, and also worked to simplify and standardize AIS destination reporting for the Bay Area;
 - the VTS developed and implemented an RNA speed monitoring program in 2004 that resulted in vastly improved awareness and regulatory compliance by vessel pilots and masters; and

- following a number of near-misses involving commuter ferries, the San Francisco HSC Ferry Operations Work Group initiated a study regarding the need for organized ferry routes - the group modeled routing modifications to reduce the probability for collisions, and ultimately created a new experimental Ferry Routing Protocol being implemented on November 1st, 2006.
- In Port Hueneme, there is a committee evaluation when specific incidents/situations arise. To date, the only such evaluation involves the potential increase and impacts of vessel traffic to and from the proposed Cabrillo Port LNG facility, which was generally deemed insignificant.
- In Eureka, the port installed night lighting on a jetty and other prominent points of land to illuminate the harbor for commercial fisherman.
- For Oregon ports, the Port Waterways Safety Committee (PWSC) conducted a Lower Columbia Risk Assessment in 2005. As a result the PWSC has undertaken several projects aimed at improving safety on the Lower Columbia, including ongoing Navigation Rule 9 Enforcement, and Crab Light Enforcement efforts. Two LNG plant proposals on the Columbia River have necessitated Waterway Suitability Assessments.
- A number of efforts were cited for the Puget Sound area that had been completed prior to July, 2002, but they continue to impact the management of international waterways. Ongoing Cooperative VTS operational efforts include addressing traffic at the entrance to the Strait of Juan de Fuca, offshore approaches, check-in procedures, traffic lane modifications, pre-arrival testing and the development and implementation of joint propulsion/steering failure decision matrices to ensure swift international response actions. All of these issues typically involve briefing and/or critical input from HSC key stakeholders or the entire HSC.
- In British Columbia, Transport Canada and the Canadian Coast Guard reported that the changes to the traffic separation scheme (TSS) for Juan de Fuca Strait and its approaches, Haro Strait, Boundary Pass, and the Strait of Georgia have been completed. In December 2006, the northern outer limit of the west bound traffic lane on the approaches of Juan de Fuca Strait was moved one mile north. This enables vessels more maneuvering room in an area where many fishing vessels may be encountered. The IMO-approved TSS for contiguous waters is monitored 24/7 by Tofino MCTS, Seattle Traffic, and Victoria MCTS. Response plans are in place at all three centers for addressing disabled vessels in these waters. Centre failure matrices have been implemented for all three centers. A modernization project for Tofino MCTS will occur in fall of 2007.
- In Alaska, a Cook Inlet Navigation & Safety Committee was formed in 2006 to bring together the key players that affect port operations and safety for Cook Inlet. The goals of this committee are to practice risk management, prevent injuries, reduce terminal and vessel liabilities and strive to prevent interruption of services. A Ports and Waterway Safety Assessment was conducted in July 2006 for the Aleutian Islands as an initial action to address navigation safety in the Aleutians following the grounding and major oil spill from the stricken M/V SELENDANG AYU.

For the complete answers from these USCG offices or Harbor Safety Committees to a survey regarding this WCOVTRM Recommendation, please refer to Appendix 1, pages 31-34.

WORKGROUP COMMENTS, RANKING, AND FURTHER RECOMMENDATIONS re: 1-A

Average Ranking Score = 8

Summarized Comments

Harbor Safety Committees were acknowledged as effective forums for improving local navigation. Since it is the central function of Harbor Safety Committees (HSCs) to evaluate navigation safety, they will continue their vigilance regarding this role. In addition, Port Access Route Studies and Ports and Waterways Safety Assessments have been - and will continue to be - useful tools for Harbor Safety Committees working with federal, state, and local authorities.. In ports where there is no established VTS, assessing risks of vessel traffic at the entrance has to be done in different ways. With AIS and shoreside AIS receiving capabilities, both VTS and non-VTS areas have increasingly better data to facilitate vessel traffic risk assessments, including at entrances. It was noted, however, that, whereas the larger ports have implemented this item, some of the smaller ports are lagging behind.

Summarized Recommendations for Further Action

- Harbor Safety Committees should be established in any ports where they do not current exist as a forum for collaborative problem-solving.
- The WCOVTRM Workgroup and the Pacific States/British Columbia Oil Spill Task Force should ensure that the safety, risk management and communications/outreach advances made in the high-volume ports are shared, as appropriate and necessary, with the smaller ports on the West Coast.

To review the detailed comments, please refer to Appendix II.

I. RECOMMENDATIONS REGARDING COLLISION HAZARDS ON THE WEST COAST

B. BASED ON THEIR SURVEY OF COASTAL TRANSITS FOR JULY OF 1998 THROUGH JUNE OF 1999, THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP FINDS THAT COASTWISE TRAFFIC DENSITY IS HIGHER ALONG THE SECTION OF THE WEST COAST BETWEEN THE STRAIT OF JUAN DE FUCA AND LOS ANGELES/LONG BEACH THAN EITHER NORTH OF THE STRAIT OR SOUTH OF LA/LB. THE WORKGROUP ANTICIPATES THAT THE PENDING AIS CARRIAGE REQUIREMENT, WHEN FULLY IMPLEMENTED, COULD SIGNIFICANTLY REDUCE ANY COLLISION HAZARD IN THESE AREAS OF HIGHER TRAFFIC DENSITY. THEY THEREFORE RECOMMEND THAT THE MARITIME AND TOWING INDUSTRY OPERATING ON THE WEST COAST CONSIDER IMPLEMENTING COMPATIBLE AUTOMATIC IDENTIFICATION SYSTEM (AIS) CARRIAGE IN ADVANCE OF THE REQUIRED SCHEDULE.

IMPLEMENTATION STATUS OF RECOMMENDATION I.B

The U.S. Coast Guard (USCG) reports that, since the publication of the final WCOVTRM report, substantial advances have been made in technology and other means to better track vessel traffic and reduce the risk of collision. Most significantly, the implementation of the Automatic Identification System (AIS) has expanded substantially. As of January 2005, AIS equipment is mandated under the Safety of Life at Sea (SOLAS) convention for carriage aboard most vessels over 300GT on international voyages. In addition to the international SOLAS requirements, the Maritime Transportation Security Act (MTSA) of 2002 mandated expanded AIS carriage requirements for vessels in US waters, generally commercial vessels over 65 feet in length and certain other vessels. Currently the implementing regulations mandate AIS carriage on these vessels only in VTS areas, but pending regulations will expand this requirement to all US navigable waters.

Since December 2004 the USCG has had the capability to receive AIS transmissions from ships to monitor their location and movement in VTS areas. Additional coverage areas have been added since then as research and development projects and to enhance maritime security. Beginning in 2006, the Coast Guard's Nationwide AIS project began installing AIS monitoring equipment in all major port and critical coastal areas of the US. The initial phase of this project will be completed by the end of 2007, and includes the majority of California, high traffic areas of Oregon and Washington, and certain areas in Alaska and Hawaii out to 24nm offshore. The complete project will provide seamless shore-based coverage out to 50nm and long range coverage out to 200nm. It will also include advanced information processing and two-way communication capabilities to enhance navigation safety and vessel monitoring. The Nationwide AIS project is expected to be completely operational by 2014.

Besides AIS, other measures have been taken or are under development to track vessel movements. In order to increase maritime security, the requirement for vessels to submit advance notices of arrival to US ports has been expanded. The International Maritime Organization (IMO) has required that vessels participate in a system of Long Range

Identification and Tracking (LRIT). LRIT will require vessels to periodically transmit their position, course and speed (and potentially other information) to their flag state, port state and, in certain circumstances, coastal state. This information would be transmitted at varying rates depending on the location of the vessel, and in conjunction with AIS will provide robust monitoring of large commercial vessel traffic off the West Coast of North America.¹

Bob Bohlman, Executive Director of the Marine Exchange of Puget Sound (now retired) and a member of the original WCOVTRM Project Workgroup, explained on 9/18/2006 that "the AIS carriage requirements were met for the most part long before the regulations went into effect. He also noted that "Certain fishing vessels are currently exempted but will be included in the next set of regulations that come out in the near future from the USCG. All vessels that operate in a USCG VTS zone must have an AIS unit in operation. While some tug boats may not be required to carry AIS, they are installing units if they occasionally operate in VTS areas.

1 USCG Press Release 4/3/2007: WASHINGTON - The U.S. Coast Guard announced today that it met the April 1 deadline mandated by the SAFE Port Act of 2006 to track all large commercial vessels within U.S. waters.

"Using the full range of classified and unclassified vessel tracking information available to the Coast Guard, we are meeting all vessel tracking requirements," said Adm. Thad Allen, Commandant of the Coast Guard. "Beyond the SAFE Port Act, we need to focus our attention on closing other gaps in maritime security, including long-range tracking of vessels outside U.S. waters and coming to grips with potential threats posed by smaller vessels. While we have done a lot since the terrorist attacks of 9/11, we need to build a maritime security architecture that does more than just simply react to the last threat or terrorist event."

The Coast Guard is working with the International Maritime Organization, the recreational boating community, small commercial vessel operators, and others to close existing gaps in maritime security to help keep American citizens safe and secure. The International Maritime Organization's long-range identification and tracking system will provide an unclassified system for tracking more than 40,000 ships worldwide by the end of 2008. The U.S. will be able to obtain tracking information for ships navigating within 1,000 nautical miles of the coast under the new system.

As part of its commitment to obtain greater awareness of potential threats in the maritime environment, the Coast Guard will be participating in a Department of Homeland Security-sponsored small vessel security summit in Washington June 19 and 20.

"We are working with our partners to identify solutions to potential issues surrounding the millions of smaller vessels that ply our nation's waters, many of which are capable of being exploited for transportation of dangerous weapons and people from other countries, or being used as weapons," said Dana Goward, director of maritime domain awareness.

Information on the small vessel security summit can be found at: http://www.uscg.mil/hq/g-m/mp/GMPWebpages/SVS/SVS_home2.shtml

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: 1-B

Average Ranking Score = 8

Summarized Comments

This should now be complete for the target vessel population, by U.S. federal requirement. Fishing vessels and larger recreational vessels are still exempt at this time, so there may be future rulemaking to cover these vessel categories. Under the SOLAS agreement AIS will be implemented for Canadian waters in 2008. MCTS centers will utilize this technology in conjunction with land based radar for vessel traffic management.

However, the domestic U.S. requirement for AIS only applies to Vessel Traffic Service (VTS) service areas. Nevertheless, most vessels to which these rules would apply, except that they are operating in other than VTS service areas, also have AIS for various reasons, including frequent transits into VTS areas. As a ship-to-ship collision avoidance tool, the system is pretty much in place.

From a shore-based tracking perspective, the U.S. Coast Guard in non-VTS areas still has a long way to go. The Maritime Information Systems of North America (MISNA), an association of the Marine Exchanges in most major port areas around the country, already has a very effective shore-based system in place for short-range tracking of AIS equipped vessels, and also has a long-range satellite based tracking system in place. This "Automated Secure Vessel Tracking System (ASVTS)" provides nearly 100 shoreside AIS receiving stations around the country with a majority of those on the west coast. The long range satellite tracking system is currently voluntary and predominating west coast, based largely on encouragement from Coast Guard District 17. Significant improvements would be possible if the Coast Guard would give some form of endorsement to ASVTS at the national level.

It was also noted that Physical Oceanographic Real Time System (PORTS) data will eventually be broadcast over AIS.

Summarized Recommendations for Further Actions

- To the extent possible, the Pacific States/BC Oil Spill Task Force should endorse ASVTS and encourage the U.S. Coast Guard to endorse it as well.
- All vessels over 26 feet should be required to carry AIS; this is especially important on the Columbia River.
- The WCOVTRM Workgroup should evaluate the status of this recommendation again in early 2009, after IMO's long-range identification and tracking system has been implemented.

To review the detailed comments, please refer to Appendix II.

I. RECOMMENDATIONS REGARDING COLLISION HAZARDS ON THE WEST COAST

C. THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT WORKGROUP FINDS THAT DIFFERENT OFFSHORE BALLAST WATER EXCHANGE STANDARDS HAVE BEEN ADOPTED BY CALIFORNIA, OREGON, WASHINGTON, AND SEVERAL CANADIAN WEST COAST PORTS. ALTHOUGH THE PROJECT WORKGROUP DID NOT FIND THAT THESE DIFFERING STANDARDS IMPOSED AN INCREASED RISK OF COLLISION OFFSHORE, THEY RECOMMEND THAT THE US COAST GUARD, IN CONSULTATION WITH FISHERIES AND OCEANS CANADA AND TRANSPORT CANADA, AND CONSISTENT WITH IMO ACTIONS, ADOPT A SINGLE SET OF PREEMPTIVE NATIONAL OR REGIONAL OFFSHORE BALLAST WATER EXCHANGE STANDARDS THAT WOULD ENHANCE THE CONSISTENCY OF [COASTWISE] NAVIGATION FOR THE PURPOSE OF BALLAST WATER EXCHANGE ON THE WEST COAST.

IMPLEMENTATION STATUS OF RECOMMENDATION I.C

The following information from the website of the West Coast Ballast Outreach Project (WCBOP) (<http://ballast-outreach-ucsgep.ucdavis.edu/>) provides an excellent summary of the status of ballast water regulations covering West Coast vessel traffic, with web links to the specific international, federal, and state program descriptions:

Ballast Management: Laws and Regulations

The United Nations International Maritime Organization (IMO) developed voluntary guidelines for ballast water management in 1997, and adopted an international mandatory ballast management regime in February 2004: The International Convention for the Control and Management of Ships' Ballast Water and Sediments. The convention will enter into force 12 months after it is ratified by 30 nations, representing 35 percent of the world shipping tonnage. ([More info...](#))

The principal U.S. legislation controlling the discharge of ballast water is the Non-indigenous Aquatic Nuisance and Prevention and Control Act of 1990 (NANPCA) as revised and reauthorized by the National Invasive Species Act of 1996 (NISA). Under NISA, all vessels carrying ballast water in U.S. waters are required to keep records and provide written information to the U.S. Coast Guard. The law also requires all vessels that enter U.S. territorial waters (with certain exemptions) to manage ballast water according to prescribed measures. Additional requirements are in place for the Great Lakes. ([More info...](#))

Three states on the West Coast of the U.S. ([California](#), [Oregon](#) and [Washington](#)) have passed mandatory ballast water exchange and management laws, which are similar to the federal law, but also include additional requirements for coastwise traffic (vessels operating in estuarine and/or ocean water within 200 nautical miles of land or less than 2,000 meters (6560 feet, 1093 fathoms) deep including rivers, lakes or other water bodies navigably connected to the ocean). Failure to comply can result in fines and/or criminal penalties. ([Summary Table](#))

Please note that the focus of Recommendation I. C is on avoiding collision hazards associated with vessels traveling coastwise crossing paths in order to comply with differing offshore ballast water exchange standards. Regarding the issue of whether the Ballast Water Exchange regulations apply to coastwise traffic, the Summary Table provided above indicates that the California, Oregon, and Washington regulations all apply to coastwise traffic. At this point in time, however, the U.S. Coast Guard regulations do not. In their October 2003 comments to the U.S. Coast Guard on their proposed Mandatory Ballast Water Management Program for US Waters, the Oil Spill Task Force urged the Coast Guard to establish an offshore ballast water exchange standard which also covers coastwise vessel traffic. To read these comments, please go to <http://www.oilspilltaskforce.org/docs/comments/BallastWater.pdf>.

For British Columbia, the "Ballast Water Control and Management Regulations" (BWCMR) pursuant to section 657.1 of the Canada Shipping Act, came into force on June 8, 2006. The BWCMR reflects the requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (the Ballast Water Management Convention) with Canadian modifications. The BWCMR is enforced by Transport Canada together with the Port State Control Inspection.

Regarding the issue of differing offshore exchange standards, Maurya B. Falkner² of the Marine Invasive Species Program in the California State Lands Commission notes that "there is no conflict among state offshore exchange requirements - Washington, Oregon and California all require 50nm from shore for coastally originating vessels. British Columbia also requires a 50nm distance. So the recommended consistency has now been achieved, at least among the West Coast states and the Canadian authorities.

Ms. Faulkner also notes that no collision or near-miss incidents have occurred as a result of these requirements. Her analysis is supported by the comments provided by the West Coast Harbor Safety Committees, which replied that they were not aware of any navigational incidents associated with vessels crossing paths at sea in order to meet coastal state ballast water exchange requirements. To review their replies, please see Appendix I, pages 34-35.

Ms. Falkner, Mark Sytsma³ of Portland State University, and Jack Wylie of the Oregon Department of Environmental Quality all reported that interstate cooperation has been good. Program representatives from California, Oregon, Washington, Alaska, and British Columbia have met to discuss ballast water management for coastwise traffic. They also met with the U.S. Coast Guard earlier this year to discuss Alternative Exchange Zone Areas for consideration under the federal program.

² Maurya Faulkner can be reached at FALKNEM@slc.ca.gov

³ Mark Sytsma can be reached at sytsmam@pdx.edu

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: 1-C

Average Ranking Score = 6.64

Summarized Comments

There are now U.S. federal ballast water regulations, although they do not address coastwise transits. Additionally, the USCG is developing ballast water discharge standards, which are essential for the certification and approval of the performance of any mandated ballast water treatment systems. Once the discharge standard is established, the USCG will publish the timeline and regulations for ships to install and operate ballast water treatment systems for all US waters.

Although California, Oregon, Washington and BC have aligned their coastal BW exchange requirements to be a minimum of 50 NM off shore and 200 meters depth (with the exception of BC that requires 500 meters depth), there are differences in how these states and province define common waters. These differences should not necessarily impact navigational risk for transiting vessels. Ideally the USCG will develop common coastal requirements, similar to language in pending federal legislation. This would provide greater uniformity and certainty for vessel crews.

It appears mariners are knowledgeable concerning state requirements. One commenter expressed the following concern regarding "a movement afoot within States to fine vessels that have not been able to exchange ballast water due to safety reasons (heavy wx, etc.). I believe that the number of vessels that have actually claimed this is very small (so it does not appear that vessels are gun decking their claims). Fining vessels for being safe appears to encourage unsafe practices, something that the BC/Pacific States Task Force does not stand for."

Summarized Recommendations for Further Action

- Encourage the USCG to adopt uniform ballast water exchange standards for coastwise transits with pre-emption over state programs.
- Continue to look at alternative methods for treating ballast water when it is unsafe to conduct an open-ocean exchange.
- Evaluate behavior of coastal traffic to see if an increased risk of collision exists based on vessels going out to only the minimum distances to exchange ballast water. Also, look to see exactly how many vessels have claimed that it was unsafe to exchange to measure size of problem.

To review the detailed comments, please refer to Appendix II.

II. RECOMMENDATIONS REGARDING HISTORIC CASUALTY FACTORS

A. THE WORKGROUP FINDS A HEAVY CONCENTRATION OF REPORTED CASUALTY POSITIONS NEAR MAJOR PORTS. THIS MAY BE ATTRIBUTED TO HIGHER TRAFFIC DENSITY IN THESE AREAS, AS WELL AS TO THE FACT THAT SHIPS CONDUCT THEIR STATUS REVIEW OF STEERING AND PROPULSION SYSTEMS 12 HOURS PRIOR TO ENTERING US WATERS. NOTING THAT THE USCG MARINE SAFETY OFFICE PUGET SOUND WORKED WITH THE PUGET SOUND STEAMSHIP OPERATORS ASSOCIATION TO DEVELOP A RECOMMENDED "STANDARD OF CARE" FOR VESSELS ENTERING PORT, THE WORKGROUP RECOMMENDS ADOPTION OF A SIMILAR STANDARD OF CARE BY OTHER WEST COAST US PORTS AND ENCOURAGES CANADIAN AUTHORITIES AND INDUSTRY TO EXAMINE THE APPLICABILITY IN WESTERN CANADIAN WATERS AS WELL.

IMPLEMENTATION STATUS OF RECOMMENDATION II.A

Replies from Harbor Safety Committees and/or the U.S. Coast Guard Sectors regarding the status of this recommendation (Appendix I, pages 35-37) indicated in some instances that they were unaware of the Recommendation, although some replies stated that it "Sounds like a good idea to add to the Harbor Safety Plan." In other instances, similar actions had been taken, as noted below:

- The San Francisco Harbor Safety Committee developed a similar standard of care after reviewing all loss of propulsion and loss of steering casualties occurring in the AOR between 2002 and 2004. The analysis focused on the various types of vessels, locations, frequency rate and overall trends. They developed a pamphlet called the "Safe Transit Program" which outlines the required tests and drills to be performed before a vessel enters port, plus a number of check list items related to the steering and propulsion systems that should be tested and maintained. They send copies of the updated pamphlet to all vessels/agents whose vessels suffered this type of casualty.
- Los Angeles/Long Beach HSC is using the San Francisco pamphlet as a template for developing a similar "Safe Transit" pamphlet.
- Port Hueneme uses the normal "pre-arrival" test required by USCG.
- The Oregon ports responded that regulations require main propulsion testing ahead and astern prior to entry into port, but they typically do not add to this requirement unless the vessel has already had a propulsion anomaly. If a vessel has had a propulsion anomaly or other steering failure, controlling factors including a required tug assist would be considered.
- For Washington ports, the referenced standard of the Harbor Safety Plan was reviewed by the HSC last year and retained without revision.
- For British Columbia, CAPT John Yeung of Transport Canada responded that "there are adequate International Conventions and Canadian legislation and regulations to govern the responsibility and duty of care to be exercised by any vessel, and we do not see there is a need to repeat such requirements in any other forms."
- Alaska ports deal with a high volume of cruise vessel traffic as well as ice conditions during winter months, both of which have resulted in specific Captain of the Port (COTP) special

operating orders as needed. The Anchorage Area of Operations (AOR) COTP is exploring the possibility of a regulatory project to codify these "standards of care" into a RNA.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: 2-A

Average Ranking Score = 7.1

Summarized Comments

It's not clear this recommendation of the WCOVTRM Workgroup provided any particular impetus for changes not already underway.

High marks, but not fully implemented. Obviously, with the model being the Puget Sound SOC as published in the Puget Sound Harbor Safety Plan, Puget Sound has essentially fully implemented the recommendation. It appears that the other ports have done something similar.

While Transport Canada does not feel it necessary to develop SOC's as they see them duplicative of other requirements, the Puget Sound Harbor Safety Plan has some application to Canadian bound vessels in that they transit U.S. waters in the Cooperative Vessel Traffic Service (CVTS).

This is an ongoing mitigation measure and should never be considered fully implemented, until the review and updates are routine, the periodic reminders communicated to the industry are routine, and the reference to the Plan by the crews of visiting vessels is routine; we're not there yet.

Summarized Recommendations for Further Action

- Because some HSCs were largely unaware of this WCOVTRM recommendation, there might be benefit in providing further outreach to them to see if they can identify any other actions to minimize casualties, emphasizing cases where possible solutions may not be within their scope of influence.
- Forward a copy of the summary survey responses to stakeholders in ports that have not pursued such Standards of Care to encourage them to consider the benefits of reviewing/adapting existing efforts for their benefit.
- Using Puget Sound's template, SOC's should be reviewed, formulated and adopted by new HSC in Portland District (covering both upper and lower Columbia River).
- One issue you may want to take a look at is the use of light fuels versus heavy fuels when transiting in port. Most of the historical losses of propulsions have occurred when switching. The testing of the engines are often really testing the ability to switch fuels. May want to look at where/when the switch should take place to decrease risk, while at the same time minimize cost to the vessel.

To review the detailed comments, please refer to Appendix II.

II. RECOMMENDATIONS REGARDING HISTORIC CASUALTY FACTORS

B. THE WORKGROUP ALSO FINDS THAT CRACKS AND FRACTURES IN TANK VESSEL CARGO TANKS WERE THE MOST COMMON TYPE OF STRUCTURAL FAILURE IDENTIFIED IN THE CASUALTY DATA. THE WORKGROUP ANTICIPATES THAT SUCH INCIDENT FREQUENCY WILL DECREASE AS NEW DOUBLE-HULL REPLACEMENTS COME ON LINE FOR THE EXISTING TRANS-ALASKA PIPELINE SYSTEM (TAPS) FLEET. THE WORKGROUP RECOMMENDS CONTINUED VIGILANT APPLICATION OF THE CRITICAL AREA INSPECTION PROGRAM (CAIP) BY THE US COAST GUARD AS THE TAPS FLEET AGES, AND ENCOURAGES TAPS TANKER OPERATORS TO CONSIDER EXPEDITED REPLACEMENT SCHEDULES.

IMPLEMENTATION STATUS OF RECOMMENDATION II.B

The USCG continues to utilize its Critical Area Inspection Program (CAIP) to assess tank vessels enrolled in the Trans Alaska Pipeline Service (TAPS) trade. Currently USCG Headquarters maintains records on CAIP inspections for 24 TAPS trade vessels. A USCG Headquarters review of 46 CAIP reports on file since 2000 revealed TAPS Tankers only had 5 Class I failures in the past 7 years. In the future, this number is expected to decrease as the older single hull tankers are replaced with the new double hulls (i.e. Alaskan Class). These new tankers (already more rigid) are being built above full scantling (mild steel construction) and are designed with much more thorough analysis than previous generation tankers.

For example, USCG Headquarters staff reported that the Alaska Tanker Company (ATC) has made large strides with fracture reduction on their four *San Clemente* Class Tankers. Based on Spectral Fatigue Analysis of *San Clemente* Class tankers in 2000, ATC made substantial modifications on these vessels which were designed to reduce the likelihood of sideshell, web frame, horizontal strut and CVK fracturing. Because of these modifications, their Class I fracturing decreased in the following 5 yrs. It appears that Class 1 and 3 fracturing (overall) did not decrease.⁴

The bar graph on the following page compares the number of Class 1, 2, and 3 fractures found in 42 separate CAIP exams on 23 different TAPS tankers from 2002 to 2006. Since not all TAPS tankers were examined during this period, this should be considered a representative sample

⁴ Class 1 Structural Failure: A fracture that occurs during normal operating conditions (i.e., not as the result of a grounding, collision, allision or other casualty damage), that is:

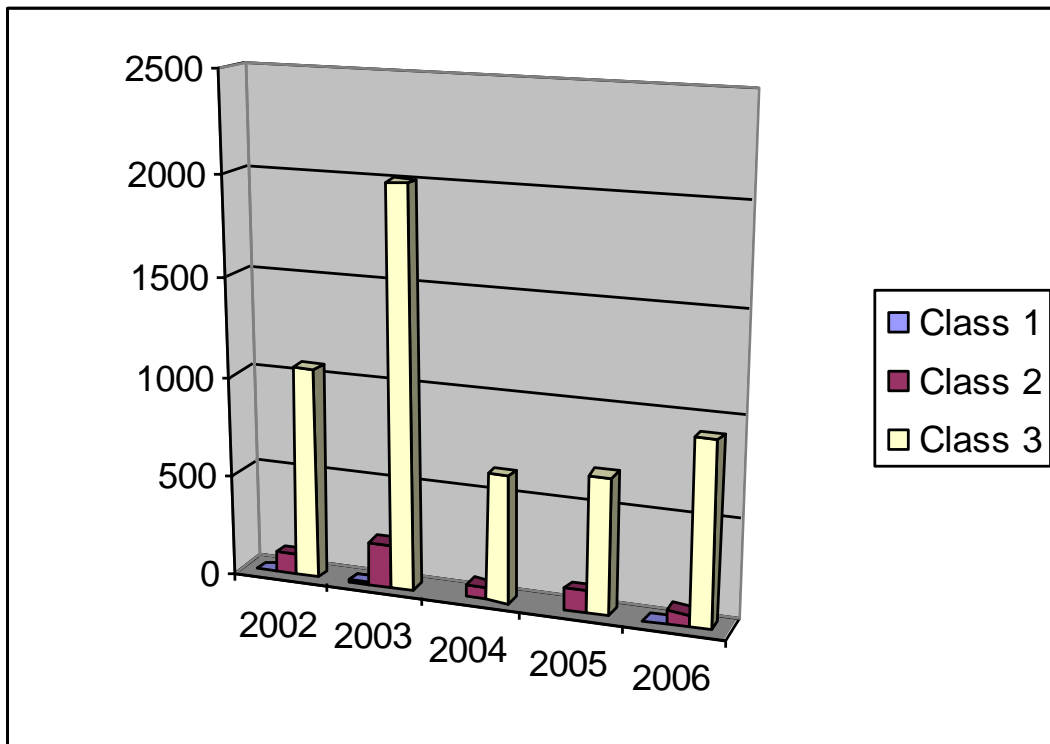
1. A fracture of the oil/watertight envelope that is visible and of any length or a buckle that has either initiated in or has propagated into the oil/watertight envelope of the vessel; or
2. A fracture 10 feet or longer in length that has either initiated in or propagated into an internal strength member.

Class 2 Structural Failure: A fracture less than 10 feet in length or a buckle that has either initiated in or propagated into an internal strength member during normal operating conditions.

Class 3 Structural Failure: A fracture or buckle that occurs under normal operating conditions that does not otherwise meet the definition of either a Class 1 or Class 2 structural failure.

Source: Enclosure (1) to NVIC 15-91, CLASSIFICATION OF STRUCTURAL FAILURES, Definitions

rather than comprehensive data. FYI, the details on the CAIP program are found in NVIC 15-91. (Go to <http://www.uscg.mil/hq/g-m/nvic/index90.htm> and scroll down to 15-91).



Transport Canada reports that, "Under our Port State Control program, governed by Paris and Tokyo MOUs and with Canadian modifications, TC Inspectors on the West Coast inspect all tankers arriving into Canadian waters, in addition to the Paris and Tokyo MOUs' requirements, at their first visit at a Canadian port, and then every 12 months thereafter. For double hull requirements, Canada follows IMO's mandatory requirements as specified in MARPOL 73/78 Annex I, Reg.19 & 20".

CAPT Laura Stratton of the Washington Department of Ecology tracks the double-hull conversion status of the of the U.S. flag TAPS fleet carrying Alaska North Slope Crude from Valdez to West Coast refineries; her report is updated regularly and is available at: <http://www.ecy.wa.gov/programs/spills/prevention/bap/TAPS%20Trade%20Tanker%20Report.pdf>

As of CAPT Stratton's April 2007 update, she noted that the average age of the 17 tankers participating in the TAPS trade is 11.1 years. Mandatory retirement dates for the remaining two tankers that are not double hull are August 2012 for the double-bottom tanker SEARIVER BAYTOWN and January 2010 for the single-hull tanker SEARIVER LONG BEACH. The retirement dates listed above are mandated under the Federal Oil Pollution Act of 1990 (OPA '90). Some companies retire their tonnage before the OPA '90 date.

Double hull requirements are also specified in MARPOL 73/78, Annex I, 13 F and 13 G.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: II-B

Average Ranking Score = 8.44

Summarized Comments

The Coast Guard has continued the inspection program to monitor the condition of TAPS fleet vessels, and exhibits good inspection standards and response to problems. It appears that the Coast Guard continues to put appropriate emphasis on this program, as it should. However, it would be wise to monitor to ensure that emphasis continues as needed and that other demands on the Coast Guard don't drain resources from this program.

It is likely the remaining single hull vessels will be replaced before the mandatory retirement date.

Summarized Recommendations for Further Action

- It is not clear from this report whether the USCG plans on finishing the CAIP exams. Perhaps it should be a WCOVTRM Workgroup recommendation that they do so, and provide a timeline/deadline, as appropriate, for the completion of the CAIP examinations.

To review the detailed comments, please refer to Appendix II.

II. RECOMMENDATIONS REGARDING HISTORIC CASUALTY FACTORS

C. THE WORKGROUP FINDS THAT FISHING VESSELS ALSO RANKED HIGH IN THE MECHANICAL/EQUIPMENT FAILURE CATEGORY. BASED UPON THE WORKGROUP'S EXAMINATION OF EXISTING AND PROPOSED PROGRAMS SPONSORED BY BOTH GOVERNMENT AND THE FISHING INDUSTRY TO IMPROVE SAFETY OVERALL, THE WORKGROUP RECOMMENDS IMPLEMENTATION OF THE US COAST GUARD'S COMMERCIAL FISHING VESSEL SAFETY ACTION PLAN. THE WORKGROUP ALSO RECOGNIZES THE STATE OF WASHINGTON'S FISHING VESSEL INSPECTION PROGRAM AS A GOOD MODEL FOR FISHING VESSEL INSPECTIONS, SINCE IT FOCUSES ON REDUCING ACCIDENTS CAUSED BY HUMAN ERROR.

IMPLEMENTATION STATUS OF RECOMMENDATION II.C

The workgroup made its recommendation that the USCG implement its Commercial Fishing Vessel (CFV) Safety Action Plan of 2001 to "improve overall safety" and did not make recommendations specifically or directly related to their goal of reducing risks of collision or drift groundings. A 10-year CFV industry casualty study conducted by the USCG and released in 2006 (<http://www.uscg.mil/hq/g-m/moa/docs/fvstudy9404.pdf>) found that out of 13 significant types of vessel casualties, groundings accounted for 17% and collision & allisions accounted for 8% (flooding and fire accounted for 55% of casualties and are the current areas of focus).

With regard to implementation of the USCG CFV Safety Action Plan, all recommendations were either implemented or attempted. Improvements to crew emergency training & enforcement as well as vessel stability & watertight integrity were included as part of CFV safety regulation revisions (the Notice of Proposed Rulemaking (NPRM) is due out in 2007).

Improvement in casualty analysis is ongoing through a joint national project with the National Institute of Occupational Safety and Health. Efforts with fishery management to lower casualties resulted in shifting high risk seasonal derby fisheries to safer individual quotas. Repeated attempts to introduce legislation to require safety exams failed. Final regulations for AIS carriage requirements exempted fishing vessels. Improved communications with the industry is producing a variety of initiatives and continues to be championed by the Commercial Fishing Vessel Safety Advisory Council (CFIVSAC).

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: II-C

Average Ranking Score = 7.125

Summarized Comments

All proposals in the Action Plan have been implemented or attempted. Port-specific actions were taken, including more effective promotion of the dockside examination decal; increased focus on high risk fisheries; better boarding officer training and improved communication between industry and the USCG. Longer term actions such as mandatory licensing and inspection have failed to gather sufficient support from Congress.

Acceptance of voluntary exams is not upward trending, however. Some F/V masters feel that it does not preclude fewer boardings at sea. Targeted efforts such as OPERATION SAFE CRAB, etc. are getting the word out, but those vessels that are operating at the margin may want to risk a boarding at sea rather than deal with voluntary requirements up front.

While it appears attempts have been made to implement all aspects of the subject plan, efforts must be continued toward further reduction in fishing vessel casualties. Although the collision statistics are relatively low, any number of collisions is unacceptable. AIS should be required on fishing vessels, and from a domestic standpoint, AIS should be required in all waters of the U.S.

Summarized Recommendations for Further Actions

- The WCOVTRM Workgroup should revisit the status of this item in another 3-5 years, to see if implementation of CG CFV safety regulation revisions and the CFIVSAC initiatives have been successful.
- Market voluntary exams - get States and Canada to play along by encouraging safe operation of the F/V fleet.
- The WCOVTRM should emphasize the importance of AIS on all commercial vessels, or at least all vessels over a certain size, in all waters, not only as an effective collision avoidance tool, but also an effective security tool.

To review the detailed comments, please refer to Appendix II.

III. RECOMMENDATIONS REGARDING RESCUE TUG AVAILABILITY ON THE WEST COAST

A. BASED ON A 2000-2001 INVENTORY, THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP FINDS THAT APPROXIMATELY 182 OCEAN-GOING TUGS OPERATE OUT OF WEST COAST "HOME PORTS." OF THESE, 77 WERE FOUND TO BE CAPABLE OF SEVERE WEATHER RESCUES. THE PROJECT WORKGROUP FURTHER FINDS THAT THE CAPABILITY OF POTENTIAL RESCUE VESSELS ON THE WEST COAST HAS IMPROVED GREATLY IN RECENT YEARS WITH THE CONSTRUCTION AND PLACEMENT OF NUMEROUS STATE-OF-THE-ART TUGS WITH GREATER HORSEPOWER, MANEUVERABILITY AND TECHNOLOGICALLY ADVANCED EQUIPMENT. THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP CONDUCTED AN ANALYSIS OF THE RESPONSE TIMES OF THESE 77 RESCUE TUGS FROM THEIR HOME PORTS UNDER BOTH AVERAGE AND WORST CASE WIND CONDITIONS, ASSUMING THAT A DISABLED VESSEL IS DRIFTING TOWARDS SHORE AND NO OTHER MEANS IS AVAILABLE TO STOP ITS DRIFT. THIS ANALYSIS DEFINED RESPONSE TIME CONTOURS UNDER BOTH AVERAGE AND WORST-CASE WIND CONDITIONS. WHERE THE TUG AVAILABILITY RISK FACTOR IS HIGH DUE TO A LACK OF READILY AVAILABLE SEVERE WEATHER RESCUE TUGS AS IDENTIFIED BY OUR TUG HOMEPORT ANALYSIS, THE WORKGROUP RECOMMENDS CONSIDERATION BY LOCAL JURISDICTIONS OF SEVERAL MEASURES OR COMBINATIONS OF MEASURES TO REDUCE THAT RISK, INCLUDING INVESTMENT IN A DEDICATED RESCUE TUG, CREATION OF A STAND-BY TUG FUND, OR ADOPTION OF REGULATIONS REQUIRING RESCUE TUG CONTRACTS HELD BY VESSEL OPERATORS.

IMPLEMENTATION STATUS OF RECOMMENDATION III.A

U.S. Coast Guard actions regarding rescue tug capability:

On May 10, 2002 the Coast Guard published a Notice of Proposed Rulemaking (NPRM) titled "Salvage and Marine Firefighting Requirements; Vessel Response Plans for Oil; Proposed Rule," which addressed requirements in 33 CFR Part 155 for vessel owners/operators to identify and ensure the availability of salvage and marine firefighting resources. During the comment period, the Coast Guard received over 104 separate written comments, consisting of over 480 pages of text, in addition to transcripts of the four public meetings held. The rulemaking can be accessed at www.uscg.mil/vrp. Alternatively, the docket for this rulemaking can be accessed at: <http://dms.dot.gov/search/searchFormSimple.cfm> (search under number 3417). This rulemaking, previously in the Office of Response (G-MOR), has moved to the Office of Vessel Activities (G-PCV). In a March 2007 report to API's Spills Advisory Group, the USCG reported that all comments have been addressed and incorporated in the the Final Rule for Salvage and Marine Firefighting Requirements; Vessel Response Plans for Oil.

The USCG also noted that current vessel response plan regulations require the owners or operators of vessels carrying Groups I through V petroleum oil as a primary cargo to identify in their response plans a salvage company with expertise and equipment, and a company with

firefighting capability that can be deployed to a port nearest to the vessel's operating area within 24 hours of notification (Groups I-IV) or a discovery of a discharge (Group V). On January 23, 2004, a notice of suspension was published in the Federal Register, suspending the 24-hour requirement scheduled to become effective on February 12, 2004, until February 12, 2007 (69 FR 3236). The Coast Guard has decided to extend this suspension period for another two years to allow the them to complete the rulemaking that will revise the salvage and marine firefighting requirements. This extension is effective as of February 12, 2007. Termination of the suspension will be on February 12, 2009.

Activities in West Coast States and British Columbia regarding rescue tug capability:

Alaska:

- The Alyeska Pipeline Company maintains escort tugs for laden tankers departing Prince William Sound, and a rescue tug is kept on standby at Hinchinbrook Entrance.
- The Alaska Department of Environmental Conservation and U.S. Coast Guard are working on a multi-stage risk assessment of maritime transportation in the Bering Sea and the Aleutian Archipelago. This effort is being driven by the December 8, 2004 grounding and subsequent oil spill from the [M/V Selendang Ayu](#), along with other marine casualties in the region. The first step in this long-term risk assessment and mitigation strategy was a Ports and Waterways Safety Assessment (PAWSA) conducted in Anchorage on July 24-25, 2006. The PAWSA report is available at: http://www.dec.state.ak.us/spar/perp/ai_risk/aleutian_islands_finalrpt.pdf. The PAWSA focused on the region surrounding Dutch Harbor and Unimak Pass. Future work may expand the risk analysis to include the entire Aleutian Island Chain. Ultimately, the PAWSA and other planning assessments will become part of a comprehensive risk mitigation strategy for the region. More information on this project, as well as a link to the *Vessel Traffic in the Aleutians Subarea: Updated Report to the Alaska Department of Environmental Conservation (September 20, 2006)*, are available at: http://www.dec.state.ak.us/spar/perp/ai_risk/ai_risk.htm.
- Another project in the Aleutians is the Emergency Towing System project. Following the near grounding of the *Salica Frigo* on March 9, 2007, the Mayor of Unalaska convened a Disabled Vessel Workgroup to discuss issues and proactive solutions, which prompted the ETS workgroup. The goal of the workgroup is to develop an emergency towing capability for disabled vessels in the Aleutians subarea utilizing locally available tugboats and an emergency towing system. Emergency towing equipment and trained personnel stationed in Unalaska will decrease response time and may preclude a disabled vessel from grounding. The ETS consists of a towline capable of towing a distressed vessel, a messenger line to assist in deploying the towline, a line-launcher, a buoy, and chaffing gear. The ETS may be deployed to a disabled ship from the stern of a tugboat or airdropped to the deck of the ship via helicopter. Two ETS will be purchased to cover most vessels found in the Aleutian Islands. The City of Unalaska has purchased a system suitable for vessels up to 50,000 DWT and the Alaska Department of Environmental Conservation is purchasing a system capable of towing vessel greater than 50,000 DWT. For more information, go to <http://www.dec.state.ak.us/spar/perp/aiets/home.htm>.

- The Cook Inlet Regional Citizens Advisory Council announced on July 31, 2007 that Tesoro Alaska is working with Crowley Marine Services to tailor a new tractor tug to meet Cook Inlet conditions and will keep the vessel in the region year round. Tesoro had brought a tug to Cook Inlet earlier this winter to assist oil tankers at the KPL dock in Nikiski and initially considered sending it away after the sea ice receded. The new tug, the *Vigilant*, is a 6700 horsepower tug designed for ship assist, docking, and escort. The *Vigilant* utilizes a Z-Drive propulsion system that gives the vessel increased maneuverability. Tesoro has also asked for additional hull strengthening and other modifications to deal with Cook Inlet's severe ice conditions.

British Columbia:

- There are no initiatives underway in British Columbia to assess the need for a dedicated rescue tug for the outer coastline. Traffic off the coast of Vancouver Island and in the outer Straits of Juan de Fuca benefits from the dedicated tug at Neah Bay, when it is on station.
- The Canadian Coast Guard notes that Canada utilizes commercial contracts or vessels of opportunity when required. Regulatory and industry contingency planning are the responsibility of Transport Canada.
- As a tanker port in Kitimat, British Columbia, is being developed for use by VLCCs, a TERMPOL study is underway by Transport Canada to assess the risks and give recommendations⁵. According to Phil Nelson, Executive Director of the Council of Marine Carriers in British Columbia, escort tugs for that area would likely be new-builds with enhanced capabilities likely to qualify them for offshore rescue work.

Washington:

- Jon Neel of the Washington Department of Ecology stated in a September, 2006 issue paper that "In an effort to help manage risk, a [state] government-funded rescue tug has been stationed at Neah Bay on a seasonal basis since early 1999. The tug helps to reduce the risk of major maritime accidents and oil spills by providing emergency towing and initial salvage services to protect the Strait of Juan de Fuca and the outer coast, in one case going as far south to the mouth of the Columbia River. In 2003, the Legislature passed SB 6072 and established the Vessel Response Account (VRA) to fund the rescue tug. The funding source is vehicle title transfer fees. Certain vessel-related oil spill penalties are also deposited in the VRA. The funding has been used to station a seasonal rescue tug from mid-September until the funding (approximately \$1.5 million) has been spent each year. Normally funding runs out in May. The VRA will sunset on June 30, 2008 unless it is extended by the legislature. The rescue tug has responded to 29 vessel incidents to date." More information on the Neah Bay tug can be found at:
<http://www.ecy.wa.gov/programs/spills/hottopics/RESCUE%20TUG%20Summary/tugresponsemainpage.htm>.

⁵ Here is the link to Transport Canada's Publication # 743 on TERMPOL matters:
<http://www.tc.gc.ca/MarineSafety/TP/Tp743/menu.htm>

- The Washington Oil Spill Advisory Council's October 2006 *Report Providing Recommendations to the Governor, the Legislature, and the Department of Ecology* included the following recommendation from the Council's Tug Technical Advisory Committee: "The Council recommends that there be a fully funded, year-round 'Straits and coastal Waters Prevention Response/Rescue Tug,' at or near Neah Bay, Washington. The Council also recommended establishing a 'Contingency Tug Fund' of \$1,000,000 per biennium to be managed by Ecology. This fund would enable Ecology to periodically place as-needed response/rescue tugs, in [other] strategic locations. For example, if bad weather is coming, placing temporary protection in key areas could be critical to preventing storm-related incidents that could lead to large oil spills." The Washington Oil Spill Advisory Council's full report is available at: <http://www.governor.wa.gov/osac/report/default.htm>.
- USCG Pacific Area notes that USCG District Thirteen commissioned a study entitled "Regulatory Assessment - Use of Tugs to Protect Against Oil Spills in the Puget Sound Area", which was completed in November 1999. This study provides a comprehensive overview of some of the issue surrounding rescue tugs, standby-by tugs etc. They also note that funding for rescue tugs continues to remain a contentious issue.

Oregon:

- In 2000, the *New Carissa* Review Committee (NCRC) recommended that "...the State of Oregon examine the cost-effectiveness of maintaining adequate salvage resources for rapid deployment to the scene of stranded vessels threatening to discharge a hazardous substance into Oregon waters." A 2002 status review of the NCRC recommendations noted that the status on this recommendation was "No progress."
- USCG Sector Portland reports that they conducted several meetings with salvage personnel from the private and public sector in order to determine the degree to which rescue tugs/salvage tugs were available on Oregon and Washington's outer coast in July 2006. Currently there are no tugs dedicated to deep draft commercial vessel rescue, therefore the availability of any suitable tug capable of forestalling a vessel from going aground continues to be dependent on their location. Given that vessels continue to lose power off the Oregon and Washington coasts (for example, in 2006 there were 3 deep draft casualties which threatened Oregon and Washington coastlines in Sector Portland's Area of Operation alone). CAPT Patrick Gerrity, Commander of Sector Portland, raised his concerns at the September 2006 Northwest Area Committee and RRT 10 meeting. He questioned whether, since nearly eight years have passed since the "New Carissa" oil spill, we were more prepared to respond today to such a crisis. He noted that many reports were written following the "New Carissa" accident but it was unclear how far anyone has gotten in implementing any of the reports' recommendations. CAPT Gerrity proposed that the RRT/Area Committee form a Work Group to examine the 45 recommendations of four key reports (see table, page 51) to determine the status of the recommendations. The RRT/Area Committee agreed to form a Work Group and to complete their report by July 2007.
- Sector Portland notes that a cursory review of primary sources the Work Group will examine reveals a surprising recurrence of recommended actions after the *M/V New Carissa* incident. The reports cover a six-year period. In the four reports cited in the table on page 51 there are 45 recommendations for consideration:

- 3 Recommendations from The "Crisis on the Coast" the Federal On Scene Coordinator's Report and Assessment of M/V NEW CARISSA Oil Spill Response (June 1999)
- 10 Recommendations from the New Carissa Review Recommendations and Status for the State of Oregon (Feb 2002)
- 18 Recommendations from The Pacific States/British Columbia Oil Spill Task Force report on West Coast Offshore Vessel Traffic Risk Management (July 2002)
- 14 Recommendations: Responding to Terrorist Attacks in U.S. Ports—Actions to Improve Readiness; A Report of the Committee for Marine Salvage Response Capability: A Workshop (Aug 2003). Transportation Research Board (TRB), National Academy of Sciences.

California:

- For vessels carrying oil as cargo, California's Oil Spill Contingency Plan regulations state that the plan must demonstrate sufficient salvage capability as outlined in Section 818.02 (m) (2). This includes:
 - (B) Availability of the following salvage equipment and services shall be demonstrated by sufficient in-house capability or a signed, valid contract with a salvage company or program. Any company or program secured by contract must have the appropriate expertise, and all required equipment ready and available to respond in the timeframes specified in this section. Timeframes are determined from the time the Coast Guard is notified that the vessel is disabled.
 1. within 12 hours of notification;
 - (i.) a support vessel of the appropriate size, configuration, and operating capability to ensure stabilization of a disabled vessel. The support vessel must be capable of reaching the vessel before the vessel would run aground. In determining the time it would take for a vessel to run aground, an estimate shall be made based on the drift rate in the worst case weather assuming the complete loss of power and steering.
- California's Oil Spill Contingency Plan regulations for nontank vessels carrying oil as fuel set the same requirements in Section 827.02 (n)(2)(B)(i).

Harbor Safety Committee or the U.S. Coast Guard Sector Survey Replies

In some cases the port-specific replies to our survey indicated that this issue had not been considered. In other cases, there are port-specific circumstances which provide for rescue tug coverage. For instance, they reported that, in addition to tugs that handle the routine vessel movements in San Diego, the Navy has five tractor tugs primarily for U.S. Navy vessel movements, which would be able to assist in emergency situations. Likewise, escort tugs are routinely on station outside the Golden Gate Bridge awaiting inbound tankers, and there are always tugs transiting in the central San Francisco Bay which could respond to an emergency.

Activities reported for the Oregon and Alaska ports are covered above. In addition to the information above regarding Washington, their survey reply noted that the Harbor Safety Committee's Heavy Weather Standard of Care was developed and adopted to minimize marine risk across a broad spectrum in the anticipation of heavy weather. This Standard of Care includes discussion about the appropriate use of assist tugs using a risk-based approach.

For the complete answers from these USCG offices or Harbor Safety Committees to our survey regarding this WCOVTRM Recommendation, please refer to Appendix I, pages 37-39.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: III-A

Average Ranking Score = 6.33

Summarized Comments

In some areas this has been studied extensively and arrangements have been implemented. Washington is fully engaged at the entrance to the Straits, but not at any other location. [The commenter is] not sure if the entrance is more important than the Columbia River entrance or Haro Strait/Boundary Pass. There is some concern about the availability of rescue tugs along the Oregon Coast. Ports with tug escort requirements appear to have sufficient tugs.

The Coast Guard has issued a rulemaking to require salvage company response within 24 hours, but the rule has been suspended until February 2009. Until the CG salvage and marine firefighting requirements are completed, it will be difficult to evaluate whether tug numbers and capabilities are sufficient.

The Coast Guard needs to complete the salvage and firefighting regulations required under OPA 90. The continued delay of these regulations is unacceptable. Also, the regulations regarding vessel response plans for non-tank vessels need to be completed; they are already a couple of years past due. The latter will likely spread the cost of the salvage and fire fighting regulations over all of the deep draft vessels operating in the U.S.

Beyond that, if it is still believed that specific dedicated response tugs are necessary, local action may be appropriate. State funding of such resources may be necessary should those resources still be considered necessary after implementation of the salvage and firefighting regulations.

Summarized Recommendations for Further Action

- This recommendation needs continued tracking by the WCOVTRM Workgroup, and a status check in 3-5 years.
- The WCOVTRM Workgroup should look at a better break down of data where there are standby tugs. WA DOE and the CG are developing a protocol on the deployment of the tug that will include some type of metrics. Data should be collected and studied for actual responses including: Actual propulsion condition of the disabled vessel; Time to potential grounding; Time/Distance of next best tug; Actual action of the Response Tug (passed wire, escort, stand by).
- The Task Force should formally support the promulgation of USCG salvage and firefighting regulations as soon as possible. Similar measures should be taken by the Canadian Coast Guard.
- An update by the Task Force of the tug inventory and response times would also serve to give a better picture of the situation today.
- Use AIS data to assess tug distribution and to provide real time identification of available tugs (leverage ITOS with AIS).

To review the detailed comments, please refer to Appendix II.

III. RECOMMENDATIONS REGARDING RESCUE TUG AVAILABILITY ON THE WEST COAST

B. THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT WORKGROUP FINDS THAT THE INTERNATIONAL TUG OF OPPORTUNITY SYSTEM (ITOS), WHICH OPERATES IN THE US/CANADIAN TRANSBOUNDARY WATERS OF THE STRAIT OF JUAN DE FUCA AND PUGET SOUND, AND WHICH COVERS THE COASTLINE OF BRITISH COLUMBIA AS WELL, PROVIDES INFORMATION ON THE POSITION AND BASIC CAPABILITIES OF OCEAN-GOING TUGS. THE WORKGROUP FINDS THAT IT WOULD BE BENEFICIAL TO ENHANCE TUG POSITION AND CAPABILITY INFORMATION COASTWISE. THE WORKGROUP RECOGNIZES THAT INTERNATIONAL MARITIME ORGANIZATION (IMO) MANDATED AIS CARRIAGE, AS WELL AS US DOMESTIC REQUIREMENTS FOR AIS CARRIAGE, SHOULD BE IN PLACE FOR TUGS NO LATER THAN 2007, OR 2004 AS CURRENTLY PROPOSED BY THE US. THE WORKGROUP THEREFORE RECOMMENDS THAT THE US COAST GUARD EVALUATE WHETHER THE INFORMATION TO BE AVAILABLE THROUGH AIS CARRIAGE WILL PROVIDE EQUIVALENT OR BETTER TUG POSITION AND CAPABILITY INFORMATION THAN THAT PROVIDED BY ITOS. IF SO, THE US COAST GUARD SHOULD TAKE STEPS TO ENSURE THAT THIS INFORMATION ON TUG POSITIONS IS MADE AVAILABLE TO ALL CAPTAINS OF THE PORT ON THE WEST COAST. IF NOT, OR IF THE CARRIAGE REQUIREMENTS ARE NOT IMPLEMENTED BY 2007 AT THE LATEST - OPTIMALLY BY 2004 - WE RECOMMEND THAT THE US COAST GUARD CONSIDER PLACING TRANSPONDERS ON OCEAN-GOING TUGS NOT ALREADY CARRYING THEM, AND ADDING SIGNAL RECEIVING STATIONS AS NEEDED TO ESTABLISH A COASTWISE NETWORK FOR INFORMATION ON OCEAN-GOING TUG LOCATIONS.

IMPLEMENTATION STATUS OF RECOMMENDATION III.B

The ITOS system has been superseded by other more advanced/capable vessel tracking systems such as AIS, VTOSS, ASVTS and other similar systems. AIS is a requirement since December 31, 2004 for tugs of at least 26 feet in length and more than 600 horsepower operating in commercial service in VTS areas. While there is good AIS coverage of Puget Sound and its approaches, AIS is not yet required on tugs operating outside of Coast Guard VTS areas, such as the Columbia River or parts of Alaska. The new USCG tug regulations may change that, however, the NPRM is not yet out, so the compliance dates are unknown. As previously noted, however, many tugs home-ported in a non-VTS area have installed AIS in order to operate in other areas on the West Coast with VTS.

Maritime Information Services of North America Marine Domain Awareness System (MISNA MDA) provides information that includes the location and identity of participating vessels and tugs en route and operating in U.S. waters. This Automated Secure Vessel Tracking System, or ASVTS, initially deployed at the Marine Exchanges of Puget Sound, Baltimore and Alaska, provides an XML web-based solution to collect, analyze and integrate applicable data from a variety of dissimilar sources. MISNA MDA is an integrated data gateway that can serve both

government and non-government subscribers. West Coast Marine Exchanges participating include Alaska, San Francisco, Puget Sound, Portland, the Marine Exchanges of Southern California, and the British Columbia Chamber of Shipping.

MSNA has installed and operates over 100 AIS receiving stations around the U.S. providing over 250,000 square miles of Maritime Domain Awareness. In the Pacific, over 50 AIS receiving sites have been established in Alaska, Washington, Oregon, California and Hawaii; all of these signals are received and processed by the Marine Exchange of Alaska's operations center in Juneau, Alaska. There are still some gaps in AIS coverage along stretches of the Oregon Coast south of Tillamook, along sections of the California coastline between major ports as well in Alaska in the Bering Sea and other remote regions of Alaska's vast maritime coast.

Some West Coast U.S. Coast Guard Sectors subscribe through their local Marine Exchange but the U.S. Coast Guard does not use this system to track vessel movements along the entire West Coast, or to monitor compliance with either voluntary or IMO approved recommended routes.

It's worth noting that AIS provides about 30% coverage of our near coastal waters (30 miles out) and about 10% coverage of waters out to 200 miles. The only worldwide solution in the near future (next 10 years) is the use of satellite technology such as the ASVTS system. Ed Page, Executive Director of the Alaska Marine Exchange, feels that there can be operational benefits for vessels voluntarily participating in Long Range Identification and Tracking - such as increased efficiencies - that easily lead to this technology paying for itself. He notes: "The question is...who pays the cost (approximately \$4/day) and what regulatory tool or incentive is used to obtain participation? I think the Coast Guard could provide an incentive for participating by providing relief from the ETA updates of Advance Notice of Arrival regulations that have led to numerous penalties and delays to the marine industry and the enforcement practice of turning vessels back to sea compromises safety, environmental protection and efficiency of maritime operations. Another option is for States and or the Coast Guard to pay for the system." (9/18/06 email)

On May 19, 2006, the International Maritime Organization (IMO) announced that governments party to the Safety of Life at Sea (SOLAS) convention had agreed to new rules for tracking ships by satellite; the rules are scheduled to come into force on 12/31/08. Not only will ships flagged by these governments have to carry approved equipment to transmit their identify, location, date, time, and position information via satellite, but the participating governments will also be required to implement required vessel enrollment, funding and software systems. Full implementation of the LRIT program will not be completed until 2010 unless delays, which are anticipated, materialize.

The USCG Pacific Area notes that Congress has indicated a desire for the USCG to consider tracking systems - such as the Alaska Secure Vessel Tracking System - for nationwide implementation.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: III-B

Average Ranking Score = 7.7

Summarized Comments

ITOS no longer exists as an independent system; however, the U.S. flag ocean going tugs are all AIS equipped. AIS is tracked by the Coast Guard where it has coverage and by the Marine Exchanges. However, AIS is only mandatory in VTS areas. AIS provides about 30% coverage of near coastal waters out to 30 miles, and about 10% coverage to 200 miles. AIS shore-side reception is expanding and should continue to provide better tug tracking data.

The Coast Guard itself does not have full coastwise AIS coverage, however. The Coast Guard and others can get and should be getting such coverage from the Marine Exchanges that currently cover all the west coast, including Alaska and Hawaii, except for some soon-to-be filled small gaps between major port entrances. The coverage by the Marine Exchanges routinely reaches out about 50 miles offshore and at times can see beyond a 100 miles. The shore-side AIS tracking display still needs to be colorized or otherwise filtered for the quick and distinct identification of the tugs. This is already in place in some locations and should be added elsewhere soon.

Although satellite technology could be used to expand coverage of existing areas, there are issues concerning who would pay for the additional costs and how to obtain participation in the system.

Summarized Recommendations for Further Action

- AIS coupled with satellite based ID systems will provide total coverage. Some carriers are already participating in such systems for proprietary tracking of their fleets. Information contained in AIS signals can include important data (towing/not, cargo, laden/not, etc.). More work needs to be done to fully leverage and better support this technology with useful data embedded in the transmission.
- The WCOVTRM should emphasize the value and importance of public/private partnerships. MISNA has much to offer to the Coast Guard in short and long range tracking. At the field level the partnerships are in place because the field personnel appreciate the value of the MISNA capabilities to the work they do; however, there is much work to do to break the unexplained barriers at the national level.
- The shore-side AIS tracking display still needs to be colorized or otherwise filtered for the quick and distinct identification of the tugs. This is already in place in some locations and should be added elsewhere soon.
- Re-evaluate after the [salvage and firefighting] rules come into effect.

To review the detailed comments, please refer to Appendix II.

IV. RECOMMENDATIONS REGARDING THE DISTANCE OFFSHORE RISK FACTOR

THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP FINDS THAT THE RISK OF A GROUNDING/COLLISION GENERALLY INCREASES THE CLOSER A VESSEL TRANSITS TO SHORE. USING A RELATIVE RANKING/RISK-INDEXING MODEL THAT INCORPORATED NINE RISK FACTORS THE WORKGROUP MAPPED AREAS OF HIGHER RISK ALONG THE WEST COAST OF CANADA AND THE UNITED STATES. THE RESULTING HIGHER RISK AREAS WERE GENERALLY 25 MILES FROM LAND ALONG THE ENTIRE WEST COAST, EXCEPT AT ONE POINT OFF SOUTHEAST ALASKA WHERE IT EXTENDED TO 50 NM, OFF NORTHWEST BC WHERE THE AREA EXTENDED TO 100 NM OFFSHORE, AND OFF POINT ARGUELLO IN CALIFORNIA WHERE IT EXTENDED TO 50 NM OFFSHORE. THE WORKGROUP FINDS THAT VESSELS TRANSITING WITHIN THESE HIGHER RISK AREAS HAVE A GREATER POTENTIAL FOR A GROUNDING DUE TO ONE OR MORE OF THE RISK CRITERIA THAN IF THEY TRANSITED OFFSHORE OF THESE AREAS.

A. THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP RECOMMENDS THAT, WHERE NO OTHER MANAGEMENT MEASURE SUCH AS AREAS TO BE AVOIDED (ATBAS), TRAFFIC SEPARATION SCHEMES (TSS), OR RECOMMENDED TRACKS ALREADY EXIST, VESSELS 300 GROSS TONS OR LARGER TRANSITING COASTWISE ANYWHERE BETWEEN COOK INLET AND SAN DIEGO SHOULD VOLUNTARILY STAY A MINIMUM DISTANCE OF 25 NAUTICAL MILES (NM) OFFSHORE. VESSELS TRANSITING SHORT DISTANCES BETWEEN ADJACENT PORTS SHOULD SEEK ROUTING GUIDANCE AS NEEDED FROM THE LOCAL CAPTAIN OF THE PORT OR VTS AUTHORITY FOR THAT AREA. NOTHING IN THESE VOLUNTARY MINIMUM DISTANCE OFFSHORE RECOMMENDATIONS IS INTENDED TO PRECLUDE A VESSEL MASTER FROM TAKING PRUDENT ACTION FOR THE SAFETY OF THE VESSEL AND ITS CREW.

B. FOR THE SAKE OF CONSISTENCY WITH EXISTING AGREEMENTS, THE WORKGROUP FURTHER RECOMMENDS THAT, WHERE NO OTHER MANAGEMENT MEASURES SUCH AS AN ATBA, TSS, TANKER EXCLUSION ZONES, OR RECOMMENDED TRACKS ALREADY EXIST, TANK SHIPS LADEN WITH CRUDE OIL OR PERSISTENT PETROLEUM PRODUCTS AND TRANSITING COASTWISE ANYWHERE BETWEEN COOK INLET AND SAN DIEGO SHOULD VOLUNTARILY STAY A MINIMUM DISTANCE OF 50 NM OFFSHORE. NOTHING IN THESE VOLUNTARY MINIMUM DISTANCE OFFSHORE RECOMMENDATIONS IS INTENDED TO PRECLUDE A VESSEL MASTER FROM TAKING PRUDENT ACTION FOR THE SAFETY OF THE VESSEL AND ITS CREW.

C. THE WORKGROUP FURTHER RECOMMENDS THAT THESE VOLUNTARY MINIMUM DISTANCES OFFSHORE BE COMMUNICATED TO MARINERS BY PLACING THE TEXT OF THESE RECOMMENDATIONS IN THE COAST PILOT AND SAILING DIRECTIONS FOR THE WEST COAST, AND ALSO BY PLACING NOTES ON THE APPROPRIATE NAUTICAL CHARTS, TO BE REPEATED AT HEADLANDS, WHICH INDICATE THE VOLUNTARY MINIMUM DISTANCES OFFSHORE AND REFER THE MARINER TO THE COAST PILOT AND SAILING DIRECTIONS FOR FURTHER DETAILS.

IMPLEMENTATION STATUS OF RECOMMENDATIONS IV. A, B, & C

Pursuant to the recommendations above, USCG Pacific Area staff worked with the Task Force and NOAA's Coast Pilot Branch in 2003 to insert the following notes on navigation charts and entries into Coast Pilot editions 7, 8, and 9:

- Language inserted into the appropriate US Coast Pilot editions for Alaska, and the West Coast waters from Washington to California:

"Based on the West Coast Offshore Vessel Traffic Risk Management Project, which was co-sponsored by the Pacific States/British Columbia Oil Spill Task Force and U.S. Coast Guard Pacific Area, it is recommended that, where no other traffic management areas exist such as Traffic Separation Schemes, Vessel Traffic Services, or recommended routes, vessels 300 gross tons or larger transiting along the coast anywhere between Cook Inlet and San Diego should voluntarily stay a minimum distance of 25 nautical miles offshore. It is also recommended that tank ships laden with persistent petroleum products and transiting along the coast between Cook Inlet and San Diego should voluntarily stay a minimum distance of 50 nautical miles offshore. Vessels transiting short distances between adjacent ports should seek routing guidance as needed from the local Captain of the Port or VTS authority for that area. This recommendation is intended to reduce the potential for vessel groundings and resulting oil spills in the event of a vessel casualty."

- Chart Note (at major headlands):

"The U.S. Coast Guard and the Pacific States/British Columbia Oil Spill Task Force endorse a system of voluntary measures and minimum distances from shore for certain commercial vessels transiting along the coast anywhere between Cook Inlet, Alaska, and San Diego, California. See U.S. Coast Pilot X Chapter 3 for details."

PLEASE NOTE: These statements can currently be found in NOAA's Coast Pilot as follows: Coast Pilot 7, Chapter 3, page 261/262 of the 2007 edition; Coast Pilot 8, Chapter 3, page 127 of the 2006 edition; and Coast Pilot 9, Chapter 3, page 115 of the 2006 edition.

Transport Canada had agreed in 2002 to work with the Canadian Coast Guard to place the following language on charts and the Sailing Directions for the waters of Western Canada:

Language inserted into Canadian Sailing Directions, British Columbia Coast (South portion Vol.1 and North portion Vol.2.) Pilot editions:

"Based on the West Coast Offshore Vessel Traffic Risk Management project, which was co-sponsored by the Pacific States/British Columbia Oil Spill Task Force and U.S. Coast Guard Pacific Area, it is recommended that, where no other traffic management areas exist such as Traffic Separation Schemes, Vessel Traffic Services, or recommended routes, vessels 300 gross tons or larger transiting along the Canadian West coast should voluntarily stay a minimum distance of 25 nautical miles offshore. Tankers transiting along the Canadian West Coast should refrain from operating in the Tanker Exclusion Zone."

Language suggested for notes on appropriate Canadian West Coast Charts at major headlands:

"A system of voluntary measures and minimum distances from shore for commercial vessels transiting along the Canadian West coast exists. Consult Canadian Sailing Directions, Northern Portion Vol.2 or Southern Portion Vol.1 for details."

The USCG Pacific Area reports on compliance indicate that most vessels do seem to stay outside 25 nm along stretches of the California coastline, except for areas around major headlands, where vessel track lines tend to move closer to shore. The USCG has not undertaken a specific study at this time to ascertain laden tank ship or tank barge compliance with these voluntary distance offshore recommendations.

PLEASE NOTE: The Workgroup recognized that laden tank barges operated by members of the American Waterways Operators have agreed to a voluntary policy of transiting at least 25 miles offshore of the US West Coast. The Council of Marine Carriers in British Columbia has committed to a similar voluntary policy for its laden tank barges transiting in the open ocean off the West Coast of Canada, but also maintains the longstanding practice of tugs seeking refuge in the many inlets available along the BC coastline which may be the safer action under certain circumstances.

[WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: IV.A](#)

Average Ranking Score = 8.7

Summarized Comments

These recommendations have been added to the Coast Pilot and NOAA charts. Most vessels seem to stay outside 25nm on a voluntary basis, except for areas around major headlands. The occasional deviation from the recommended 25nm offshore distance from headlands could be problematic. The reasons for such deviation have not been identified.

AIS tracking would provide documentation of this. MISNA may soon have the capability to not only track these vessels real time but also provide historical trackline analysis. As an example, observance of the ATBA at the Olympic Coast National Marine Sanctuary is nearly 100%. On very rare occasion, a cargo vessel unknowingly passes through the ATBA. Letters to owner/operator of these vessels jointly from the Coast Guard and NOAA have reportedly been very effective in improving appropriate observation. Also, there are vessels that transit along the boundary of the ATBA and some occasionally veer into the ATBA for short periods, sometimes to avoid meeting traffic. The use of AIS has been much more effective at identifying these minor entries into the ATBA.

Tank Barge Operators are maintaining the 25-mile line. By directing self-propelled non-tank cargo vessels into the same waters, however, an increase in collision potential is possible.

Summarized Recommendations for Further Action

- The WCOVTRM Workgroup should continue to work with the USCG on issues related to deviation from recommended offshore distances around the headlands. CG should be asked to identify why maintaining minimum distances from some of the headlands is proving problematic for vessel operators: due to insufficient notice on charts and Coast Pilot? Vessel operator concern over lost time in using the offshore recommended track? What is the position of the P&I Clubs to this information, and do they have a way to better outreach on "consequences" of spills to their members? Can CG identify the vessels transiting closer than 25 nm? Are just a handful of vessels or companies responsible for most incidences of non-compliance?
- The USCG may want to check vessel behavior when National AIS tracking comes on line. The Marine Exchanges may be able to help right now. Also, has risk of collision increased with everyone at the same minimum distance of 25nm?

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: IV.B

Average Ranking Score = 8.7

Summarized Comments

These recommendations have been added to the Coast Pilot and NOAA charts. This appears to have been addressed to the extent of the Task Force [i.e., Workgroup] recommendation, although it's not clear how much CG monitoring is assuring us of this, versus company reports.

Summarized Recommendations for Further Action

- The WCOVTRM Workgroup should consider asking the USCG what monitoring frequency and tools they are using to assure compliance with the voluntary agreements, and open the discussion again of whether USCG efforts are sufficient, or our reliance on company reports on compliance is too great.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: IV.C

Average Ranking Score = 9.67

Summarized Comments

This recommendation has been implemented and appears to be effective.

Summarized Recommendations for Further Action

- We need to know the "why" of why some vessels are transiting closer than the voluntary recommended distances around headlands. If it's due to unclear (or unread) chart and Coast Pilot notes, then there will need to be text fixes and further outreach to mariners.

To review the detailed comments, please refer to Appendix II.

V. RECOMMENDATIONS REGARDING DATA IMPROVEMENTS

A. THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP FINDS THAT, DUE TO THE CONFIGURATION OF THE DATABASES CURRENTLY IN USE BY US AND CANADIAN FEDERAL AGENCIES, INFORMATION ON CAUSE AND OUTCOME OF CASUALTIES IS DIFFICULT TO EXTRACT. THE WORKGROUP NOTES THAT THE US COAST GUARD AND THE CANADIAN TRANSPORTATION SAFETY BOARD ARE REVISING THEIR VESSEL CASUALTY DATABASES, AND RECOMMENDS THAT THEY REDESIGN THESE SYSTEMS TO ALLOW FOR IMPROVED ACCESS TO INFORMATION ON BOTH THE CAUSES AND OUTCOMES OF REPORTED INCIDENTS. THE WORKGROUP FURTHER RECOMMENDS THAT THE MEMBER AGENCIES OF THE PACIFIC STATES/BRITISH COLUMBIA OIL SPILL TASK FORCE IMPLEMENT THEIR AGREEMENT TO INCLUDE CAUSAL INFORMATION IN THEIR OIL SPILL INCIDENT DATABASES AND TO SHARE THAT INFORMATION ON A COASTWISE BASIS.

IMPLEMENTATION STATUS OF RECOMMENDATION V. A

The USCG Pacific Area notes that "the previous USCG marine safety database (Marine Safety Information System (MSIS)) suffered a series of catastrophic and unplanned failures in December 2001 and was replaced with a new system called Marine Information for Safety and Law Enforcement (MISLE). MISLE has significantly enhanced user functions and search capability, through a series of tools and associated products such as the Mission Analysis and Reporting System (MARS), CG Business Information (CGBI), and other tools, allowing for enhanced data search and retrieval by field units. CG units at all levels can generate on-demand reports for a variety of missions, including casualties, however data searches and queries must be deliberately thought out as search results are based on input parameters that can significantly skew data if not properly defined."

Ken Potter, the Acting Director of Investigation - Marine Transportation Safety Board (TSB) of Canada, responded to our inquiry regarding this recommendation as follows: "Of the approximately four thousand transportation occurrences (marine, rail, air, or pipeline) reported to the TSB every year, approximately one hundred are investigated, with the aim of identifying and communicating safety deficiencies. An individual occurrence will be investigated when there is high probability that an investigation will advance Canadian transportation safety, meaning there is significant potential for reducing future risk to persons, property or the environment.⁶ Most of our occurrence data (ie., Class 5 occurrences) were reported by transportation industry operators. Therefore, our marine occurrence database will contain little or no information about the causes of those occurrences not investigated by the TSB (or information about the safety deficiencies which led to the occurrences).

[We note that] the Task Force found that the configuration of the TSB marine occurrence database made information on cause and outcome difficult to extract, and therefore

⁶ (http://www.tsb.gc.ca/en/investigation_process/what_we_do.asp)

recommended that our database systems be redesigned. However, we were unable to find support for that recommendation elsewhere in the Task Force report. The report does not cite a TSB data source (e.g., TSB MARSIS database), and does not describe any data extraction methodology. The only reference to the Transportation Safety Board (of Canada) is in the finding and recommendation itself. Although Appendix G (of the WCOVTRM 2002 Report) contains data tables for the west coast of US and Canada, it does not cite a data source. Furthermore, data as to occurrence cause may have been unavailable for a different reason than that stated by the Task Force. TSB staff extracts data from our databases in response to requests from other TSB investigators, from government staff external to the TSB, from transportation industry stakeholders, from researchers and reporters, and from members of the general public." (EDITOR'S RESPONSE: Mr. Potter is accurate in noting that our data used in Appendix G does not cite source; it was compiled by the USCG Pacific Area with input from Workgroup members, including the Canadian Coast Guard. Also, the 2002 Project Workgroup relied on its members' recommendation that the Canadian TSB and the USCG would be the appropriate recipient agencies for this recommendation.)

The Pacific States/British Columbia Oil Spill Task Force debuted its regional oil spill database for spill data in our 2003 Annual Report; each subsequent year our Annual Report has included a compilation of regional data from the prior year as well as a trend analysis. The data are developed and compiled by representatives from each Task Force Member agency. This Database Workgroup was chaired by Jack Barfield of the Washington Department of Ecology from 2003 through August of 2006. Camille Stevens of the Alaska Dept. of Environmental Conservation took over as Chair at that time. The British Columbia Ministry of Environment is developing a spill database and plans to contribute to the Task Force database as soon as possible.

Our ongoing goal is continuous improvement of this database in order to provide information on spill trends and causal factors; this allows us to better target our spill prevention efforts. Consistent with this goal, the Data Project Workgroup has recently completed updates and revisions to our Data Dictionary, now available at:

<http://www.oilspilltaskforce.org/docs/datadictionary.pdf>

The Database Workgroup endeavors to refine data submittals consistent with the Task Force Data Dictionary, with particular emphasis on reducing the amount of data categorized as "other" or "unknown" to no more than 5% in any category. It is an ongoing challenge to refine information entered into the database to a level of specificity that supports effective analysis while also conforming to the varied investigation capabilities of Task Force member agencies. The Task Force does sponsor DNV investigator training courses for our member agencies every two years.

Spill data from 2002 - 2005 are available in the Annual Reports on the Task Force website at www.oilspilltaskforce.org. According to the data, vessels accounted for approximately 10% of the total spill volume reported in 2002, but 56% of that was from one spill in Hawaii, which is outside of the geographic area of the WCOVTRM project. In 2003, vessel spills represented a

lower percentage of non-crude product spilled than those from facilities and vehicles; there were no crude spills from vessels. In 2004, vessels as a source accounted for 6% of the non-crude spilled. Crude oil spilled in 2004 was only 0.3% of the total volume, and none was from vessels. In 2005, vessels were the source of 7% of the non-crude oil spilled; no crude was spilled from vessels. 2006 data indicates that vessels were the source of 5% of non-crude spills and no crude spills. The primary causes of spills each year, for all sources, have been human error and equipment failure. For 2002 - 2006, vessels accounted for 434,166 gallons of all products spilled, or 17%.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: V.A

Average Ranking Score = 6.89

Summarized Comments

It appears that through efforts in the US and Canada, data systems have been improved. The creation of the Task Force database provides uniform data searches and when the BC Ministry of Environment provides their input to this database it will cover the areas intended by the Task Force. The U.S. Coast Guard has developed a new data base that contains information on oil spill incidents and casualty data. The data base is also used for several other types of information, so search queries must be well-defined to ensure accurate information is obtained.

The U.S. NTSB and the Canadian Transportation Safety Board data were not addressed, but they do release findings in report form which are made available to public.

We have source data, but States/CG data is not harmonized and better broken down into categories to direct mitigation strategies. This is one of the action items on the State of Washington/USCG Strategic Work Plan. It also seems that there is still work to do getting all current (and historic) records up to date and evaluated. The state and Federal agencies need to reconcile and coordinate their common data.

Summarized Recommendations for Further Action

- This recommendation is also worth continued tracking and a status update to the WCOVTRM Workgroup in another 3-5 years. The database developments of the past 5 years are only now starting to bear fruit, and it is still too early to judge whether or not further database developments or changes will need to be recommended.
- Standardize metrics across States in conjunction with the CG.
- Continue with Oil Spill Task Force Annual Reports and post in a timely manner.

To review the detailed comments, please refer to Appendix II.

V. RECOMMENDATIONS REGARDING DATA IMPROVEMENTS

B. THE WORKGROUP ALSO RECOMMENDS THAT THE US AND CANADIAN COAST GUARDS WORK WITH THE WEST COAST STATES AND MARITIME INDUSTRY TO FURTHER INVESTIGATE THE CAUSES OF PAST VESSEL INCIDENTS AND CASUALTIES ON THE WEST COAST OVER A PERIOD OF NOT LESS THAN FIVE YEARS.

IMPLEMENTATION STATUS OF RECOMMENDATION V. B

Replies to our survey of Harbor Safety Committees and the U.S. Coast Guard Sectors regarding any incident investigations they had undertaken generally described their procedures and experiences. Where Harbor Safety Committees operate, the local U.S. Coast Guard routinely presents them with reports of incidents and near-misses for discussion of the "Lessons Learned."

Several Harbor Safety Committees cited examples of actions taken as a result of these reviews; for example, the San Francisco HSC developed guidance after examining incidents of loss of propulsion or steering during approaches to their port, as well as with incidents of containers or equipment falling on bunker barges. In working on the loss of propulsion and steering issue, they did note that an earlier joint review by the Marine Exchange, the HSC, the USCG MSO, and California Department of Fish & Game OSPR identified many of the same concerns related to loss of propulsion casualties between 1996 and 2000.

The USCG in Washington State noted that "since 2002, Coast Guard investigation cases have been maintained in the MISLE database. Each case includes detailed causal and outcome information." The San Francisco HSC reported, however, that "the standard MISLE product sets did not allow for the quick identification of possible causal factors," so "data system improvement recommendations were passed along to CGHQ soon afterwards."

For the complete answers from these USCG offices or Harbor Safety Committees to our survey regarding this WCOVTRM Recommendation, please refer to Appendix I, pages 40-42.

The USCG Pacific Area responded that "This study has not been initiated, however USCG Pacific Area has initiated conversation with the USCG Headquarters Office of Investigations and Analysis (CG-3PCA), Compliance Analysis Division (CG-3PCA-2) to discuss ways to better analyze marine safety information and casualty data to ensure we remain informed of the latest status and trends in casualty data. CG-3PCA-2 remains the primary conduit for requesting casualty and enforcement data not available to field units via MISLE/MARS/CGBI "cubes." That Division is also working on developing a Casualty and Compliance Feedback System."

Ken Potter, Acting Director of Investigation - Marine Transportation Safety Board of Canada, responded that "From 1995 to now, the TSB has undertaken 36 Class 2 or Class 3 investigations of shipping accidents involving vessels greater than 300 GT occurring off the west coast of Canada (In addition, nine Class 2 or Class 3 investigations involved four accidents aboard ship,

three incidents, and two life boat accidents.) Five of those investigations have resulted in the TSB's issuance of a total of fourteen safety recommendations to date."

No comprehensive investigations into all past incidents have been undertaken by any of the Pacific States/British Columbia Oil Spill Task Force member agencies, but there are examples of geographically-targeted analyses being undertaken, as follows:

- Alaska DEC undertook an analysis of all oil and hazardous material spills in the Aleutians Subarea from 7/1/95 to 6/30/05. The analysis covers annual and monthly trends, immediate cause, product, and source data. As a source, vessels accounted for 47 % of the number of spills and 88% of the total volume. Causal data is not broken down for vessels only. The studies are available at http://www.dec.state.ak.us/spar/perp/ai_risk/ai_risk.htm.
- The Washington Department of Ecology has provided data on past incidents for the Cherry Point Risk Assessment, for which BP has contracted with a research team to conduct a study supporting the Environmental Impact Assessment (EIS) for the expansion of the Cherry Point terminal. The study will analyze the effects on oil spill risk resulting from the incremental increase in vessel traffic projected to call at the Cherry Point facility over the next twenty years. Based upon the risk analysis, the study could go on to evaluate potential risk mitigation measures to address environmental impacts. Study methods would include:
 - Modeling all vessel traffic (not just vessels carrying crude oil and petroleum products) and changes in vessel traffic along the entire pathway followed by vessels between Cherry Point and Buoy J, to include vessels calling in British Columbia, and vessels calling at existing and proposed marine terminal facilities in the Cherry point area.
 - Consideration of the impact of human and organizational error on the likelihood of accidents and the effectiveness of risk reduction interventions.
 - Utilization of prior studies that examined various aspects of maritime risk in Washington State waters.
- Also in Washington, the state's Oil Spill Advisory Council has contracted for a report titled *Causal Analysis of Vessel-Related Incidents and Oil Spills in the State of Washington Occurring November, 1993 through December, 2006*. The study was conducted to identify the primary and secondary causes of vessel-related incidents and spills. Reports identifying the contributing (or causal) factors for vessel related spills and incidents were received from the Washington Department of Ecology for 94 vessel-related incident investigations between November 1993 and December 2006. Of these 94 reports, 50 resulted in spills. The investigation reports primarily involved incidents on cargo, fishing and tank vessels. Among the report's findings for all spills and incidents was that "The principal root cause for mishaps is the organizational/management failure related to policies or procedures." A draft report, which was presented to the Council in July, 2007, is available at http://www.governor.wa.gov/osac/meetings/20070719/Causal_Analysis_Report.pdf.
- California OSPR is developing an Incident Tracking Database System to provide OSPR with information for statistical evaluation to support program planning, drills and exercise training and development, and various administrative applications. January 1, 2007 is the target date for full statewide implementation of the system. The study covers California marine waters only, and focuses on California's five major harbors (Humboldt Bay, San

Francisco Bay, Port Hueneme, Los Angeles/Long Beach Harbor and San Diego Bay) and their approaches. Initial data for calendar year 2006 involving 110 vessel casualties were collected through California's five Harbor Safety Committees. Preliminary findings indicate that the majority of vessel casualties involve propulsion failures (44). Of these, the preponderance (25) takes place during inbound transits with air start system failures (8) being the leading cause of failure. Propulsion failures are followed by allisions (15), steering failures (11), groundings (7), collisions (6), fires (5), close-quarters situations (4), and vessel sinking (2). A miscellaneous category includes sixteen incidents. An in-depth analysis of these casualties and possible mitigation measures is presently being undertaken. The study is continuing.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: V.B

Average Ranking Score = 6

Summarized Comments

Although databases are in place, we need to see all the historic data loaded before we can determine if this recommendation has been fully achieved. Although the CG has not conducted a comprehensive analysis of [historic] casualty data, individual casualties are investigated to determine causes and identify possible recommendations for preventing future casualties.

We are not aware of any effort to conduct additional US and Canadian incident analysis with state agencies or the industry beyond the case by case summaries provided to the HSCs or in forums like the Cooperative Vessel Traffic Service Joint Coordinating Group made up of a US/Canadian contingent. U.S. and Canadian federal agencies investigate incidents envisioned by this recommendation. The primary responsibility for improved historical analysis of that data should rest with those agencies as opposed to being duplicated by state or local efforts.

Summarized Recommendations for Further Action

- Once all historic data are loaded, the WCOVTRM should recommend that agencies analyze the data to determine whether the databases are capable of providing status and trend reports.
- Expectations/requests with regard to reporting causes of incidents and casualties and trends should be conveyed in very specific terms so the agencies can consider modifying current reports and/or generating trend analysis.
- Continue to pursue incident tracking system, and tap into the Puget Sound Vessel Traffic Risk Assessment data (Cherry Point study).
- Consider referring this recommendation to the Transportation Safety Boards in both the U.S. and Canada.

To review the detailed comments, please refer to Appendix II.

V. RECOMMENDATIONS REGARDING DATA IMPROVEMENTS

C. THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT WORKGROUP RECOMMENDS THAT THE US AND CANADIAN COAST GUARDS COORDINATE WITH MARINE EXCHANGES AND OTHER APPROPRIATE ORGANIZATIONS TO IMPROVE COAST-WISE DATA COLLECTION PROCEDURES COVERING VESSEL MOVEMENTS IN ORDER TO PROVIDE MORE DETAILED AND STANDARDIZED INFORMATION REGARDING VESSEL TYPES, CARGO, ROUTING, AND PORTS OF ORIGIN. FUTURE IMPLEMENTATION OF AIS CARRIAGE SHOULD BE EVALUATED AS A POTENTIAL SOURCE OF DATA FOR THIS PURPOSE.

IMPLEMENTATION STATUS OF RECOMMENDATION V. C

No response has been received from the USCG Pacific Area regarding the status of actions on this recommendation.

David Heap, Superintendent, Marine Communications and Traffic Services, Canadian Coast Guard, Pacific, replied as follows on 1/22/07: "Two initiatives were implemented in 2002 to support the exchange of information between US and Canadian authorities: First, the US Coast Guard (USCG) VTS Puget Sound was provided with Canadian vessel transit near-real-time data through the Vessel Traffic Management Information System (VTMIS) internet client server. Secondly, using the same system, the USCG Puget Sound VTS began to transfer its vessel transit data for the contiguous waterway of Juan de Fuca Strait to Canadian authorities. These installations enable the exchange of fused vessel traffic data bi-laterally. The USCG is responsible to liaise with the Marine Exchanges in the US, and likewise, the CCG works with the Ports and shipping agents in Canada."

The Maritime Information Services of North America Marine Domain Awareness System (MISNA MDA), uses ASVTS, and is maintained by a network of marine exchanges nationwide. As noted above, participating West Coast Marine Exchanges include Alaska, San Francisco, Puget Sound, Portland, the Marine Exchanges of Southern California, and the British Columbia Chamber of Shipping.

Their system is capable of generating both real-time and summary reports on coastwise vessel transits. Individual U.S. Coast Guard Sectors subscribe through their local Marine Exchanges, but the U.S. Coast Guard Pacific Area has not utilized this system to track or compile information on vessel movements along the entire West Coast.

The Maritime Global Net issued the following article on 20 March 2007:

THE US-based Marine Exchange of SoCal (MESC) which is a member of MISNA (Maritime Information Service of North America) has called on the US Coast Guard to speed up a decision on establishing a partnership with MISNA to implement long range vessel tracking. MISNA which has 13 members has had a long-range, satellite-based, vessel tracking system in place for over four years now. A statement says "MISNA has succeeded in developing this unique program - called "ASVTS" (for Automated and Secure Vessel Tracking System) - and which has proven to be

reliable, effective, and cost efficient. It adds: "MISNA has been negotiating with the USCG for over three years now in an effort to establish with them a "partnership pilot project" for tracking vessels long-range, and in keeping with the congressional mandates that have set a deadline of April 1st, 2007, for implementing long-range tracking of ships calling at U.S. ports. While USCG officials at their DC Head quarters have expressed interest in MISNA's ASVTS program, they have not taken any steps to finalize the proposed "partnership" with MISNA." MISNA says it has verified that there are more than 80,000 vessel arrivals reported at the various seaports around the US each year, including over 6,000 in Southern California

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: V.C

Average Ranking Score = 7.7

Summarized Comments

Coast Guard Sectors subscribe to this information through local Marine Exchanges. Tracking is done at the local level, but MISNA and USCG have not completed their work to develop an effective regional partnership for implementing long-range tracking of ships calling at U.S. ports.

Summarized Recommendations for Further Action

- The balky progress of the MISNA and USCG partnership suggests that the WCOVTRM will need to continue tracking this issue, ask for periodic status updates, and may need to create opportunities to help this effort make more effective and timely progress.
- Evaluate the data used for the Puget Sound Vessel Traffic Risk Assessment.

To review the detailed comments, please refer to Appendix II.

VI. RECOMMENDATION REGARDING IMPLEMENTATION REVIEW
THE WEST COAST OFFSHORE VESSEL TRAFFIC RISK MANAGEMENT PROJECT
WORKGROUP RECOMMENDS THAT THE PACIFIC STATES/BC OIL SPILL TASK FORCE
WORK WITH THE US AND CANADIAN COAST GUARDS IN 2007 TO REVIEW THE STATUS
OF IMPLEMENTATION AND EFFICACY OF THE FINAL RECOMMENDATIONS FROM THIS
PROJECT.

IMPLEMENTATION STATUS OF RECOMMENDATION VI

In recognition of this recommendation, the Pacific States/British Columbia Oil Spill Task Force adopted a Task in their 2006-2007 Annual Work Plan which outlined a process and timeline to conduct this five-year review. Rick Holly of the Office of Spill Prevention and Response (OSPR) of the California Department of Fish and Game, who had served as the initial Project Co-Chair, and Mr. Steve Danscuk of the USCG Pacific Area, agreed to work with Jean Cameron, the Task Force Executive Coordinator, as Co-Chairs on this project. They reviewed the Recommendations and assigned responsibility to provide status reports.

Since several of the WCOVTRM recommendations were directed to Harbor Safety Committees or their equivalents in West Coast ports, this team drafted a survey which Rick Holly distributed to the California Harbor Safety Committees and which Steve Danscuk distributed through the USCG Sectors in Oregon, Washington, and California. The replies to this survey are summarized in this report and can also be found in Appendix I.

The WCOVTRM Review Project Co-Chairs and the Task Force Coordinating Committee members were provided a copy of the draft report for their review and comment in April, 2007. In May of 2007, the current draft is being submitted to the original members of the WCOVTRM Project Workgroup, or their current replacements, for review and comment. The Workgroup members were asked to submit edits and comments, as well as numerical rankings of the status of implementation and efficacy, plus any further recommendations for action.

This draft final report will be re-submitted to the 2007 WCOVTRM Project Workgroup for their review. A conference call will be convened to facilitate final decisions regarding Recommendations for Further Actions. At that point, a Final Report will be provided to the Pacific States/British Columbia Oil Spill Task Force Members as well as to appropriate U.S. or Canadian agencies, and will also be posted on the Oil Spill Task Force's website.

WORKGROUP RANKING, COMMENTS, AND FURTHER RECOMMENDATIONS re: VI

Average Ranking Score = 8.78

Summarized Comments

The Executive Coordinator and Co-Chairs have compiled a comprehensive report for the five year review. It provides a thorough report on the status of the recommendations from the 2002 final project report.

Some further outreach by the WCOVTRM Workgroup might be necessary, for example to HSCs, on some of the recommendations of the first five years that still need some work in order to be considered fully implemented. There also needs to be continued involvement and input from the CG on vessel tracking and monitoring issues, and from all agencies collecting vessel risk, casualty and spill information, to make sure it is analyzed for risk management and spill mitigation trends.

Summarized Recommendations for Further Action

- Continue tracking progress of key recommendations that have not yet been fully implemented ... perhaps as a focused status/update check on those particular issues by the WCOVTRM Workgroup in another 3-5 years.

To review the detailed comments, please refer to Appendix II.

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Section 3:
DRAFT RECOMMENDATIONS FOR FURTHER ACTION
Pursuant to the Five Year Implementation Review of the
West Coast Offshore Vessel Traffic Risk Management Project

I. RECOMMENDATIONS TO IMPROVE NAVIGATION SAFETY AND AVOID VESSEL CASUALTIES	
Recommendations	Target Date
A. Noting that Harbor Safety Committees provide an effective forum for collaborative maritime safety and security problem-solving, and that their Standards of Care may improve navigation safety at port entrances, the WCOVTRM Workgroup recommends that the Pacific States/British Columbia Oil Spill Task Force member agencies work with the USCG Captains of the Port, maritime industry, and other stakeholders to establish Harbor Safety Committees in any West Coast commercial ports where they do not currently exist.	Ongoing
B. In order to ensure that Best Practices for navigation safety developed by any one Harbor Safety Committee (HSC) are communicated to other West Coast HSCs as models, the WCOVTRM Workgroup recommends that the Pacific States/British Columbia Oil Spill Task Force serve as a clearinghouse for this information by posting links to West Coast HSC websites/Best Practices on its own website, and work with HSCs to encourage them to consider the benefits of reviewing/adapting existing Standards of Care as appropriate.	1/2009
C. The WCOVTRM Workgroup recommends that, as part of its outreach to Harbor Safety Committees on the West Coast, the Pacific States/British Columbia Oil Spill Task Force draw their attention to the survey responses compiled in Appendix I of this 5-Year Implementation Review report.	11/2008
D. Recognizing the value of AIS carriage for collision avoidance, and noting that the U.S. Coast Guard and Transport Canada continue to refine AIS carriage requirements, the WCOVTRM Workgroup recommends that the USCG and Transport Canada require AIS carriage on all vessels of 65' or longer operating in all navigable waters, independent of VTS systems. The Pacific States/British Columbia Oil Spill Task Force should communicate this recommendation to the U.S. Coast Guard and Transport Canada.	ASAP 11/2008
E. The WCOVTRM Workgroup recommends that the USCG, Transport Canada, Harbor Safety Committees, and the Oil Spill Task Force member agencies maintain aggressive outreach campaigns to recreational boaters regarding the Rules of the Road and the value of voluntary AIS carriage for collision-avoidance.	Ongoing
F. Acknowledging that current legislative and regulatory proposals include provisions for coastwise ballast water exchange regulations, the WCOVTRM Workgroup nevertheless encourages the Pacific States/British Columbia Oil Spill Task Force to continue its advocacy for uniform ballast water exchange standards for coastwise transits, and encourages the U.S. Coast Guard to adopt such standards as soon as possible. The WCOVTRM Workgroup also recommends that the USCG should continue to look at alternative methods for treating ballast water when it is unsafe to conduct an open-ocean exchange.	Ongoing as needed

I. RECOMMENDATIONS TO IMPROVE NAVIGATION SAFETY AND AVOID VESSEL CASUALTIES, continued:	
Recommendations	Target Date
G. The WCOVTRM Workgroup recommends that West Coast Harbor Safety Committees consider the potential navigation safety impacts and unintended adverse consequences of propulsion losses associated with fuel switching recommendations developed to meet air quality standards.	As needed
H. The WCOVTRM Workgroup recommends that the USCG complete the CAIP exams on all TAPS tankers, and consider continuing the program for the double-hull TAPS tankers. If this program is not continued, the WCOVTRM Workgroup recommends that all TAPS operators utilize Critical Area Assessment programs provided by their Classification Societies.	As needed
I. The WCOVTRM Workgroup recommends that the States, the Province of British Columbia, and both the U.S. and Canadian Coast Guard continue to promote fishing vessel safety through regulations, voluntary standards, and aggressive education programs.	Ongoing

II. RECOMMENDATIONS REGARDING RESCUE TUG AVAILABILITY	
Recommendations	Target Date
A. The WCOVTRM Workgroup recommends that the Pacific States/British Columbia Oil Spill Task Force formally support the expedited promulgation of USCG salvage and firefighting regulations. The Workgroup further recommends that the U.S. Coast Guard coordinate with Transport Canada to harmonize these regulations, and that the Oil Spill Task Force advocate for adoption of similar salvage/firefighting regulations by Transport Canada.	11/2008 ASAP
B. The WCOVTRM Workgroup recommends that the U.S. Coast Guard/American Waterways Operators (AWO) Regional Quality Steering Committee (on which the Oil Spill Task Force is represented) update the West Coast tug inventory (Appendix H of the 2002 WCOVTRM Report), including data needed to determine tug suitability for offshore vessel rescues in worst-case weather conditions.. Such an update should include provisions for ongoing maintenance to keep the inventory current.	1/2010
C. The WCOVTRM Workgroup recommends that the Washington Department of Ecology and the USCG District 13 collaborate to develop data fields to quantify metrics on rescue tug deployment, including but not limited to: actual propulsion condition of the disabled vessel; time to potential grounding; time/distance of next best tug; and actual action of the Response Tug (passed wire, escort, stand by). Once developed, these data fields should be provided as a model for other West Coast jurisdictions.	8/2008
D. The WCOVTRM Workgroup finds that AIS coupled with satellite-based ID system, such as MISNA's ASVTS system, provides comprehensive offshore vessel tracking coverage, which some tug and barge operators are already using to track their fleets. Information contained in AIS signals can include important data (towing/not, cargo, laden/not, etc.). The WCOVTRM Workgroup recommends that more work be done to fully leverage this technology with useful data embedded in the transmission. The WCOVTRM Workgroup further recommends that the Pacific States/British Columbia Oil Spill Task Force member agencies work with their local USCG Districts to facilitate usage of the MISNA system as appropriate to augment existing vessel and tug tracking systems for the purpose of emergency tug deployment.	As soon as possible and ongoing thereafter

III. Recommendations regarding tracking compliance with recommended Vessel Transit Distances Offshore	
Recommendations	Target Date
A. The USCG continues to build out and enhance its nationwide AIS receiving and tracking capabilities, and is actively working with the International Maritime Organization (IMO) to develop and implement a Long Range Identification and Tracking (LRIT) system (see Federal Register - 72 FR 56600 dated 03 October 2007 for a Notice of Proposed Rulemaking for domestic LRIT implementation). The WCOVTRM Workgroup recommends that, until the USCG's AIS and LRIT systems are fully developed, and as needed to fill any information gaps in the current system, the USCG Pacific Area should utilize the most appropriate systems available to periodically check vessel compliance with the Workgroup's 2002 Distance Offshore Recommendations.	ASAP
B. The WCOVTRM Workgroup further recommends that MISNA develop its data reporting capabilities in order to provide data every six months regarding compliance with the offshore distances by vessel size and cargo type, according to the 2002 recommendations (tank vessels carrying persistent product and non-tank vessels 300 GT or larger).	12/2009
C. The WCOVTRM Workgroup further requests that Transport Canada add language to the Sailing Directions for Western Canada as soon as possible in order to implement the 2002 Recommendations regarding voluntary distances offshore.	ASAP

IV. Recommendations regarding Data Improvements	
Recommendations	Target Date
A. The WCOVTRM Workgroup recommends that the Pacific States/British Columbia Oil Spill Task Force track work done by Washington State and USCG District 13 to harmonize state and USCG oil spill data collection and entry protocols, and consider it a model for all Task Force states, if appropriate. The WCOVTRM Workgroup further recommends use of the Task Force Data Dictionary by U.S. and Canadian federal agencies, as well as coordinated investigator training.	Ongoing
B. The WCOVTRM Workgroup recommends continuous improvements in the causal information provided in both the Task Force regional oil spill database and the USCG and Canadian oil spill and vessel casualty databases.	Ongoing
C. The WCOVTRM Workgroup recommends that both U.S. and Canadian federal agencies and the Task Force member agencies continue to pursue incident tracking systems, and tap into the Puget Sound Vessel Traffic Risk Assessment data (Cherry Point study).	Ongoing, and upon completion of Cherry Point study.
D. The Washington State members of the WCOVTRM Workgroup should track the current study by the Washington Oil Spill Advisory Council of past vessel casualties in Washington waters as a possible model for retroactive analysis.	Upon completion of the study
E. The WCOVTRM Workgroup recommends that the Pacific States/British Columbia Oil Spill Task Force request causal data from the U.S. and Canadian Transportation Safety Boards for all vessel incidents on the West Coast from 1997 through 2007.	1/2009
F. In coordination with recommendation I-D above (that the Pacific States/British Columbia Oil Spill Task Force advise the USCG to require AIS carriage on all vessels 65' or longer operating in all navigable waters, independent of VTS systems), the WCOVTRM Workgroup also recommends that the Task Force advise the USCG to require Advance Notice of Arrival information which includes Last Port of Call and Next Port of Call information. The WCOVTRM Workgroup notes that this improved information on coastwise transits which can be derived from such LPOC/NPOC information would be useful for proposed maritime traffic air-quality impact studies.	1/2009

V. Recommendations regarding further Implementation Reviews	
Recommendations	Target Date
A. The Task Force Executive Coordinator shall report on the implementation status of these 2008 Recommendations at each Annual Meeting of the Pacific States/British Columbia Oil Spill Task Force.	Annually
B. The WCOVTRM Workgroup should conduct a full Five-Year Implementation Review regarding the status of both the 2002 and 2007 Recommendations.	2013

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APPENDIX I
Survey Replies from USCG offices or Harbor Safety Committees
Regarding the status of WCOVTRM Recommendations

This Appendix presents the replies received from the California Harbor Safety Committees or from the U.S. Coast Guard Sectors in Oregon, Washington, and Alaska. Where sources were named they have been cited below:

[Below are port-specific replies from West Coast Harbor Safety Committees and/or the U.S. Coast Guard regarding Recommendation 1A, that Harbor Safety Committees or their equivalents in West Coast ports continuously monitor this risk and evaluate the need for enhanced traffic safety systems at their port entrances.](#)

San Diego Harbor Safety Committee: *The San Diego Harbor Safety Committee (SDHSC) continually looks at any need for enhanced traffic safety systems, based on whatever incidents and/or reports are brought to the attention of the SDHSC. We don't have any formal evaluations.*

USCG San Diego:

- *The Regulated Navigation Area (RNA) for San Diego Bay, Mission Bay and their entrances was established on a permanent basis in December 2005. The main intent of the RNA was to give the Captain of the Port greater situational awareness over all vessels 100 GT or greater intending to enter, depart or navigate within San Diego or Mission Bay. While the RNA was established as an added security measure it also serves to increase navigational safety, since applicable vessels must obtain permission from the Captain of the Port to enter, depart or move within the port.*
- *The U. S. Coast Guard Waterway Analysis Management System (WAMS) was created as a tool for effectively reviewing the safety and adequacy of our nation's Aids to Navigation (AtoN). A WAMS report contains a review of the nautical chart(s) with annotations indicating traffic patterns and density, a narrative of any and all recommendations for improvement to the AtoN system, and all supporting documentation (public comment being key). Guard Sector San Diego created the most recent WAMS Report in 2004 and submitted it to the Eleventh Coast Guard District for review, approval and subsequent action if necessary. (No significant actions were deemed necessary.)*

Los Angeles/Long Beach: *Our VTS system in LA/LB has been working flawlessly. The USCG partners with the Marine Exchange to monitor traffic 25 miles out and allows the respective Pilot Groups, LA and Jacobsen to monitor traffic inside the breakwaters.*

San Francisco: *VTS San Francisco and the Harbor Safety Committee have undertaken numerous initiatives and improved processes as a result of internal trend analysis, review of transit statistics, and formal studies in concert with the State's Water Transit Authority, as follows:*

- *Union Pacific Railroad Bridge Communications Protocol: Numerous allisions and "close calls" demonstrated a need for a prevention-based approach to problem solving. In 2002, the VTS and San Francisco HSC spearheaded an effort to improve and standardize*

communications between vessels and the operating railway of this vital part of the regional transportation infrastructure.

- *Based on historical increases in the number of transits being managed prior to 2002, and extrapolating future maritime transportation growth (including numerous major bridge and other maritime construction projects), the VTS recognized the need to expand staffing. We partnered with the VTS Program in Coast Guard Headquarters in developing a resource proposal that eventually resulted in the addition of seven watch standers and one training position. This was unprecedented growth at VTS San Francisco, and recruitment, hiring and training of new staff is now nearing completion.*
- *Recognizing the impact of new maritime security requirements resulting from the 9/11 terrorist attacks, the VTS worked with ferry and tug companies, pilots and the San Francisco HSC in 2003 to develop MARSEC reporting procedures for vessels navigating waterways within the VTS area of responsibility.*
- *Working in conjunction with the San Francisco HSC, as well as local and federal stakeholders, VTS San Francisco played a major role in 2003 developing outreach and training initiatives to prepare its users for compliance with AIS carriage requirements. Efforts resulted in VTS San Francisco and its users being ready for full implementation eleven days prior to the federally mandated deadline.*
- *Recognizing a need to simplify and standardize AIS destination reporting, the VTS worked closely with the San Francisco HSC in 2003 to develop and implement a new geographic naming convention based on the international location code system. Major outreach, education and enforcement efforts resulted in successful implementation of the convention, which is now being modeled by other major VTSs for use in their ports.*
- *Feedback from local environmental groups and internal analysis demonstrated that a number of vessels within the Bay Area were exceeding the Regulated Navigation Area Speed limits. The VTS developed and implemented an RNA speed monitoring program in 2004, which resulted in vastly improved awareness and regulatory compliance by vessel pilots and masters.*
- *The San Francisco HSC Ferry Operations Work Group initiated a study regarding the need for organized ferry routes, following a number of near-misses involving commuter ferries. The HSC brought together affected parties, and solicited help from the Water Transit Authority (WTA). After analyzing the impact of additional high speed ferry routes on Bay Area waterways, VTS San Francisco partnered with the WTA and George Washington University to conduct a detailed analysis of vessel interactions. The group modeled routing modifications to reduce the probability for collisions, and ultimately created a new experimental Ferry Routing Protocol being implemented on November 1st, 2006.*
- *Finally, six new closed-circuit television camera sites are in various stages of planning/installation to enhance VTS/COTP surveillance throughout the VTS area of responsibility. The cameras will provide significant benefits to the safety of navigation and maritime domain awareness.*

(The San Francisco HSC response was provided by Mr. Sean Kelley, VTS Branch, Waterways Management Div, USCG Sector San Francisco)

Port Hueneme: *This is an ongoing committee evaluation when specific incidents/situations are brought to our attention. To date, the only specific additional evaluation which has arisen involves the potential increase and impacts of vessel traffic to and from the proposed Cabrillo Port LNG facility. This increase and impact was generally deemed insignificant, although we are still questioning possible safety concerns regarding proposed use of LNG as fuel on these vessels.*

Eureka: *The port installed night lighting on jetty and other prominent points of land to illuminate harbor for commercial fisherman.*

Oregon ports: *In 2005, the Port Waterways Safety Committee (PWSC) conducted the Lower Columbia Risk Assessment. As a result the PWSC has undertaken several projects aimed at improving safety on the Lower Columbia, including ongoing Navigation Rule 9 Enforcement, and Crab Light Enforcement efforts. In 2006 Northern Star Natural Gas submitted a Waterway Suitability Assessment as part of their application for a LNG Terminal on the Columbia River; the review is underway.*

Washington ports: *Although the Strait of Juan de Fuca Port Access Route Study (PARS) was completed November, 2000, it had resultant alterations to the Puget Sound Vessel Traffic System and associated operations. While this was not a HSC initiative, it did take HSC stakeholder contributions into account, including an efficient communication portal, via the Harbor Safety Plan, for all marine interests. Additionally, there were voluntary efforts to move traffic farther offshore prior to changing the traffic lanes via official International Maritime Organization (IMO) action. One example of this is implementation of the Olympic Coast National Marine Sanctuary (OCNMS) Area to be Avoided (ATBA) in June, 1995. There were also studies in Puget Sound: a North Puget Sound Risk Management Panel that included the Strait of Juan de Fuca (U. S. Coast Guard Commander, Thirteenth District co-chaired) in July, 2000—this effort included discussion of vessel traffic, traffic lanes, etc., and other marine safety or tug related studies, the Blue Ribbon Task Force on WSF (with attendant computerized traffic modeling by the George Washington University) in January, 2001, and a Haro Strait U. S. Coast Guard Ports and Waterways Safety Assessment in conjunction with British Columbia representatives and key HSC members in February, 2002. Although all of these efforts were completed prior to July, 2002, they continue to impact the management of our international waterways. The ongoing Cooperative VTS operational efforts include addressing traffic at the entrance to the Strait of Juan de Fuca, offshore approaches, check-in procedures, traffic lane modifications, pre-arrival testing and the development and implementation of joint propulsion/steering failure decision matrices to ensure swift international response actions. All of these issues typically involve briefing and/or critical input from HSC key stakeholders or the entire HSC.*

British Columbia: CAPT John Yeung of Transport Canada reports: *From 01 December 2002 to 01 December 2006, there were three amendments made to the Traffic Separation Schemes in the Strait of Juan de Fuca and its approaches, Strait of Georgia, Haro Strait and Boundary Pass*

through International Maritime Organization (IMO). The purpose of the amendments was to enhance the traffic flow patterns in the areas.

Alaska Ports: *A HSC (Cook Inlet (CI) Navigation & Safety Committee) was formed in 2006, consisting of members from the Southwest Alaska Pilots Association, Tug and Barge company owners, Cook Inlet Facility managers, Vessel Agents, Container Lines representatives, Port Captains, Clean-up contractors and the USCG. This committee has been organized to bring together the key players that affect port operations and safety for Cook Inlet. The goals of this committee are to practice risk management, prevent injuries, reduce terminal and vessel liabilities and strive to prevent interruption of services. This committee was founded and held it's first meeting in April of 2006 largely as a result of the breakaway and subsequent grounding of the T/S SEABULK PRIDE in February 2006. The last traffic safety evaluation (Ports and Waterway Safety Assessment, PAWSA) in CI was conducted in the Spring of 2000. A PAWSA was conducted in July 2006 for the Aleutian Islands as an initial action to address navigation safety in the Aleutians following the grounding and major oil spill from the stricken M/V SELENDANG AYU.*

[Below are port-specific replies from West Coast Harbor Safety Committees and/or the U.S. Coast Guard regarding Recommendation 1C, that the US Coast Guard, in consultation with Fisheries and Oceans Canada and Transport Canada, and consistent with IMO actions, adopt a single set of preemptive national or regional offshore ballast water exchange standards that would enhance the consistency of navigation for the purpose of ballast water exchange on the West Coast:](#)

San Diego: *Don't know of any navigational safety hazards caused by ballast water exchange.*

Los Angeles/Long Beach: *We are not aware of any other than the "Cougar Ace" (Editor's Note: The Cougar Ace, a car carrier, developed a severe list in the mid-Pacific during ballasting in July of 2006, but the event did not involve any collision hazards and the vessel was not on a coast-wise voyage.)*

San Francisco: *There have not been any recent navigational safety issues stemming from ballast water exchange requirements reported to the Port State Control (PSC) Branch of Sector San Francisco, nor were any reports located in PSC archives. (The San Francisco HSC response provided was by LT Muareen Majewski, Port State Control Branch, Inspections Div, USCG Sector San Francisco)*

Port Hueneme: *We are not aware of any navigational safety issues in this regard.*

Eureka: *Eureka is not a first US port of call and there are no known issues caused by ballast water exchanges.*

Oregon ports: *We are not aware of any navigational safety issues for this AOR, with respect to ballast water exchange.*

Washington ports: *No navigational safety issues associated with ballast water management have been reported in our AOR. Previously, ballast water was a frequently updated issue; however, the HSC has been less involved due to the Coast Guard's establishment of a mandatory ballast water management program for all vessels equipped with ballast water tanks that enter or operate with the U.S. waters. The Puget Sound HSC is fully aware of the Washington state legislation that eliminates safety exemptions for ballast water exchange with a new effective date of July 1, 2007. This issue is expected to come up for discussion again due to the lack of alternatives to exchange. The Puget Sound HSC will likely engage on these issues from a safety perspective.*

Alaska Ports: *There have been no reports of any navigational safety issues reported by vessels caused by ballast water exchange requirements. The M/V COUGAR ACE casualty (July, 2006) occur while the vessel was conducting a ballast water exchange. The casualty investigation is being conducted by the Singapore flag administration as the casualty occurred in international waters. Coast Guard Headquarters is coordinating.*

Below are port-specific replies from Harbor Safety Committees and/or the U.S. Coast Guard regarding the implementation status of Recommendation 2.A: [The Workgroup finds a heavy concentration of reported casualty positions near major ports. This may be attributed to higher traffic density in these areas, as well as to the fact that ships conduct their status review of steering and propulsion systems 12 hours prior to entering US waters. Noting that the USCG Marine Safety Office Puget Sound worked with the Puget Sound Steamship Operators Association to develop a recommended "Standard of Care" for vessels entering port, the Workgroup recommends adoption of a similar Standard of Care by other West Coast US ports and encourages Canadian authorities and industry to examine the applicability in Western Canadian waters as well.](#)

San Diego Harbor Safety Committee: *Don't know if there are any formal Standards of Care for vessels preparing to enter port. Sounds like a good idea to add to the Harbor Safety Plan.*

Los Angeles/Long Beach: *We are actively educating and monitoring arriving ships of their responsibility to test engines. The following comes from the minutes of our Navigation Safety subcommittee's last meeting: "VESSEL PRE-ARRIVAL EQUIPMENT TESTS - Propulsion failures continue to occur in the Precautionary Area. It is not known exactly how many of these failures are the direct result of vessels testing astern propulsion while slowing down to board their pilot. Ensuring that inbound vessels test astern propulsion well before they arrive in the Precautionary Area should go a long way towards minimizing these failures. The subcommittee recognized that both education and enforcement will likely be needed to achieve this goal. The subcommittee recommended completing and distributing the "Safe Transit" pamphlet as soon as possible to address the education aspect of this problem. The LA/LB HSC is using the SF pamphlet as a template for developing their own "Safe Transit" pamphlet. The USCG will review enforcement efforts.*

San Francisco: *Standards of Care similar to those used in Puget Sound addressing vessels preparing to enter port have not been implemented in San Francisco Bay by either state or federal authorities following the Workgroup's 2002 conference. However, the San Francisco Harbor Safety Committee did develop a similar standard of care, drawing from elements of existing safety management programs, regulatory requirements and locally generated measures to establish good marine practice for preventing propulsion and steering casualties. (The San Francisco HSC response was provided by Mr. Mike Coyne, Office of Spill Prevention & Response (OSPR), California Dept of Fish and Game)*

Port Hueneme: *There are no written "Standards of Care" which would be in addition to the normal "pre-arrival" test required by USCG. It should be noted that the approach to Port Hueneme is a fairly open, uncongested area and that all inbound deep draft vessels are under Pilot control and tug escort from a point about two miles seaward of the Sea buoy.*

Eureka: *No port specific standards of care have been implemented.*

Oregon ports: *The regulations require main propulsion testing ahead and astern prior to entry into port. We typically do not add to this requirement unless the vessel has had a propulsion anomaly. If a vessel has had a propulsion anomaly or other steering failure, controlling factors including a required tug assist, will be considered. The vehicle for this requirement would be a COTP Order - 33 CFR 164.25(a)(5). All of the pre-arrival steps on page 49 are completed during the Bar Pilot's initial discussion with the vessel Master during both inbound and outbound transits.*

Washington ports: *The Puget Sound HSC is the one referenced regarding Standards of Care. The referenced standard of the Harbor Safety Plan was reviewed last year, and the HSC approved the recommendation to retain without revision.*

British Columbia: *CAPT John Yeung of Transport Canada reports There are adequate International Conventions and Canadian Legislations and Regulations to govern the responsibility and duty of care to be exercised by any vessel, and we do not see there is a need to repeat such requirements in any other forms. For example: Rule 2 - Responsibility, of the Convention on the International Regulations for Preventing Collisions at Sea, 1972, as amended, states: (a) Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to comply with these Rules or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.....*

Alaska Ports: *Due to the amount of cruise vessel traffic in the Anchorage AOR, the COTP Western Alaska has issued waivers, on a case by case basis, from Title 33 Code of Federal Regulations (C.F.R.) Part 164.25 as outlined in the G-MOC Policy Letter 02-05 Navigation Safety Equipment Testing for Cruise Ships. Additionally, due to the amount of ice encountered during the winter months, the COTP has issued Special Operating Procedures for Hazardous Ice Conditions. These instructions periodically extend further south when ice conditions warrant.*

Extreme Ice Condition Operating Guidelines are set in place with a greater emphasis on vessel safety due to the past history of several hazardous events including the parting of numerous mooring lines from the M/V OCEAN LAUREL and the recent breakaway and grounding of the T/V SEABULK PRIDE. The COTP is exploring the possibility of regulatory project to codify these "standards of care" in a RNA.

[Below are port-specific replies from Harbor Safety Committees and/or the U.S. Coast Guard regarding the implementation status of Recommendation 3.A, that where the tug availability risk factor is high due to a lack of readily available severe weather rescue tugs as identified by our tug homeport analysis, the Workgroup recommends consideration by local jurisdictions of several measures or combinations of measures to reduce that risk, including investment in a dedicated rescue tug, creation of a stand-by tug fund, or adoption of regulations requiring rescue tug contracts held by vessel operators.](#)

San Diego: *The San Diego Harbor Safety Plan for 2006 that is under revision addresses the tugs used in San Diego Bay. The "rescue tug" recommendation is not discussed, but several factors may explain this...In addition to the tugs that handle the routine vessel movements the Navy has five tractor tugs primarily for Naval vessel movements, but would be able to assist in emergency situations; laden oil takers do not enter San Diego Bay (closest lightering zone is 20 nm offshore NW of San Diego Bay entrance), severe weather in this AOR is infrequent.*

Los Angeles/Long Beach: *Not Applicable.*

Pt. Hueneme: *This issue has not been addressed.*

San Francisco: *San Francisco HSC response provided by Mr. Fred Henning, Bay Delta Marine, San Francisco HSC Tug Workgroup Chair: I am not aware of any steps taken in the San Francisco Bay Area by the HSC addressing a dedicated rescue tug. My personal take on the issue is that dedicated rescue tugs are unnecessary in the San Francisco Bay Area since escort tugs are routinely outside the Golden Gate Bridge awaiting tankers inbound and outbound. Furthermore, there are always tugs in the central SF Bay transiting, which could respond to any ship call at least as quickly as any rescue tug could respond to an emergency. (The San Francisco HSC response was provided by Mr. Fred Henning, Bay Delta Marine, San Francisco HSC Tug Workgroup Chair)*

Eureka: *Not addressed; no large NTV or TV grounding in recent history of Eureka off shore area.*

Oregon Ports: *USCG Sector Portland conducted several meetings with salvage personnel from the private and public sector to determine the degree to which rescue tugs/salvage tugs were available on Oregon and Washington's outer coast in July 2006. Currently there are no tugs dedicated to deep draft commercial vessel rescue, therefore the availability of any suitable tug capable of forestalling a vessel from going aground continues to be dependent on their location. Given that vessels continue to lose power off the Oregon and Washington coasts (for example,*

in 2006 there were 3 deep draft casualties which threatened Oregon and Washington coastlines in Sector Portland's AOR alone). Sector Portland's COTP, CAPT Patrick Gerrity, raised his concerns at the September 2006 Northwest Area Committee and RRT X meeting. He questioned whether, since nearly 8 years have passed since the "New Carissa" oil spill, we were more prepared to respond today to such a crisis. He noted that many reports were written following the "New Carissa" accident but it was unclear how far anyone has gotten in implementing any of the reports' recommendations. Sector Portland's COTP proposed that the RRT/Area Committee form a Work Group to examine the 45 recommendations of four key reports (see table below) to determine the status of the recommendations. The RRT/Area Committee agreed to form a Work Group and to complete their report by July 2007. A cursory review of primary sources the work Group will examine reveals a surprising recurrence of recommended actions after the M/V New Carissa incident. The reports cover a 6 year period. In the four reports cited in the table that follows, there are 45 recommendations for consideration:

- 3 Recommendations from The "Crisis on the Coast" the Federal On Scene Coordinator's Report and Assessment of M/V NEW CARISSA Oil Spill Response (June 1999)
- 10 Recommendations from the New Carissa Review Recommendations and Status for the State of Oregon (Feb 2002)
- 18 Recommendations from The Pacific States/British Columbia Oil Spill Task Force report on West Coast Offshore Vessel Traffic Risk Management (July 2002)
- 14 Recommendations: Responding to Terrorist Attacks in U.S. Ports—Actions to Improve Readiness; A Report of the Committee for Marine Salvage Response Capability: A Workshop (Aug 2003). Transportation Research Board (TRB), National Academy of Sciences.

Table 1: An Incomplete Comparison of Findings in Salvage Studies and Reports, 1999-2003

Emphasis: Strong, Implied, None	"Crisis on the Coast" FOSC Report 1999	New Carissa Report to Governor of Oregon 2000	West Coast Offshore Vessel Traffic Risk Management (PS/BC OSTF Report) 2002	Responding to Terrorist Attacks in U.S. Ports (TRB report) 2003
Evaluate adequacy of salvage assets nationally for large vessels stranded on US shores	Strong	Strong	Implied	Strong
Establish Public/Private Funding System for Salvage Capability	Strong	Strong	Implied	Strong
Leverage Technology to Reduce Collision & Historic Casualty Factors	None	None	Strong	None

Emphasis: Strong, Implied, None	"Crisis on the Coast" FOSC Report 1999	New Carissa Report to Governor of Oregon 2000	West Coast Offshore Vessel Traffic Risk Management (PS/BC OSTF Report) 2002	Responding to Terrorist Attacks in U.S. Ports (TRB report) 2003
Use CG-led PWSC/AMSC forums to maintain salvage networks & resolve local RNA & "Standards of Care" Initiatives	None	Strong	Strong	Strong
Conduct Exercises w/Salvage Component	None	None	None	Strong

Washington Ports: *No recent action has been taken by the HSC on this issue. The state has taken the lead in funding, assignment, and management of a part-time dedicated assistance tug. The Coast Guard has historically required or recommended, as specific circumstances have dictated, use of standby tugs in high risk locations when appropriate. The HSC's Heavy Weather Standard of Care was developed and adopted to minimize marine risk across a broad spectrum in the anticipation of heavy weather. This Standard of Care includes discussion about the appropriate use of assist tugs using a risk-based approach. Sector Seattle intends to bring up this issue of response to vessels disabled offshore at the November Puget Sound HSC meeting, and the fact the U. S. Coast Guard is looking at the present system. Due to an overall high demand for tugs in the Pacific Northwest, the State has been unable to secure a full time assistance tug for use in Neah Bay during the month of October 2006. The State program has historically provided an assistance tug at Neah Bay from approximately mid September to early May. Accordingly, a risk-based approach was developed by the state, in cooperation with the Coast Guard, to place an assistance tug at Neah Bay during Storm warnings or similar conditions during the month of October 2006. The agreement stipulates weather monitoring and notification by Sector Seattle, with contracting decision responsibilities managed by WA DOE. A full-time tug will be in place during November and December of 2006. The State, in cooperation with the Coast Guard, is working on a viable solution for the remainder of the winter months.*

Alaska Ports: *The Special Operating Procedures for Hazardous Ice Conditions as amended in February 2006 following the T/S SEABULK PRIDE incident, contains requirements for vessels and facilities during periods of hazardous ice including a designated vessel stationed up current to be used as an ice scout for improved situational awareness. The Coast Guard, State of Alaska, and a number of professional and citizen organizations support conducting a full risk assessment in the Aleutians which could determine that rescue tugs are viable risk mitigation tools for the Aleutians. (Also see page 14 above)*

Below are port-specific replies from Harbor Safety Committees and/or the U.S. Coast Guard regarding the implementation status of Recommendation 5.B, that the US and Canadian Coast Guards work with the West Coast states and maritime industry to further investigate the causes of past vessel incidents and casualties on the West Coast over a period of not less than five years:

San Diego: *Each Harbor Safety Committee meeting there is time designated to discuss any incidents or "near misses". The majority of the information comes from near misses and those reports are infrequent. As in any port there have been some near misses between commercial and private mariners. Efforts for continued outreach/education to the boating public via HSC, Harbor Police, CG & CG Aux are on-going.*

Los Angeles/Long Beach: *We have been working on the issue of containers falling on bunker barges alongside since 2004. The issue has resurfaced and we are now working on it with the SF HSC. The following notice comes from our Tug Utility Workgroup chairman: "The issue is falling objects (containers, lashing gear, etc) from container ships to bunker barges. In light of the recent incidents here and SF bay we must respond as an industry. It is a chance to be proactive in lieu of regulations. We will meet with PMA, Shippers and Stevedores to come up with a safety protocol for bunkering alongside ships at container terminals. Please pass the word to your ship agents to attend. They will become part of the process and need to be in the working group."*
(This reply was provided by Jeff Browning, LA/LB HSC Vice Chair and Tug Representative)

Pt. Hueneme: *There have been no reported incidents during this time.*

San Francisco: *Soon after I got here, there were what appeared to be a higher than normal number of "loss of propulsion and loss of steering casualties". The Harbor Safety Committee (HSC) was concerned that these "incidents" indicated that carriers were possibly getting lax in their preventive maintenance programs or possibly the use of low sulfur content fuel was in part to blame. Thus I was tasked with reviewing all loss of propulsion and loss of steering casualties occurring in the AOR between 2002 and 2004 to see what if any trends may exist. The analysis focused on the various types of vessels, locations, frequency rate and overall trends (increasing or decreasing frequency). In the end, we discovered that the number of these types of casualties being reported was not significantly higher than those in previous years. In addition, while there were slight variances among the categories of vessels, nothing suggested that a particular class of vessel was more or less likely to sustain this type of casualty. However, a couple of "lessons learned" came out of that effort.*

First, as of 2004, the standard MISLE product sets did not allow for the quick identification of possible causal factors related to use of low sulfur fuels as a potential element. No where is this type of information required to be listed. In addition, in looking at engine manufacturers as another potential factor, we discovered again there was no easy way to readily discern this information from the standard MISLE product sets. These "data system improvement recommendations" were passed along to CGHQ soon afterwards.

One best practice was also initiated as a result of the study. An earlier joint review by the Marine Exchange, HSC, MSO, California Department of Fish & Game and OSPR identified many of the same concerns related to loss of propulsion casualties between 1996 and 2000. As

a result, this group developed a pamphlet called the "Safe Transit Program". In it, the pamphlet outlines the required tests and drills to be performed before a vessel enters port along with a number of check list items related to the steering and propulsion systems that should be tested and maintained to prevent, to the greatest extent possible, these types of casualties. Following the 2004 study, we began as a standard practice, mailing copies of the updated pamphlet to all vessels/agents whose vessels suffered this type of casualty. (The San Francisco HSC response provided by Mr. Ross Wheatley, Senior Investigating Officer, Investigations Branch, USCG Sector San Francisco)

Eureka: *No HSC incident investigative process in place. The HSC relies on USCG for investigative support.*

Oregon Ports: *Noteworthy marine casualty findings are shared with the industry via the Ports and Waterways Safety Committee on a continual basis. A number of marine casualty cases resulted in lessons learned that focused on bar crossings, as in the case of the small passenger vessel "Taki Too" which capsized causing the loss of 11 lives on June 14, 2003 while crossing the Tillamook Bar. Many of the recommendations from the NTSB Report focused on the need to wear life jackets and the need to perform a safety assessment prior to crossing a bar (also know as using a "go/no-go" criteria). After nearly a year of work, Sector Portland has successfully developed go/no-go policies that have been adopted for small passenger vessels, for use prior to crossing breaking bars.*

Additional lessons learned from marine casualty cases have identified the need to revise policy on training protocols and procedures. However, the primary concern of the Ports and Waterways Safety Committee remains violations of Rule 9. Therefore a great deal of effort by Sector Portland and the States of Washington and Oregon has been expended to educate recreational boaters about Rule 9. Additionally, during certain times of the year, joint law enforcement operations are performed by the Coast Guard and local law enforcement to enforce and civilly violate any offenders of Rule 9.

Washington Ports: *Since 2002, Coast Guard investigation cases have been maintained in the MISLE database. Each case includes detailed causal and outcome information. The Coast Guard continues to provide critical information on marine incidents and near misses to the HSC at each meeting. These discussions often include incident recap and lessons learned. For example, there were sixteen lessons in the "lessons learned" report issued after the 2003 Foss Maritime barge spill at Point Wells. The "lessons learned" from the spill were used by all stakeholders to improve processes and procedures. Additionally, many of the "lessons learned" were acted upon during the mid-October, 2004, Dalco Passage oil spill. Another example of sharing lessons learned is the ongoing presentation of near-miss incidents to the HSC as recorded by VTS Puget Sound. Recently Sector Seattle presented a real-time radar, AIS and communications replay of a near miss between a Jumbo Mark II Washington State Ferry and a Panamax container ship. This incident highlighted the importance of COLREGS compliance and clear communication between vessels to facilitate safe passing arrangements. Lessons learned such as these are routinely discussed at HSC meetings after casualties and near misses are investigated or reviewed.*

Alaska Ports: *Sector Anchorage averages over 175 incident investigations with causal information per year. Safety recommendations have been made in regard to the groundings of the M/V CLIPPER ODYSSEY and the P/V GLACIER EXPLORER. The NTSB investigation and findings on the grounding of the M/V SELENDANG AYU were recently released. The Singapore flag administration conducting an investigation for the M/V COUGAR ACE ballasting incident. The casualty investigation for the T/V SEABULK PRIDE is complete and has been forwarded to Commandant.*

APPENDIX II

Survey responses, rankings, and recommendations from members of the West Coast Offshore Vessel Traffic Risk Management Project Workgroup 7/31/07

I. FINDINGS AND RECOMMENDATIONS REGARDING COLLISION HAZARDS ON THE WEST COAST

A. The West Coast Offshore Vessel Traffic Risk Management Project Workgroup recommends that Harbor Safety Committees - or their equivalents in West Coast ports - continuously monitor this risk and evaluate the need for enhanced traffic safety systems at their port entrances.

Workgroup members were asked to rank the implementation status and effectiveness of all recommendations on a scale of 1 to 10, with 1 meaning "Nothing effective has been accomplished" and 10 meaning "This Recommendation has been fully implemented and is effective." Eleven (11) members ranked 1.A for an average score of 8.

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- I am most familiar with CA HSCs. Because it is the central function of CA HSCs to evaluate navigation safety within the context of incident/spill risk, I think they will continue their vigilance.
- COTP, Govt & Industry continue to evaluate risks. Formulation of local workgroups/committees continues to be the most productive avenue to make progress in such a geographically challenged & dispersed area as Alaska.
- The San Francisco Harbor Safety Committee consistently does this. One of their present projects is the PORTS system (Physical Oceanographic Real Time System) which are data buoys placed in key port areas to provide actual sea conditions to the pilots.
- The larger ports have implemented this item and some of the lesser ports are lagging behind.
- The implementation of the Port Access Route Study recommendations has significantly improved safety at the entrance to the Straits of Juan De Fuca. Nationwide, AIS will significantly help as well. The Joint Coordinating Group (managing the CVTS) work on disabled vessel response matrixes have brought together USCG, Canadian CG, and Transport Canada with excellent discussion and resulting response coordination.
- Harbor Safety Committees in California are actively engaged in monitoring the risk and implementing measures to facilitate the safety of navigation. It is apparent from the report that all major port areas along the west coast are actively engaged in monitoring vessel traffic patterns and facilitating the safety of navigation.
- The Harbor Safety Committees in the areas with established VTS operations do monitor traffic safety systems including at the entrance primarily via reports by the Coast Guard at HSC meetings and in standing or ad hoc committees or via regulatory projects like Coast Guard Port Access Route Study and resulting traffic routing changes. In ports where there is no established VTS, assessing risk of vessel traffic at the entrance has to be done in different ways. With AIS and shoreside AIS receiving capabilities, both VTS and non-VTS areas have increasingly better data to facilitate vessel traffic risk assessments including at entrances. In the Area To Be Avoided (ATBA) near the entrance to the Strait of Juan de Fuca for example, AIS data captured by the Marine Exchange has

provided a much improved and more accurate picture of vessel traffic indicating a very high compliance rate. The capability also provides information to facilitate feedback and education where appropriate.

- The actions taken by the Coast Guard in concert with the community through various processes (Long-Term Oil Spill Risk Management Panel, Port Access Route Study, Ports and Waterways Safety Assessment, etc.) were very significant. The TSS was modified, including pushing the entrance farther offshore. Also, NOAA, through similar actions achieved an expansion in the IMO designated Area to be Avoided. While these actions occurred in the few years just prior to the WCOVTRMP recommendations and finalized about the time of the recommendations, they have provided significant risk mitigation. A comprehensive vessel traffic risk assessment (VTRA) by GWU is currently in progress and may lead to further recommended risk mitigation actions.
- Puget Sound Harbor Safety Committee plays active role addressing issues within Puget Sound. The Portland Ports and Waterways Safety meetings are less organized, and less frequent. The Portland District is looking to come up with Charter guidelines for a designated Harbor Safety Committee (actually in July 2007).
- Canadian Coast Guard Response
 - The changes to the traffic separation scheme (TSS) for Juan de Fuca Strait and its approaches, Haro Strait, Boundary Pass, and the Strait of Georgia have been completed.
 - In December 2006, the northern outer limit of the west bound traffic lane on the approaches of Juan de Fuca Strait was moved one mile north. This enables vessels more maneuvering room in an area where many fishing vessels may be encountered.
 - The IMO approved TSS for contiguous waters is monitored 24/7 by Tofino MCTS, Seattle Traffic, and Victoria MCTS.
 - Response plans are in place at all three centres for addressing disabled vessels in these waters.
 - Centre failure matrices have been implemented for all three centres.
 - A modernization project for Tofino MCTS will occur in fall of 2007.
- Harbor Safety Committees be established in Oregon and Washington. The Regional committees proposed for Washington do not have enough Local Port users input.

The following recommendations were offered for additional action:

- Because SF and LALB are the most proactive of the HSCs, the WCOVTRM Workgroup should continue efforts to make sure safety, risk management and communications/outreach advances made in the high-volume ports are shared, as appropriate and necessary, with the smaller ports (Humboldt, Pt. Hueneme, San Diego). Some of these same tools and approaches might be appropriate for consideration by ports outside CA, in which case the PS/BC Task Force might be the most appropriate communication channel.
- Place more emphasis on accomplishing this item with the lesser ports.

I. B. The maritime and towing industry operating on the West Coast [should] consider implementing compatible Automatic Identification System (AIS) carriage in advance of the required schedule.

Eleven (11) members ranked 1.B for an average score of 8.

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- While advances have clearly been made, it seems there is still work to do and/or track.
- This is already in place by regulation for towing vessels 26 feet in length of greater and more than 600 horsepower (33 CFR 164.46 (a)(3)(ii))
- Vessels are carrying AIS at this time it is a matter of getting them to use it correctly.
- Once carriage requirements are in place, can move this to fully implemented.
- Carriage requirements have been implemented ahead of schedule and expanded to include more types and sizes of vessels.
- This should now be complete for the target vessel population, by federal requirement. Fishing vessels and larger recreational vessels are still exempt at this time. They may be added in future rulemaking.
- The domestic requirement for AIS still applies only to Vessel Traffic Service (VTS) service areas, however, most, if not all the vessels to which these rules would apply, except that they are operating in other than VTS service areas, also have AIS for various reasons. As a ship-to-ship collision avoidance tool, the system is pretty much in place. From a shore based tracking perspective, the Coast Guard in other than VTS areas still has a long ways to go. The Maritime Information Systems of North America (MISNA), an association of the Marine Exchanges in most major port areas around the country, already has a very effective shore based system in place for short-range tracking of AIS equipped vessels, and also has a long-range satellite based tracking system in place. Automated Secure Vessel Tracking System (ASVTS) provides nearly 100 shoreside AIS receiving stations around the country with a majority of those on the west coast. The long range satellite tracking system is currently voluntary and predominating west coast, based largely on encouragement from Coast Guard District 17. Significant improvements would be possible if the Coast Guard would give some form of endorsement to ASVTS at the national level.
- Continued support for offshore AIS coverage. fyi - Physical Oceanographic Real Time System (PORTS) data will eventually be broadcast over AIS.
- Canadian Coast Guard Response: Under the SOLAS agreement AIS will be implemented for Canadian waters in 2008. MCTS centers will utilize this technology in conjunction with land based radar for vessel traffic management. Transport Canada: To be reviewed after July 2008. No other regulatory changes proposed.
- AIS is employed by the Commercial vessel community, but needs to be brought into regulation for ALL vessels over 26 feet to include recreational and fishing vessels. This is especially important on the Columbia River.

The following recommendations were offered for additional action:

- Suggest the WCOVTRM Workgroup evaluate the status of this recommendation again in early 2009, after the IMO's long-range identification and tracking system has been implemented.
- To the extent possible, the States/BC Oil Spill Task Force should endorse ASVTS and encourage the Coast Guard to endorse it as well.
- Address PORTS issue within status review

I. FINDINGS AND RECOMMENDATIONS REGARDING COLLISION HAZARDS ON THE WEST COAST

C. That the US Coast Guard, in consultation with Fisheries and Oceans Canada and Transport Canada, and consistent with IMO actions, [should] adopt a single set of preemptive national or regional offshore ballast water exchange standards that would enhance the consistency of [coastwise] navigation for the purpose of ballast water exchange on the West Coast.

Eleven (11) members ranked I. C for an average score of 6.64.

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- This task appears to be complete.
- There now exist national ballast water regulations. Additionally CG-3PSO-4 is sharing with States the progress the CG is making with the development of ballast water discharge standards. The discharge standard is essential for the certification and approval of the performance of any mandated ballast water treatment systems. Once the discharge standard is established, the USCG will publish the timeline and regulations for ships to install and operate ballast water treatment systems for all US waters.
- This is in the process of being completed by Coast Guard HQ. Anticipate ballast water standards within the year.
- The USCG is still working on a national ballast water bill possibly due out this year.
- There are still questions regarding the States ability to require action outside of their jurisdictional areas (outside 3nm). Whatever the distance is though, I do not think that it will create increased risk of collision. Vessels are not changing routes to exchange ballast water, unless they are transiting from a West Coast port to another West Coast Port and are required to exchange at 50nm when the coastal transit standard of care is 25nm off shore. My concern is the movement afoot within States to fine vessels that have not been able to exchange ballast water due to safety reasons (heavy wx, etc.). I believe that the number of vessels that have actually claimed this is very small (so it does not appear that vessels are gun decking their claims). Fining vessels for being safe appears to encourage unsafe practices, something that the BC/Pacific States Task Force does not stand for.
- The Coast Guard is in the process of developing national standards. It appears mariners are knowledgeable concerning state requirements.
- Although California, Oregon, Washington and BC have aligned their coastal BW exchange requirements to be a minimum of 50 NM off shore and 200 meters depth, there are differences in how these states and province define common waters. These differences should not necessarily impact navigational risk for transiting vessels. Ideally the USCG will develop common coastal requirements, similar to language in pending federal legislation, followed by the Canadian CG. This would provide greater uniformity and certainty for vessel crews.
- The states have made a run at consistency, but the Coast Guard hasn't yet addressed the coastal ballast water exchange issues. Beyond my limited knowledge on this issue, not sure what else might be in the works.
- Canadian Coast Guard: Issue is within the Transport Canada mandate. Transport Canada: The Ballast Water Control and Management Regulations (BWCMR), under the Canada Shipping Act, came into effect on 8 June 2006. These Regulations were prepared in consultation with Fisheries and Oceans Canada. The BWCMR are almost consistent with IMO Ballast Water Management Convention.
- IMO and USCG in process.

The following recommendations were offered for additional action:

- Push the USCG to get a federal bill in place to cover this item for continuity on all Coasts.
- Continue to look at alternative methods for treating ballast water when it is unsafe to conduct an exchange. May need to look at transit behavior on coastal traffic to see if increased risk of collision exists based on vessels going minimum distance to exchange ballast water. Also, may want to look to see exactly how many vessels have claimed that it was unsafe to exchange to measure size of problem.
- Support rigorous federal legislation for uniform ballast water regulations, with pre-emption over state programs.

II. FINDINGS AND RECOMMENDATIONS REGARDING HISTORIC CASUALTY FACTORS

A. The Workgroup recommends adoption of a "Standard of Care" for vessels entering port, modeled on that adopted by Puget Sound, by other West Coast US ports and encourages Canadian authorities and industry to examine the applicability in Western Canadian waters as well.

Ten (10) members ranked II. A for an average score of 7.1

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- This recommendation seems substantively complete, primarily as a function of the normal work and charge of the HSCs. It's not clear this recommendation of the WCOVTRM Workgroup provided any particular impetus for changes not already underway.
- The Marine Safety Task force has been in existence prior to the recommendation and SEAK waterway guide has been around since 1996. Cook Inlet Ice Guidelines formed in 2006 as a result of the Cook Inlet Navigation & Safety Committee efforts following the grounding of the SEABULK PRIDE.
- All ships entering port are vetted for safety (and now security) through the Coast Guard's Port State Control Program.
- Pretty good implementation. Canada will not likely create a SOC. So you may be about as far as you are going to get with this.
- Most ports or Harbor Safety Committees have reviewed the recommendation and evaluated the need for additional standards of care. Several have implemented additional measures; others have determined existing procedures are adequate. It is probably best to let each Port determine the need for additional requirements in their area.
- San Francisco has adopted similar Standards of Care as the Puget Sound. LA/LB and Alaska are pursuing similar types of guidelines. We are unaware of other ports taking up this initiative. Puget Sound is updating this Standard of Care to address additional lessons learned.
- High marks, but not fully implemented. Obviously, with the model being the Puget Sound SOCs as published in the Puget Sound Harbor Safety Plan, Puget Sound has essentially fully implemented the recommendation. It appears that the other ports have done something similar. While Transport Canada does not feel it necessary to develop SOCs as they see them duplicative of other requirements, the Puget Sound Harbor Safety Plan has some application to Canadian bound vessels in that they transit U.S. waters in the Cooperative Vessel Traffic Service (CVTS). The Puget Sound Harbor Safety Plan is currently undergoing a much deeper annual review and some significant modifications to the Plan are expected. These changes will involve some substance, but mostly updating references. I think this is an ever ongoing mitigation measure and should never be

considered fully implemented, until the review and updates are routine, the periodic reminders communicated to the industry are routine, and the reference to the Plan by the crews of visiting vessels is routine; we're not there yet.

- Using Puget Sound's template, SOC's should be reviewed, formulated and adopted by new HSC in Portland District (covering both upper and lower Columbia River).
- Transport Canada: There already exist adequate International Conventions and Canadian Legislation and Regulations to govern the responsibility and Duty of Care of any vessel in Canadian waters. As such no additional measures are proposed.

The following recommendations were offered for additional action:

- Because some HSCs were largely unaware of this WCOVTRM recommendation, there might be some benefit in providing further outreach to them to see if they can identify any other actions to minimize casualties, emphasizing cases where possible solutions may not be within their scope of influence. That said, I am not sure there are enough potential cases where this would happen to justify the extra time and effort on outreach to HSCs. For the most part, I think CA HSCs, through their membership, can successfully address the casualty concerns of their ports. I cannot speak for HSCs outside CA, and/or whether it may benefit them to have continued outreach and education on this issue, or if they feel the WCOVTRM could provide any leverage for solutions that they cannot provide themselves.
- One issue you may want to take a look at is the use of light fuels versus heavy fuels when transiting in port. Most of the historical losses of propulsions have occurred when switching. The testing of the engines are often really testing the ability to switch fuels. May want to look at where/when the switch should take place to decrease risk, while at the same time minimize cost to the vessel.
- Forward a copy of the summary survey responses to stakeholders in ports that have not pursued such Standards of Care to encourage them to consider the benefits of reviewing/adapting existing efforts for their benefit.

II. FINDINGS AND RECOMMENDATIONS REGARDING HISTORIC CASUALTY FACTORS

B. The Workgroup recommends continued vigilant application of the Critical Area Inspection Program (CAIP) by the US Coast Guard as the TAPS fleet ages, and encourages TAPS tanker operators to consider expedited replacement schedules.

Nine (9) members ranked II.B for an average score of 8.44.

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- The TAPS tankers not examined from 2002-2006 need to be examined.
- The Coast Guard has been staying on top of this program. The Traveling Inspectors at HQ keep a close eye on these.
- Good inspection standards and response to problems. The recent problems with the new AK tanker's anchors were a good example of both vessel owner response to the problem and CG oversight. Communication between COTP zones was excellent and the company actually flew in anchors to correct.
- The Coast Guard has continued the inspection program to monitor the condition of TAPS fleet vessels, and it is likely the remaining single hull vessels will be replaced before the mandatory retirement date.

- No comment as our organization (PMSA) does not engage in and monitor the TAPS trade and specifics of the fleet; however we do support established, rigorous USCG inspection programs and protocols and CAIP is such a program.
- It appears that the Coast Guard continues to put appropriate emphasis on this program, as it should. However, it would be wise to monitor to ensure that emphasis continues as needed and that other demands on the Coast Guard don't drain resources from this program.
- Transport Canada: Under our Port State Control program, governed by Paris and Tokyo MOUs and with Canadian modifications, TC Inspectors on the West Coast inspect all tankers arriving into Canadian waters, in addition to the Paris and Tokyo MOUs' requirements, at their first visit at a Canadian port, and then every 12 months thereafter. For double hull requirements, Canada follows IMO's mandatory requirements as specified in MARPOL 73/78 Annex I, Reg.19 & 20.

The following recommendation was offered for additional action:

- It is not clear from this report whether the USCG plans on finishing the CAIP exams. Perhaps it should be a WCOVTRM Workgroup recommendation that they do so, and provide a timeline/deadline, as appropriate, for the completion of the CAIP examinations.

II. C. The Workgroup recommends implementation of the US Coast Guard's Commercial Fishing Vessel Safety Action Plan.

Eight (8) members ranked II.C for an average score of 7.125.

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- This recommendation seems substantively complete.
- Immediate actions were taken including more effective promotion of the dockside examination decal; increased focus on high risk fisheries; better boarding officer training and improved communication between industry and the CG. Longer term actions such as mandatory licensing and inspection have failed to gather sufficient support from Congress.
- In San Francisco we have a robust Volunteer Fishing vessel inspection program which includes examinations by trained Coast guard Auxiliary Inspectors. Every Fishing Season our Commercial Fishing Vessel Examiners walk the docks to assist the fishing fleet.
- Acceptance of voluntary exams is not upward trending. Some F/V masters feel that it does not preclude quicker or less boardings at sea. Targeted efforts such as OPERATION SAFE CRAB, etc. are getting the word out, but those vessels that are operating at the margin may want to just risk a boarding at sea rather than deal with requirements up front.
- All proposals in the Action Plan have been implemented or attempted.
- Based on the USCG report on their ongoing efforts, it appears that this issue is being addressed - the Coast Guard is best suited to assess implementation status.
- While it appears attempts have been made implementing all aspects of the subject plan, efforts must be continued toward further reduction in fishing vessel casualties. Although the collision statistics are relatively low, any number of collisions is unacceptable. AIS should be required on fishing vessels, and from a domestic standpoint, AIS should be required in all waters of the U.S. In that we at the Marine Exchange monitor and track vessels using AIS, I note that a significant number of fishing vessels are already AIS equipped. The regulations to require AIS on all commercial vessels and in all waters is overdue, but I understand they may come soon. The Coast Guard is also visiting the

application of tracking for all small vessels, e.g., recreational vessels. Many large recreational vessels (yachts) already have AIS, most likely for their own safety.

- [Canadian Coast Guard](#): Vessel safety is the responsibility of Transport Canada. [Transport Canada](#): No comments.

The following recommendations were offered for additional action:

- Perhaps the WCOVTRM Workgroup could also revisit the status of this item in another 3-5 years, to see if implementation of CG CFV safety regulation revisions and the CFIVSAC initiatives have been successful.
- Market voluntary exams - get States and Canada to play along by encouraging safe operation of the f/v fleet.
- I recommend that WCOVTRM emphasize the importance of AIS on all commercial vessels, or at least all vessels over a certain size, in all waters, not only as an effective collision avoidance tool, but also an effective security tool.

III. FINDINGS AND RECOMMENDATIONS REGARDING RESCUE TUG AVAILABILITY ON THE WEST COAST

A. Where the tug availability risk factor is high due to a lack of readily available severe weather rescue tugs as identified by our tug homeport analysis, the Workgroup recommends consideration by local jurisdictions of several measures or combinations of measures to reduce that risk, including investment in a dedicated rescue tug, creation of a stand-by tug fund, or adoption of regulations requiring rescue tug contracts held by vessel operators.

Nine (9) members ranked III.A for an average score of 6.33

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- Until the CG salvage and marine firefighting requirements are completed, it will be difficult to evaluate whether tug numbers and capabilities are sufficient. However, the original list of 77 tugs identified by the WCOVTRM Project as capable of severe weather rescues should be re-inventoried.
- Full implementation of forthcoming salvage and firefighting regulations will assist in providing national standard addressing rescue tugs. It remains questionable whether rescue tug availability could have kept an incident such as SELANDANG AYU from occurring given the extreme weather conditions and load condition of the vessel.
- There is no shortage of tugs for the San Francisco Bay Area. Every time I ordered a tug escort for a vessel at least two were available. In addition the state of California requires tug escorts of all tankers entering the port; this is tracked through the local Marine Exchange.
- The Salvage and Marine Firefighting requirements are still not out. These should be moved forward.
- WA is fully engaged at the entrance to the Straits, but not at any other location. Not sure if the entrance is more important than Col River entrance or Haro Strait/Boundary Pass. AK has requirements. OR and Canada do not have any ongoing program.
- In some areas this has been studied extensively and arrangements have been implemented. The Coast Guard has issued a rulemaking to require salvage company response within 24 hours, but the rule has been suspended until February 2009. There is some concern about the availability of rescue tugs along the Oregon Coast.

- This perceived need continues to be debated as to need, capabilities required, timeliness, funding, cross border differences, seasonality or targeted use and so on. The issue has been addressed in a few different ways (stationed tug, placement of tug(s) ahead of severe weather via CG request or a tug fund, requirement identifying salvage and firefighting resources, targeted tug requirements via COTP orders, leveraging of enhanced tracking capabilities etc.).
- First and foremost, the Coast Guard needs to complete the salvage and firefighting regulations required under OPA 90. The continued delay of these regulations is unacceptable. Also, the regulations regarding vessel response plans for non-tank vessels need to be completed; they are already a couple of years past due. The latter will likely spread the cost of the salvage and fire fighting regulations over all of the deep draft vessels operating in the U.S. Beyond that, if it is still believed that specific dedicated response tugs are necessary, then local action may be appropriate. Federal legislation, also being considered, for dedicated tugs in only one or maybe a few locations in the country is akin to a "bridge to nowhere." Thus, continued State funding of such resources may be necessary should those resources still be considered necessary after implementation of the salvage and firefighting regulations.
- Canadian Coast Guard: Canada utilizes commercial contracts or vessels of opportunity when required. Regulatory and industry contingency planning are the responsibility of Transport Canada. Transport Canada: There are no plans to have a dedicated rescue tug. Masters of disabled vessels have to make their own commercial arrangements when needed. As a tanker port in Kitimat, British Columbia, is being developed for use by VLCC; a TERMPOL study is underway to assess the risks and give recommendations.

The following recommendations were offered for additional action:

- I think this recommendation needs continued tracking by the WCOVTRM Workgroup, and a status check in 3-5 years.
- Should take a look at a better break down of data where there are standby tugs. WA DOE and the CG are developing a protocol on the deployment of the tug that will include some type of metrics. The tug is really not a "rescue" tug; it is a "response" tug. Data should be collected and studied for actual responses including: Actual propulsion condition of the disabled vessel; Time to potential grounding; Time/Distance of next best tug; Actual action of the Response Tug (passed wire, escort, stand by). Also, you may want to engage with BC to see what they think of Response Tugs.
- The Task Force should formally support the promulgation of USCG salvage and firefighting regulations as soon as possible. Similar measures should be taken by the Canadian Coast Guard. An update by the Task Force of the tug inventory and response times would also serve to give a better picture of the situation today. Use AIS data to assess tug distribution and to provide real time identification of available tugs (leverage ITOS with AIS).
- That WCOVTRM recommend the member states of the Task Force send a joint letter to the Coast Guard encouraging that the salvage and firefighting regulations be completed without further delay.

III. B. The Workgroup recommends that the US Coast Guard evaluate whether the information to be available through AIS carriage will provide equivalent or better tug position and capability information than that provided by ITOS. If so, the US Coast Guard should take steps to ensure that this information on tug positions is made available to all Captains of the Port on the West Coast. If not, or if the carriage requirements are not implemented by 2007 at the latest - optimally by 2004 - we recommend that the US Coast Guard consider placing transponders on ocean-going tugs not already carrying them, and adding signal receiving stations as needed to establish a coastwise network for information on ocean-going tug locations.

Ten (10) members ranked III.B for an average score of 7.7

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- It appears some of the port-specific aspects of this recommendation still need to be addressed.
- AIS coverage remains a challenge. Even with tug AIS requirements in full effect, AIS coverage will dictate the ability to identify tug locations
- As stated above, already in effect through regulation.
- Await rules to come into effect.
- ITOS has been superseded by more advanced and capable systems, including AIS. AIS is mandatory for vessels transiting in VTS areas. AIS provides about 30% coverage of near coastal waters out to 30 miles, and about 10% coverage to 200 miles. Satellite technology could be used to expand coverage of existing areas, but there are issues concerning who would pay for the additional costs and how to obtain participation in the system.
- Current and pending regulations provide good coverage of the deployment and movement of tugs in the higher density traffic areas on the coast. AIS shoreside reception is expanding and should continue to provide better tug tracking data.
- I don't think we should consider this one done just yet. The Coast Guard itself does not have full coastwise AIS coverage, however, the Coast Guard and others can get and should be getting such coverage from the Marine Exchanges that currently cover all the west coast, including Alaska and Hawaii, except for some soon to be filled small gaps between major port entrances. The coverage by the Marine Exchanges routinely reaches out about 50 miles offshore and at times can see beyond a 100 miles. ITOS no longer exists as an independent system; however, the tugs are all AIS equipped and AIS tracked by the Coast Guard where it has coverage and by the Marine Exchanges. The shoreside AIS tracking display still needs to be colorized or otherwise filtered for the quick and distinct identification of the tugs. This is already in place in some locations and should be added elsewhere soon.
- Canadian Coast Guard: MCTS Pacific centers will monitor and track vessels carrying AIS transponders in 2008 under the SOLAS regulations. Transport Canada: Canada will follow SOLAS requirements and those required by Canadian Navigation Safety Regulations under the Canada Shipping Act, 2001.
- U.S. flag Ocean going tugs are all carrying AIS.

The following recommendations were offered for additional action:

- Track rules and reevaluate after the rules come into effect.
- AIS coupled with satellite based ID systems will provide total coverage. Some carriers are already participating in such systems for proprietary tracking of their fleets. Information contained in AIS signals can include important data (towing/not, cargo, laden/not, etc.) - more work needs to be done to fully leverage and better support this technology with useful data embedded in the transmission.
- I suggest that WCOVTRM emphasize the value and importance of public/private partnerships. The Coast Guard in its recent Strategy document emphasized public/private partnerships, but currently I find the Coast Guard weak in the practice of what it is preaching in this regard. MISNA has much to offer to the Coast Guard in short and long range tracking. At the field level the partnerships are in place because the field personnel appreciate the value of the MISNA capabilities to the work they do; however, there is much work to do to break the unexplained barriers at the national level.

IV. FINDINGS AND RECOMMENDATIONS REGARDING THE DISTANCE OFFSHORE RISK FACTOR

A. The West Coast Offshore Vessel Traffic Risk Management Project Workgroup recommends that, where no other management measure such as Areas to Be Avoided (ATBAs), Traffic Separation Schemes (TSSs), or recommended tracks already exist, vessels 300 gross tons or larger transiting coastwise anywhere between Cook Inlet and San Diego should voluntarily stay a minimum distance of 25 nautical miles (nm) offshore.

Ten (10) members ranked IV.A for an average score of 8.7

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- The occasional non-compliance to the recommended 25nm offshore distance from headlands could be problematic. The reasons for non-compliance have not been identified.
- As far as I know, this is being carried out on a voluntary basis by the shipping companies.
- These recommendations have been added to the Coast Pilot and NOAA charts. Most vessels seem to stay outside 25nm along stretches of the California coastline, except for areas around major headlands.
- This appears to have been addressed to the extent of the Task Force [i.e., Workgroup] recommendation.
- Indications are that nearly all these vessels observe the voluntarily measure. AIS tracking would provide documentation of this. MISNA may soon have the capability to not only track these vessels real time but also provide historical trackline analysis. Observance of the ATBA at the Olympic Coast National Marine Sanctuary is nearly 100%. On very rare occasion, a cargo vessel unknowingly passes through the ATBA. Letters to owner/operator of these vessels jointly from the Coast Guard and NOAA have reportedly been very effective in improving appropriate observation. Also, there are vessels that transit along the boundary of the ATBA and some occasionally veer into the ATBA for short periods, sometimes to avoid meeting traffic. The use of AIS has been much more effective at identifying these minor entries into the ATBA, ever so minor as to essentially be in "compliance."
- Canadian Coast Guard: The Tanker Exclusion Zone (TEZ) is in place off the West Coast of Vancouver Island and is monitored by Tofino MCTS.
- Tank Barge Operators are maintaining the 25 mile line. By directing self-propelled non-tank cargo vessels into the same waters, an increase in collision potential is occurring.

The following recommendations were offered for additional action:

- The WCOVTRM Workgroup should continue to work with CG on issues related to non-compliance with recommended offshore distances around the headlands. CG should be asked to identify why maintaining minimum distances from some of the headlands is proving problematic for vessel operators: due to insufficient notice on charts and Coast Pilot? Vessel operator concern over lost time in using the offshore recommended track? What is the position of the P&I Clubs to this information, and do they have a way to better outreach on "consequences" of spills to their members? Can CG identify the non-complying vessels? Are just a handful of vessels or companies responsible for most incidences of non-compliance?
- May want to check vessel behavior when National AIS tracking comes on line. The Marine Exchanges may be able to help right now. Also, has risk of collision increased with everyone at the same minimum distance of 25nm?

IV. B. For the sake of consistency with existing agreements, the Workgroup further recommends that, where no other management measures such as ATBAs, TSSs, Tanker Exclusion Zones, or recommended tracks already exist, tank ships laden with crude oil or persistent petroleum products and transiting coastwise anywhere between Cook Inlet and San Diego should voluntarily stay a minimum distance of 50 nm offshore.

Nine (9) members ranked IV.A for an average score of 8.78

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- This recommendation seems to have been complied with in large part, although it's not clear how much CG monitoring is assuring us of this, versus company reports.
- As far as I know this is being carried out on a voluntary basis by the shipping companies.
- These recommendations have been added to the Coast Pilot and NOAA charts.
- This appears to have been addressed to the extent of the Task Force [i.e., Workgroup] recommendation.
- Same as above.
- Transport Canada: Tanker Exclusion Zone is in effect. Other management measures are still under consideration.

The following recommendations were offered for additional action:

- The WCOVTRM Workgroup should consider asking CG what monitoring frequency and tools they are using to assure compliance with the voluntary agreements, and open the discussion again of whether CG efforts are sufficient, or our reliance on company reports on compliance is too great.
- May want to check vessel behavior when National AIS tracking comes on line. The Marine Exchanges may be able to help right now. Also, has risk of collision increased with everyone at the same minimum distance of 25nm?

IV. FINDINGS AND RECOMMENDATIONS REGARDING THE DISTANCE OFFSHORE RISK FACTOR

C. The Workgroup further recommends that these voluntary minimum distances offshore be communicated to mariners by placing the text of these recommendations in the Coast Pilot and Sailing Directions for the West Coast, and also by placing notes on the appropriate nautical charts, to be repeated at headlands, which indicate the voluntary minimum distances offshore and refer the mariner to the Coast Pilot and Sailing Directions for further details.

Nine (9) members ranked IV.A for an average score of 9.67

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- I believe this is already incorporated into these publications.
- This recommendation has been implemented and appears to be effective.
- This appears to have been addressed to the extent of the Task Force [i.e., Workgroup] recommendation.
- The comments in your draft report say it all.
- Transport Canada: This recommendation is still under consideration.

The following recommendations were offered for additional action:

- We need to know the "why" of why there's non-compliance around headlands. If it's due to unclear (or unread) chart and Coast Pilot notes, then there will need to be text fixes and further outreach to mariners.

V. FINDINGS AND RECOMMENDATIONS REGARDING DATA IMPROVEMENTS

A. The Workgroup recommends that U.S. and Canadian federal agencies redesign these [data] systems to allow for improved access to information on both the causes and outcomes of reported incidents. The Workgroup further recommends that the member agencies of the Pacific States/British Columbia Oil Spill Task Force implement their agreement to include causal information in their oil spill incident databases and to share that information on a coastwise basis.

Nine (9) members ranked IV.A for an average score of 6.89

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- It is apparent that a lot has been accomplished, but it appears there is still some work to do getting all current (and historic) records up to date and evaluated.
- NTSB data not addressed but NTSB does release findings in report form made available to public.
- I am not sure on this one. We have received no requests from Canada for our Oil Spill data that I know of.

- I do not think that we have come too far on this. We have source data, but States/CG data is not harmonized and better broken down into categories to direct mitigation strategies. This is one of the action items on the State of WA/USCG Strategic Work Plan.
- The Coast Guard has developed a new data base that contains information on oil spill incidents and casualty data. The data base is also used for several other types of information, so search queries must be well-defined to ensure accurate information is obtained.
- It appears that through efforts in the US and Canada, data systems have been improved. The creation of the Task Force database provides uniform data searches and when the BC Ministry of Environment provides their input to this database it cover the areas intended by the Task Force.
- I really don't have detailed knowledge in this area, however, for years we have had problems with data bases, lack of completeness, accuracy, ease of use. The various agencies, state and Federal, need more work to reconciling and coordinating that data which is common to them.
- Transport Canada: The Canadian Transportation Safety Board is the lead agency to provide data, causes and outcomes of reported incidents.

The following recommendations were offered for additional action:

- I think this recommendation is also worth continued tracking and a status update to the WCOVTRM Workgroup in another 3-5 years. The database developments of the past 5 years are only now starting to bear fruit, and it is still too early to judge whether or not further database developments or changes will need to be recommended.
- Perhaps standardize metrics across States in conjunction with the CG.
- Continue with Annual Reports and post in a timely manner.

V. FINDINGS AND RECOMMENDATIONS REGARDING DATA IMPROVEMENTS

B. The Workgroup also recommends that the US and Canadian Coast Guards work with the West Coast states and maritime industry to further investigate the causes of past vessel incidents and casualties on the West Coast over a period of not less than five years.

Nine (9) members ranked IV.A for an average score of 6

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- Although databases are in place, we need to see all the historic data loaded before we can determine if this recommendation has been fully achieved. I know CA OSPR still needs to load historic information.
- This is more of a CG HQ issue. As far as I know we have received no requests from Canada for this info.
- Changes have been made in the systems but not everyone is talking with each other on the same level.
- Investigations are very well done by CG. Collecting data across time and within category/cause not really done that well.
- Although the CG has not conducted a comprehensive analysis of casualty data individual casualties are investigated to determine causes and identify possible recommendations for preventing future casualties. California OSPR is developing an Incident Tracking Data Base system.
- We are not aware of substantive additional efforts being made to further investigate beyond the investigations that are required now. We are not aware of an effort to conduct additional US and

Canadian incident analysis with state agencies or the industry beyond the case by case summaries provided to the HSCs or in forums like the Cooperative Vessel Traffic Service Joint Coordinating Group made up of a US/Canadian contingent. U.S. and Canadian federal agencies investigate incidents envisioned by this recommendation. The primary responsibility for improved historical analysis of that data should rest with those agencies as opposed to being duplicated by state or local efforts.

- My ranking is based purely on the discussion in the draft report.
- Should be referred to Transportation Safety Board

The following recommendations were offered for additional action:

- Once all historic data are loaded, the WCOVTRM needs to direct agencies to analyze and determine whether the databases are not just sufficiently storing historic and current data, but are capable of providing status and trends reports.
- Standardize metrics on this?
- Expectations/requests with regards to reporting causes of incidents and casualties and trends should be conveyed in very specific terms so the agencies can consider modifying current reports and/or generating trend analysis.
- Continue to pursue incident tracking system. Tap into Puget Sound Vessel Traffic Risk Assessment data (Cherry Point study).

V. C. The West Coast Offshore Vessel Traffic Risk Management Project Workgroup recommends that the US and Canadian Coast Guards coordinate with marine exchanges and other appropriate organizations to improve coast-wise data collection procedures covering vessel movements.

Ten (10) members ranked IV.A for an average score of 7.7

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- MISNA and USCG have not completed their work to develop an effective partnership for implementing long-range tracking of ships calling at U.S. ports.
- USCG D17 in Alaska has partnered with the Marine Exchange of Alaska for continued utilization and improvements of vessel tracking and maritime domain awareness.
- We coordinate with our local marine exchange on a daily basis through our Vessel Traffic service.
- Progress is being made but at a slow pace. It doesn't appear as a high priority on the USCG's priority list.
- Ongoing
- Coast Guard Sectors subscribe to this information through local Marine Exchanges. Tracking is done at the local level.
- There are well established and ongoing efforts to share data between the Marine Exchanges and the Coast Guards. More recent discussions include AIS and long range tracking capabilities.
- This ranking is based solely on my knowledge in Puget Sound where we do have a good working relationship between the Coast Guard and the Marine Exchange. Vessel movement data is routinely shared between the VTS, CVTS and the Marine Exchange.
- The exchange of vessel traffic information between USCG and CCG is done on a daily basis in managing vessel traffic movements in contiguous CVTS waters.

The following recommendations were offered for additional action:

- The balky progress of the MISNA and USCG partnership suggests that the WCOVTRM will need to continue tracking this issue, ask for periodic status updates, and may need to create opportunities to help this effort make more effective and timely progress.
- Continued discussions between the Marine Exchanges and the Coast Guards to address sharing of capabilities and data.
- Exchange of data for Puget Sound Vessel Traffic Risk Assessment.

VI. RECOMMENDATION REGARDING IMPLEMENTATION REVIEW

The West Coast Offshore Vessel Traffic Risk Management Project Workgroup recommends that the Pacific States/BC Oil Spill Task Force work with the US and Canadian Coast Guards in 2007 to review the status of implementation and efficacy of the final recommendations from this project.

Nine (9) members ranked IV.A for an average score of 8.78

A list of all Workgroup Members who submitted comments can be found at the end of this Appendix. Individual comments regarding the implementation status and effectiveness of this Recommendation were:

- Some further outreach by the WCOVTRM Workgroup might be necessary, for example to HSCs, on some of the recommendations of the first five years that still need some work in order to be considered fully implemented. There also needs to be continued involvement and input from the CG on vessel tracking and monitoring issues, and from all agencies collecting vessel risk, casualty and spill information, to make sure it is analyzed for risk management and spill mitigation trends.
- Ongoing
- The Executive Coordinator and co-chairs have compiled a comprehensive report for the five year review. It provides a thorough report on the status of the recommendations from the 2002 final project report.
- A good work in progress. It will deserve a 10 when completed.
- Although in progress, it appears to be a very comprehensive review. Knowing that it will be completed, I rank it fully completed.
- The Canadian Coast Guard and Transport Canada noted that this review is ongoing.

The following recommendations were offered for additional action:

- I suggest we frame an opportunity to continue tracking progress of key recommendations that have not yet been fully implemented ... perhaps as a more focused status/update check on those particular issues by the WCOVTRM Workgroup in another 3-5 years.

**West Coast Offshore Vessel Traffic Risk Management Project
Implementation Status
Survey Respondents**

1. LCDR Gary Koehler, U.S. Coast Guard District 17*
2. Captain Ed Page, USCG (Ret), Executive Director, Marine Exchange of Alaska**
3. Captain William J. Uberti, Commander, U.S. Coast Guard Sector San Francisco**
4. Ed Irish, Western States Petroleum Association**
5. Captain Bill Devereaux, U.S. Coast Guard District 13*
6. Commander Mike Van Houten, Eleventh Coast Guard District*
7. John Berge (SF Office)** and Mike Moore (Seattle Office),* Pacific Merchant Shipping Association
8. Captain John E. Veentjer, USCG (Ret), Marine Exchange of Puget Sound*
9. Ellen Faurot-Daniels, California Coastal Commission**
10. CDR David Neander, NOAA/NOS/OCS*
11. Susan Steele, Regional Director, Canadian Coast Guard*
12. Richard H Lauer, Sause Bros. Inc. *
13. Captain Khushru Irani on behalf of Captain John Yeung (Manager Compliance & Enforcement), Transport Canada Marine*

* Represents an organization which participated on the original WCOVTRM Project Workgroup

** Represents a member of the original WCOVTRM Project Workgroup

Extensive input to this report was also provided by Rick Holly, California Office of Spill Prevention and Response, and Stephen Danscuk, U.S. Coast Guard Pacific Area, who served as Co-Chairs of both the 5-Year Implementation Review Project and the West Coast Offshore Vessel Traffic Risk Management Project Workgroup.

**West Coast Offshore Vessel Traffic Risk Management Project
2007-2008 Implementation Status Review
Workgroup Members**

Rick Holly, California Office of Spill Prevention and Response, Co-Chair
Stephen Danscuk, U.S. Coast Guard Pacific Area, Co-Chair
LCDR Gary Koehler, U.S. Coast Guard District 17
CAPT Bill Devereaux, U.S. Coast Guard District 13 (LT Fred Seaton, Alternate)
CRD Mike Van Houten, Eleventh Coast Guard District
CAPT Ed Irish, Western States Petroleum Association
John Berge, Pacific Merchant Shipping Association (Mike Moore, Alternate)
CAPT John E. Veentjer, USCG (Ret), Marine Exchange of Puget Sound
Ellen Faurot-Daniels, California Coastal Commission
CDR David Neander, Chief, Pacific Hydrographic Branch, NOAA/NOS/OCS
Ruth Yender, Scientific Support Coordinator for the Northwest and Oceania, NOAA Office of Response and Restoration
Richard H Lauer, American Waterways Operators, Pacific Region
CAPT John Yeung, Manager Compliance & Enforcement, Transport Canada Marine
Betty Schorr, Alaska Department of Environmental Conservation
Graham Knox, British Columbia Ministry of Environment
Jack Barfield, Washington Department of Ecology
Mike Zollitsch, Oregon Department of Environmental Quality
CAPT Phil Nelson, Council of Marine Carriers, Pacific Region
David Heap, Superintendent, Marine Communications and Traffic Services, Canadian Coast Guard, Pacific
CAPT Ed Page, USCG (Ret), Executive Director, Marine Exchange of Alaska
Sven Eklof, U.S. Navy Region Northwest, Environmental Staff
Eric Johnson, Washington Public Ports Association
George Gallasso, Olympic Coast National Marine Sanctuary, NOAA NMS
Howard Seto, Teekay Shipping
Liz Wainwright, Portland Merchants Exchange (Jim Townley, Alternate)
Mic Dorrance, Port of Portland, Marine Division
Mike Munger, Cook Inlet Regional Citizens' Advisory Council
Rick Bryant, British Columbia Chamber of Shipping
CAPT Patrick Maloney, Council of American Master Mariners