


6 Ibid.

ADDITIONAL REFERENCES


**The Exxon Valdez Oil Spill was not simply a freak accident. While Exxon as the spiller should be held fully accountable and responsible for the spill and its impacts, there were myriad other factors that allowed it to happen. The oil industry, government agencies, elected officials and, to some extent, the citizens of Alaska also bore varying degrees of responsibility for conditions that allowed the spill to occur and failed to ensure prompt, effective cleanup. The oil industry failed to maintain adequate prevention and response systems. Regulatory agencies failed to protect public resources because of ineffective or inadequate monitoring, oversight and enforcement. State and federal elected officials were unwilling to pass laws strong enough to protect the environment and give regulatory agencies the funds they needed to protect public resources. Most Alaskans simply weren’t paying attention.**

The Exxon Valdez oil spill was caused by the ship’s master and crew. It could have been prevented by stronger prevention practices and vigilant government oversight. Once the spill occurred, better response planning could have lessened the impact.

This publication provides an overview of how factors that led to the nation’s worst oil spill have been addressed in the ensuing four years. Are the resources and communities of Prince William Sound and the Gulf of Alaska better protected from major oil spills than they were four years ago? Can Alaskans now breathe easier?

The Regional Citizens’ Advisory Council of Prince William Sound (RCAC) believes Prince William Sound and communities in the path of tanker traffic clearly are much better protected now. Yet, continued vigilance is needed to protect public resources.

**Conclusion**

RCAC believes Prince William Sound is better protected from major oil spills and better prepared for an effective initial response should a spill occur. Important steps have been taken to prevent oil spills from occurring. Crews are better trained and monitored. Masters are held to more stringent requirements. Measures have been instituted to increase chances of safe passage and reduce the possibility of accidents.

Several important prevention measures, such as double hulls on tankers and a study of human factors in tanker operations, will take time to implement. Getting laws on the books is only the first step and the federal rule-making process is slow. Many of the actual requirements and specific decisions have yet to be clarified and formalized in final regulations. Laws that appear strong when enacted can be weakened through vague regulations and inadequate funding. Laws must be implemented through clear, strong regulations and enforced by committed agencies that are given the funding necessary to monitor, oversee and enforce compliance.

Yet, industry and regulators are actively demonstrating the importance of learning from experience. During 1993, the Coast Guard and Alyeska’s SERVS division instituted safety changes in response to potential problems that came to light from the Braer spill in Shetland and the Kegon incident in 1992.

Response capabilities in Prince William Sound have improved dramatically. Alyeska, through its SERVS division, has done an excellent job of acquiring, stockpiling, testing and drilling spill response equipment and training personnel. The fact that there is room for improvement in some areas should not detract from the very substantial overall progress that has been made by both industry and regulatory agencies.

In the face of such progress, it is all the more alarming to see the State of Alaska backing off its commitment to oil spill prevention and response. Alaskans who care about the safe transportation of oil and environmental protection must defy ground gained since 1989, continue to monitor implementation of new laws, strengthen weak areas and close gaps that remain.
ADEQUACY OF NEARSHORE RESPONSE

The nearshore response plan for Prince William Sound is good, but more work needs to be done to implement and test it. Strategies must be developed, equipment must be tested and personnel trained and drilled. The nearshore response plans are expected to be addressed more fully in future major drills, beginning in fall 1993.

RCAC continues to be concerned about the adequacy of response capabilities and preparation outside Prince William Sound. Oil from the Exxon Valdez washed up on the beaches of Kodiak Island and the southern Kenai Peninsula, yet little has been done to assess the needs of those areas or provide them with response resources. There are no specific detailed plans describing what resources and equipment will be provided, where they will come from, and how they will be transported to the region within the time period required.

RCAC is also concerned about whether the storage capacity outlined in Alyeska's contingency plan will be sufficient to meet actual needs in the event of a spill. This is especially critical for nearshore response. Available storage capacity affects recovery of spilled oil, because skimming can proceed only so long as there is somewhere to store the recovered oil and water.

TRANSITION OF RESPONSE MANAGEMENT

Under its state-required contingency plan for tanker spills in Prince William Sound, Alyeska may transfer management of a spill response to the actual spiller, i.e., the vessel owner or operator. The transfer of spill management from Alyeska to the spiller must be approved by the Department of Environmental Conservation (DEC) and the U.S. Coast Guard.

However, RCAC has several concerns about the transition of response management. The criteria used to determine whether the responsible party is capable of managing the response are vague. Also vague are the criteria for determining whether the responsible party is financially able to respond. RCAC also questions whether responsible parties have the experience and training to take over in the middle of a crisis.

Changes since the spill

A serious threat is essential to ensure that protections aren't diluted and that gains are not lost as political memory dims.

Much has changed since 1989, mainly because of new and revised federal and state laws and regulations spurred by the Exxon Valdez oil spill. The goal of this publication is to provide the general public with information about many of the changes implemented, and some of the gaps that still remain, as a measure of how much the risk of major oil spills has been reduced.

This publication was produced by the RCAC, an independent non-profit organization formed after the Exxon Valdez oil spill to promote environmentally safe operation of the crude oil terminal in Valdez, Alaska, and the tankers it serves.

Under a contract with Alyeska Pipeline Service Company, RCAC monitors and advises Alyeska on terminal operations, spill prevention and response planning, and other environmental issues. RCAC conducts independent research, monitors regulatory activity and advises tanker owners and operators, regulatory agencies and the public, on issues related to oil transportation and its environmental impacts.

RCAC's 18 member organizations include communities affected by the Exxon Valdez oil spill and interest groups with a stake in the affected region.

The federal Oil Pollution Act of 1990 requires an industry-funded citizens' advisory group for Prince William Sound; the RCAC is certified as the entity that meets the requirement.

The views expressed in this document are those of the RCAC, which is solely responsible for the content.

—June 23, 1993
Historically, once oil is spilled on water it is never fully contained and recovered. Despite improvements in containment and cleanup technology, it has been virtually impossible to recover all the oil from a major spill, even in the most favorable conditions. Indeed, the best laid response plans in the world are no guarantee that any spilled oil will be recovered since severe weather conditions can render even a good response plan useless.

The first line of defense must be prevention.

Vessel Traffic and Navigation

The U.S. Coast Guard's Vessel Traffic Service (VTS) system functions as the waterway manager for major shipping including tankers traveling to and from the Valdez Marine Terminal. Numerous changes have been made to update and improve the system. These changes enhance the Coast Guard's ability to monitor and provide traffic advisories to inbound and outbound tankers from its Vessel Traffic Center in Valdez.

Radar coverage has been upgraded to provide better resolution in varying weather conditions and at an extended range.

The Exxon Valdez left the tanker lanes altogether to avoid ice. Now, if a vessel of 1,000 or more gross tons encounters ice, the one-way zone—which has always applied through the Valdez Narrows—is extended to Bligh Reef. The extended one-way zone allows a tanker to avoid ice by using any portion of the traffic separation scheme, without risk of collision with an on-coming vessel.

A third permanent position, watch supervisor, was added to the Vessel Traffic Center, to supervise the radar and radio watch standers. Qualifications and training for watch standers have also been upgraded and expanded.

Reporting and communication lacks of Reliable Weather Data

Lack of information about weather conditions in Prince William Sound and Hinchinbrook Entrance is a problem. Because of wind patterns and local topography, readings from the wind measuring station at Potato Point are not always a reliable gauge of actual conditions. Inadequate reporting stations through the Sound mean that frequently the only information available about wind and sea conditions is from a vessel already under way.

The problem is lack of funding. During the Exxon Valdez oil spill cleanup, the National Oceanic and Atmospheric Administration (NOAA) temporarily placed reporting stations at numerous sites in Prince William Sound, but later removed them. The Coast Guard has requested NOAA install weather stations at various locations in Prince William Sound to provide real time weather information to aid in better vessel traffic management.

Over-worked, Under-staffed Crews

While federal law now limits the work hours of tanker crews, questions about other human factors have yet to be answered. Meanwhile, the U.S. Congress has yet to ratify international protocols for crew certification and training, even though such protocols would improve the safety and technical training of crews on foreign vessels calling at U.S. ports.

Issues such as the adequacy, qualifications and training of crew are to be addressed in a U.S. Coast Guard study of tanker navigation safety standards. The study is expected to be released in 1995. Minimum requirements for pilots also need to be re-evaluated; that issue will also be addressed in a Coast Guard study.

Oversight

✓ Coast Guard given more authority & responsibility
✓ ADEQ given more authority and funding
✓ Citizens have a voice

Problem Areas:
✓ State politicians cutting back on spill programs
✓ Transfer of spill response to spillers (criteria vague)
June 1992, 16 positions were vacant or unfilled, representing about 18 percent of the division's total staff. Between 1989 and 1992, the legislature appropriated nearly $10 million from the spill response fund to establish a volunteer response corps and emergency depots. Yet little progress has been made to set it up and much of the funding has lapsed because it wasn't spent. 6

**Towing Equipment & Capabilities**

Although all laden oil tankers coming into Prince William Sound must carry special towing equipment, there is significant disparity in how the towing equipment is stowed. Stowage affects how quickly the equipment can be deployed. On some tankers, towing equipment can be deployed in 15 minutes or less with a deck crew of two. On others, however, deployment would take a crew of eight at least one hour, with power, and at least three hours, without power.

Although not currently a federal requirement, emergency towing equipment is being proposed under rules to implement provisions of OPA 90.

Efficient towing packages are only part of the solution. Any towing package would be of questionable value to a tanker that loses power in the Valdez Narrows, where the navigable water shrinks to a width of 0.5 nautical mile. A tanker disabled at the narrowest portion of the Narrows could hit the rocks in less than 10 minutes. Averting a grounding in that situation would depend on the escort tug's ability to push or pull the tanker away from the rocks. It is not clear that the assist tugs and ERVs now being used in the Narrows are capable of doing so.

A study co-sponsored by the RCAC, industry groups and regulatory agencies is investigating the adequacy of current towing practices and equipment, and escort vessel deployment. The study is expected to be completed by the end of 1993.

At the center of the issue is whether the more-maneuverable tractor tugs should be required in Prince William Sound. Unlike conventional tugs, tractor tugs could be more safely attached to a tanker before it enters the Narrows. The study findings will be considered by the Coast Guard when it develops federal regulations on escort requirements.

_reducing the chances of a spill_

_tions have been upgraded. New repeater towers installed by Alyeska allow better two-way communications between tankers and the Valdez Marine Terminal. Coast Guard personnel now track and plot tanker positions every three minutes while the tanker is in the Valdez Narrows and every six minutes elsewhere in the radar coverage area between the terminal and Bligh Reef. If a ship moves from one traffic lane into another, to avoid ice for example, fixes are taken every three minutes until the vessel re-enters its correct lane.

A new tracking system, to begin operating in mid-1994, will enable the Coast Guard to track tankers beyond Bligh Reef. The new system will give a visual display of all tankers between the terminal and approaches to Hinchinbrook Entrance. The new system will automatically transmit tanker position data, determined by a satellite-based global positioning system, back to the Vessel Traffic Center.

A fixed navigational aid tower has been installed on Bligh Reef. Studies required by federal law are investigating additional navigation aids and the adequacy of tanker navigation safety standards._
ordered escort vessels to stay within one-quarter mile of the tanker through the Narrows.

In the past, tankers could request permission to deviate from the traffic lanes altogether. Tankers now must remain in the traffic lanes, although they may request Coast Guard permission to move from one lane to the other if circumstances warrant.

Weather Considerations

Weather restrictions on tanker traffic were instituted after the Exxon Valdez oil spill. Now, the Coast Guard closes Port Valdez to tanker traffic if sustained winds are 40 knots or more. If sustained winds are between 30 and 40 knots, the Coast Guard requires additional tugs through the Valdez Narrows: a total of two tugs for tankers up to 100,000 dead weight tonnage (DWT) and three tugs for tankers over 100,000 DWT. Alyeska suspends escorts altogether in sustained winds over 40 knots, because such weather would render spill response impractical, if not impossible. If escort vessels encounter such winds while under way, they normally proceed. In more severe weather conditions, escorts may turn back, but that occurs infrequently (see "Areas of Concern").

While severe weather was not a factor in the grounding of the Exxon Valdez, it has been a factor in other major spills, most recently the Braer off Scotland's Shetland Islands. After the Braer incident, the Coast Guard Captain of the Port in Valdez evaluated conditions at Hinchinbrook Entrance and instituted new weather restrictions there. Outbound laden tankers may not transit Hinchinbrook Entrance if sustained winds in the Gulf of Alaska are 60 knots or more, or if seas reach 15 feet or greater.

Tanker Crews

Until April 1989, signs of alcohol use did not prevent tanker crews

Areas Of Concern

gaps still remaining

State Backsliding

Progress made by the State of Alaska since 1989 is in jeopardy. ADEC's ability to implement monitoring, oversight, prevention and response is being hobbled by a legislature and administration sympathetic to oil industry concerns.

Much of the state's spill prevention and response efforts are funded by a nickel-per-barrel conservation surcharge on oil producers. The surcharge was instituted after the Exxon Valdez spill, in part to ensure a long-term funding source for the state's spill prevention and response programs and to set aside a reserve for use in case of a future spill. The surcharge is levied only until the fund reaches $50 million. But continuous draws from the fund by the legislature have kept it from reaching that level, requiring the industry to keep paying into it.

Questionable legislative appropriations from the fund—to pay for a new state ferry, for example—have fueled efforts to narrow how the fund can be used. In the 1993 legislative session, oil industry lobbyists attempted to restrict the fund to actual spill response. Though unsuccessful in 1993, those efforts are expected to continue in 1994.

While the bill didn't pass, the message was not lost on the legislature. Most of the Fiscal Year 1994 budget cuts made in ADEC's Spill Prevention and Response Division (SPAR) are projects and programs paid for out of that fund. The result will be significant delays in programs designed to mitigate environmental impacts of terminal operations, prevent another major spill and improve response, should oil spills occur. By reducing those programs, the legislature ensured that the fund will reach its $50 million cap sooner, resulting in less industry taxes.

Implementation by State Agencies

Separate from political pressure on the response fund, there have been staffing and organizational problems. Positions in ADEC's Spill Prevention and Response (SPAR) Division have gone unfilled.
STATE ROLE IN SPILL RESPONSE

After the Exxon Valdez oil spill, an existing spill response fund was expanded to ensure that reserves would be available to respond to a major oil spill and provide a long-term funding source for the state's spill prevention and response programs. The money for this expanded role comes from a five-cent conservation surcharge on every barrel of oil produced in Alaska. The surcharge ceases when the fund reaches $50 million.

One of the projects to be paid for from the fund is a volunteer response corps and emergency response depots to ensure prompt response in the event of another major spill. However, little progress has been made to set them up (see "Areas of concern").

OTHER FEDERAL CHANGES

To ensure that money will be available to pay for responding to and cleaning up a major spill, the federal Oil Pollution Act required establishment of a $1 billion oil spill liability trust fund, funded by the oil industry.

The Oil Pollution Act strengthened federal authority to order spill cleanup action and requires the Coast Guard to direct spill response actions when any spill poses a risk to public health or safety. It also provides tougher criminal penalties and higher civil penalties for the spiller.

CITIZEN PARTICIPATION

Local citizens are involved in actual spill response and drills in several different ways. One of the jobs of the RCAC is to monitor the adequacy of spill response. RCAC representatives convey local concerns, advice and observations to response officials and help communicate developments in the response effort to local communities.

from returning to their vessels through the terminal. Under new alcohol screening procedures instituted by Alyeska, all tanker captains are given breath tests an hour before sailing. Crew members suspected of consuming alcohol are tested; any with blood alcohol content of .04 percent or greater are denied access to the terminal and their vessel.

A state-certified ship's pilot must be on board all tankers transiting between Bligh Reef and the terminal. A federally-licensed pilot or two licensed deck officers must be on watch on the bridge while the vessel is under way in Prince William Sound between Bligh Reef and Seal Rocks. Federal law also now limits the number of hours crew members may work, to reduce the risk of fatigue-induced accidents (see "Areas of concern").

TANKER ESCORTS

Spill prevention measures begin before a tanker leaves the terminal. State regulations now require that all tankers docked at the Valdez Marine Terminal be surrounded with containment boom while cargo is transferred.

The Coast Guard has always required laden tankers to have one tug escort through the Valdez Narrows. Now, the State of Alaska requires each laden tanker to be accompanied to Hinchinbrook Entrance by at least two escort vessels. Up to two additional tugs may be required through the Valdez Narrows, depending on weather conditions and vessel size. Federal law, under the Oil Pollution Act, also requires two escort vessels in Prince William Sound. The Coast Guard is writing regulations to implement that requirement.

The escort vessels have two functions: to assist a tanker disabled or in trouble and to provide the first line of defense should a spill occur. At least one of the escorts is a spe-
cially-fitted Escort Response Vessel, or ERV, equipped with containment boom, oil skimmers, a work boat to deploy boom, storage capacity and a trained crew. The second escort may be another ERV or a tug.

Since 1980, when the tanker Prince William Sound drifted powerless for approximately 17 hours, tankers calling at the terminal have carried towing packages to facilitate hook up with an escort vessel (see “Areas of concern”).

**Double-Hulls**

One of the most important steps taken to prevent and reduce oil spills is the federal requirement that by 2015, all tankers in U.S. waters must have double hulls. Double hulls are to be phased in, with certain vessels to be converted or scrapped on schedules based on size and age of the vessel.

Double hulls are important because studies indicate that double hulls could have prevented five of the six major oil spills in Alaskan waters between 1975 and 1990. In the case of the Exxon Valdez, one study said a double hull could have reduced the amount of oil spilled by 60 to 80 percent.¹

Double-hulled vessels existed long before 1989, and more have been built since then. However, no double-hulled tankers are currently used in the trans-Alaska pipeline system (TAPS) trade. Most of the tankers calling at the terminal in Valdez were built in the 1970s. Approximately one-third of the tankers now coming to Valdez have double bottoms.²

On three of the double-bottom tankers, the wing tanks are left empty, making them de facto double-hulled tankers.

**Tanker Inspections**

The structural integrity of the tanker Exxon Valdez was not an issue in its grounding. However, in 1988, a report issued by the Coast Guard identified the TAPS trade fleet as disproportionately affected by structural failures. The problem was underscored in January 1989, when the tanker Thompson Pass spilled 71,000 gallons of crude oil at the terminal because of cracks in its hull. The Coast Guard now requires more stringent inspections of tankers vulnerable to structural failure.

This ICS integrates the party responsible for the spill, the State of Alaska and the Coast Guard in a unified command structure that expands according to need. It also establishes a pre-determined decision-making process and a common language that significantly reduces confusion and misunderstandings among personnel from different organizations. The ICS structure has been adapted by industry and government agencies to define and coordinate their roles and responsibilities in the event of a spill. The ICS structure has been tested and practiced extensively in drills.

Other requirements added since 1989 put more emphasis on shoreline protection, identification of sensitive areas such as hatcheries, and wildlife protection. A new term was coined – Nearshore Response – to describe the effort to protect shorelines threatened by spilled oil that has escaped initial containment.

Nearshore response is a major component of spill response, in which local personnel, knowledge and resources can be used to protect critical resources and shorelines. Industry groups, RCAC and regulatory agencies have worked cooperatively to develop nearshore response plans. The nearshore response plan for Prince William Sound appears strong, but strategies for implementing it still need to be developed (see “Areas of concern”).

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¹ This is based on the assumption that double hulls would have been required by law in 1989.
² These are the two Alaska tankers that have double bottoms.
fishing boats and their crews have undergone training in basic response. The fishing vessels, based in communities in Prince William Sound, the Kenai Peninsula and Kodiak Island, are under contract with Alyeska to respond according to a pre-determined call-out procedure.

Spill containment and repair equipment is stockpiled at five fish hatcheries in Prince William Sound. Five community response centers also have been established in Prince William Sound, at Chignik, Cordova, Tatitlek, Whittier and Valdez. Three other centers have been established in Kodiak, Seldovia and Seward. Each center is responsible for coordinating emergency response, manpower and equipment. Spill response equipment is pre-packaged at the five community response centers in Prince William Sound, and at Naked Island and Fort Eichers.

Two airborne dispersant delivery systems are maintained at Anchorage International Airport, for rapid mobilization if dispersant use is approved.

Storage capacity for recovered oil was a problem in the 1989 recovery effort. Boats would pick up the emulsified oil, only to find there was nowhere to put it. Alyeska now maintains storage capacity, much of it on barges, for nearly 20 million gallons of recovered oil and water mixture (see "Areas of concern").

**DRILLS, MANAGEMENT AND OTHER ASPECTS OF RESPONSE**

Spill drills enable response personnel to become knowledgeable and proficient in the strengths and weaknesses of equipment and procedures. Major, all-systems drills are conducted twice a year, as required by the state and the Coast Guard. These major drills include state and federal agencies, fishing vessels, tanker operators and the RCAC. In 1992, Alyeska conducted nine drills at the terminal, including two surprise drills. Smaller equipment exercises are held much more frequently, often on a weekly basis.

An important aspect of spill response implemented since 1989 is use of the National Interagency Incident Management System (NIIMS), an incident command system (ICS) first developed by fire fighters in California to coordinate management, resources and roles during an emergency response.

**CITIZEN INVOLVEMENT**

The Exxon Valdez oil spill generated a shift in the oil industry's attitude about the need to communicate with and involve local citizens in issues and decisions that affect their lives. That change in attitude was exemplified by former Alyeska President James Hermiller, who in the summer of 1989, actively supported formation of a citizens' advisory group funded by Alyeska.

Citizens are involved in preventing and responding to oil spills through the RCAC. There is a similar citizens' group for Cook Inlet and another is forming among citizens of Northwest Alaska. The RCAC has 18 member organizations consisting of communities affected by the Exxon Valdez oil spill and other interest groups with a stake in the region.

The RCAC monitors terminal and tanker operations in the area impacted by the Exxon Valdez oil spill, conducts independent research and advises industry and government on ways to prevent oil spills and respond effectively if spills do occur. The RCAC is funded through a contract with Alyeska Pipeline Service Company. The RCAC, or a similar citizens' advisory group, is required by the federal Oil Pollution Act of 1990 (OPA 90) as a demonstration program that eventually may be applied in other U.S. ports.

Citizen advisory groups do not necessarily prevent complacency among the general public, but they can serve as an early warning system to alert industry, government
and the public of problem areas.

Prior to 1989 there was no mechanism, other than public hearings required by regulatory agencies, for citizens to advise the oil industry or otherwise speak directly on operations that affect their communities and livelihoods. Earlier attempts by Prince William Sound residents to give their input to oil industry representatives were generally met with negative responses.

Alyeska and others in the oil industry have become more sensitive to and communicate better with Alaskans in coastal communities, where residents’ lives depend on the Sound’s resources.

**Monitoring and Oversight by Regulatory Agencies**

The Alaska Department of Environmental Conservation (ADEC) and the U.S. Coast Guard are the two agencies most directly responsible for oversight and monitoring of the Valdez Marine Terminal and oil tanker traffic. After the Exxon Valdez oil spill, both agencies were criticized for failing to either implement or enforce adequate prevention measures.

Changes have been made in both agencies.

At the state level, the Exxon Valdez oil spill focused public and political attention on the need for ADEC to have the authority and funding to monitor and oversee terminal and tanker operations, programs which had been under-funded throughout the late 1970s and 1980s.

After 1989, state funding increased significantly for spill drills, review and approval of contingency plans, and faculty and vessel inspections. Oil-related functions were consolidated into one division, called Spill Prevention and Response (SPAR). State legislation passed in 1990 provided the authority, resources and funding that ADEC needed to effectively monitor and oversee industry operations and implement spill prevention and response programs.

ADEC now has the authority, which it didn’t have before, to require and enforce prevention measures as a condition for approval of contingency plans. Those measures include more training, more equipment, more inspection and maintenance of equipment, better record-keeping.

tow or assist tankers, carry spill response equipment and contain, recover and store oil. The escort vessels stay within one-half mile of the laden tanker and maintain radio communication with the tanker bridge until the tanker reaches Seal Rocks, outside Hinchinbrook Entrance.

Trained response crews are on duty around the clock and a response fleet is on standby alert whenever a laden tanker is transiting the Sound. SERVS employs approximately 200 trained personnel; another 60 people comprise Alyeska’s crisis management team.

Four task forces, each with a trained crew and a large barge with two skimming systems on-board, are stationed at three sites: one each at Naked Island and Cape Hinchinbrook and two in Port Valdez. SERVS’ response resources include 33 miles of containment boom, 37 high-volume skimming systems, barges to receive recovered oil and water mixture, and equipment to pump and transfer oil-water mix. Equipment is tested in drills and exercises, to reduce the chances of confusion and surprises in an actual incident.

Local fishing vessels are part

Alyeska’s planned response to a tanker spill. Private vessels are used, among other things, to transport response equipment, deploy and tend boom, and mobilize pre-staged equipment to protect fish hatcheries. Alyeska has provided comprehensive response training to about 35 fishing boats and their crews. Another 300-plus
The first three days after the Exxon Valdez oil spill afforded nearly ideal weather for oil recovery. Seas and winds were calm. But the equipment wasn't ready. Seventeen hours after the grounding, neither the leading edge of the spill nor the grounded tanker had been boomed and the few skimmers on-scene were operating ineffectively. Two hours later, skimming was forced to stop, pending arrival of more storage capacity. Throughout the first few days, debate raged about use of dispersants. Exxon argued for widespread dispersant use, yet didn't have either enough dispersant or the equipment to do the job.

The situation now is quite different. Prince William Sound is home to Ayeska's Ship Escort and Response Vessel System (SERVS), among the top oil spill response forces in the world.

SERVS has two functions: to assist tankers in safe navigation through Prince William Sound and respond to a tanker problem or spill. The escort side of SERVS' fleet consists of five escort response vessels (ERVs) and three tugs. The ERVs are equipped to and specific requirements for laden tankers.

However, the progress appears to be woefully short-lived, since ADEC is under attack again and many of the gains made are now at risk (see "Areas of concern").

The Coast Guard is the federal agency most affected by the Exxon Valdez. As a result of the problems that emerged from the spill, the Coast Guard has a more direct role in spill prevention and response and much greater regulatory oversight of the oil transportation industry. It is responsible for implementing most of the new prevention measures required by the Oil Pollution Act of 1990 (OPA 90).
Reducing the Impacts of a Spill

Prevention measures reduce the incidence and sometimes the severity of oil spills. But until prevention efforts become fail-safe, the industry, regulatory agencies and the public must be prepared to respond to spills that do occur. Oil transportation poses risks to the environment. It is incumbent upon those who handle and carry crude oil, as well as regulatory agencies and the public, to make sure that spilled oil is contained and recovered to the greatest extent humanly possible.

The speed and effectiveness of responding to an oil spill hinge on the availability of equipment, resources and trained personnel. Ultimately, responding to a spill depends on planning, preparation and favorable weather.

Contingency Plans

Anyone who handles or transports crude oil or refined product is a potential spiller. Potential spillers cannot operate without an approved contingency plan for preventing and responding to a spill. What's in the plan and provisions for drills, training, acquisition of equipment, etc. is determined by state and federal laws and regulations. Requirements vary based on type of vessel or facility, location, and amount and type of cargo carried or handled.

Contingency plans were required before. But since 1989, state and federal agencies have expanded plan requirements and changed some of the assumptions. Those who must have contingency plans to operate—called “plan holders”—must provide greater assurances that personnel are being trained, that equipment and resources are available and can be mobilized quickly, and that all players have practiced their roles in preparation for an actual spill.

The size of spill assumed in a response plan makes a tremendous difference in the resources and equipment that must be available. Alyeska's 1987 contingency plan, approved by the state, said it was highly unlikely that a spill of 8.4 million gallons (three-quarters the size of the Exxon Valdez spill) would occur and reasoned that "Catastrophic events of this nature are further reduced because the majority of tankers calling on Port Valdez are of American registry and all of these are piloted by licensed masters or pilots."

Both state and federal law now require planning for larger potential spills than in the past, and require more spill response equipment to be immediately available.

Plan holders must have enough equipment immediately available to deal with a spill of 300,000 barrels of oil within 72 hours. Plan holders must also plan for a much larger spill based on a complicated formula that includes credit for prevention measures.

As the consortium that operates the trans-Alaska pipeline and terminal for its seven owner companies, Alyeska is the plan holder for spills on the pipeline and at the terminal. In Prince William Sound, the tanker owner or operator would be the actual spiller and therefore ultimately responsible, but Alyeska is charged by the State of Alaska with providing the initial response. Federal law requires the tanker operator to submit vessel response plans, but the vessel operator may contract with Alyeska.

Tanker owners and operators must have their own approved contingency plans, but state law requires them to contract with Alyeska to provide the initial response described in their plans. Under these contracts, Alyeska manages the spill response for up to the first 72 hours after a spill. After that, it may transfer management of the response to the spiller, so long as the U.S. Coast Guard and the Alaska Department of Environmental Conservation agree that the spiller or its representative is ready to take over.
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The size of spill assumed in a response plan makes a tremendous difference in the resources and equipment that must be available. Alyeska's 1987 contingency plan, approved by the state, said it was highly unlikely that a spill of 8.4 million gallons (three-quarters the size of the Exxon Valdez spill) would occur and reasoned that "Catastrophic events of this nature are further reduced because the majority of tankers calling on Port Valdez are of American registry and all of these are piloted by licensed masters or pilots."

Both state and federal law now require planning for larger potential spills than in the past, and require more spill response equipment to be immediately available.

Plan holders must have enough equipment immediately available to deal with a spill of 300,000 barrels of oil within 72 hours. Plan holders must also plan for a much larger spill based on a complicated formula that includes credit for prevention measures.

As the consortium that operates the trans-Alaska pipeline and terminal for its seven owner companies, Alyeska is the plan holder for spills on the pipeline and at the terminal. In Prince William Sound, the tanker owner or operator would be the actual spiller and therefore ultimately responsible, but Alyeska is charged by the State of Alaska with providing the initial response. Federal law requires the tanker operator to submit vessel response plans, but the vessel operator may contract with Alyeska.

Tanker owners and operators must have their own approved contingency plans, but state law requires them to contract with Alyeska to provide the initial response described in their plans. Under these contracts, Alyeska manages the spill response for up to the first 72 hours after a spill. After that, it may transfer management of the response to the spiller, to prepare for the Exxon Valdez spill that occurred.
The first three days after the Exxon Valdez oil spill afforded nearly ideal weather for oil recovery. Seas and winds were calm. But the equipment wasn’t ready. Seventeen hours after the grounding, neither the leading edge of the spill nor the grounded tanker had been boomed and the few skimmers on-scene were operating ineffectively. Two hours later, skimming was forced to stop, pending arrival of more storage capacity. Throughout the first few days, debate raged about use of dispersants. Exxon argued for widespread dispersant use, yet didn’t have either enough dispersant or the equipment to do the job.

The situation now is quite different. Prince William Sound is home to Ayleska’s Ship Escort and Response Vessel System (SERVS), among the top oil spill response forces in the world. SERVS has two functions: to assist tankers in safe navigation through Prince William Sound and respond to a tanker problem or spill. The escort side of SERVS’ fleet consists of five escort response vessels (ERVs) and three tugs. The ERVs are equipped to

and specific requirements for laden tankers.

However, the progress appears to be woefully short-lived, since ADEC is under attack again and many of the gains made are now at risk (see "Areas of concern").

The Coast Guard is the federal agency most affected by the Exxon Valdez. As a result of the problems that emerged from the spill, the Coast Guard has a more direct role in spill prevention and response and much greater regulatory oversight of the oil transportation industry. It is responsible for implementing most of the new prevention measures required by the Oil Pollution Act of 1990 (OPA 90).
and the public of problem areas.

Prior to 1989 there was no mechanism, other than public hearings required by regulatory agencies, for citizens to advise the oil industry or otherwise speak directly on operations that affect their communities and livelihoods. Earlier attempts by Prince William Sound residents to give their input to oil industry representatives were generally met with negative responses.

Alyeska and others in the oil industry have become more sensitive to and communicate better with Alaskans in coastal communities, where residents’ lives depend on the Sound’s resources.

**Monitoring and Oversight by Regulatory Agencies**

The Alaska Department of Environmental Conservation (ADEC) and the U.S. Coast Guard are the two agencies most directly responsible for oversight and monitoring of the Valdez Marine Terminal and oil tanker traffic. After the Exxon Valdez oil spill, both agencies were criticized for failing to either implement or enforce adequate prevention measures.

Changes have been made in both agencies.

At the state level, the Exxon Valdez oil spill focused public and political attention on the need for ADEC to have the authority and funding to monitor and oversee terminal and tanker operations, programs which had been under-funded through the late 1970s and 80s.

After 1989, state funding increased significantly for spill drills, review and approval of contingency plans, and facility and vessel inspections. Oil-related functions were consolidated into one division, called Spill Prevention and Response (SPAR). State legislation passed in 1990 provided the authority, resources and funding that ADEC needed to effectively monitor and oversee industry operations and implement spill prevention and response programs.

ADEC now has the authority, which it didn’t have before, to require and enforce prevention measures as a condition for approval of contingency plans. Those measures include more training, more equipment, more inspection and maintenance of equipment, better record-keeping of Alyeska’s planned response to a tanker spill. Private vessels are used, among other things, to transport response equipment, deploy and tend boom, and mobilize pre-staged equipment to protect fish hatcheries. Alyeska has provided comprehensive response training to about 35 fishing boats and their crews. Another 300-plus
fishing boats and their crews have undergone training in basic response. The fishing vessels, based in communities in Prince William Sound, the Kenai Peninsula and Kodiak Island, are under contract with Alyeska to respond according to a pre-determined call-out procedure.

Spill containment and removal equipment is stockpiled at five fish hatcheries in Prince William Sound. Five community response centers also have been established in Prince William Sound, at Chenega, Cordova, Tattilek, Whittier and Valdez. Three other centers have been established in Kodiak, Seldovia and Seward. Each center is responsible for coordinating emergency responses, manpower and equipment. Spill response equipment is pre-positioned at the five community response centers in Prince William Sound, and at Naked Island and Port Echets.

Two airborne dispersant delivery systems are maintained at Anchorage International Airport, for rapid mobilization if dispersant use is approved.

Storage capacity for recovered oil was a problem in the 1989 recovery effort. Boats would pick up the emulsified oil, only to find there was nowhere to put it. Alyeska now maintains storage capacity, much of it on barges, for nearly 20 million gallons of recovered oil and water mixture (see "Areas of concern").

Drills, Management and Other Aspects of Response

Spill drills enable response personnel to become knowledgeable and proficient in the strengths and weaknesses of equipment and procedures. Major, all-systems drills are conducted twice a year, as required by the state and the Coast Guard. These major drills include state and federal agencies, fishing vessels, tanker owners and operators and the RCAC. In 1992, Alyeska conducted nine drills at the terminal, including two surprise drills. Smaller equipment exercises are held much more frequently, often on a weekly basis.

An important aspect of spill response implemented since 1989 is use of the National Interagency Incident Management System (NIIMS), an incident command system (ICS) first developed by fire fighters in California to coordinate management, resources and roles during an emergency response.

Citizen Involvement

The Exxon Valdez oil spill generated a shift in the oil industry's attitude about the need to communicate with and involve local citizens in issues and decisions that affect their lives. That change in attitude was exemplified by former Alyeska President James Hermiller, who in the summer of 1989, actively supported formation of a citizens' advisory group funded by Alyeska.

Citizens are involved in preventing and responding to oil spills through the RCAC. There is a similar citizens' group for Cook Inlet and another is forming among citizens of Northwest Alaska. The RCAC has 18 member organizations consisting of communities affected by the Exxon Valdez oil spill and other interest groups with a stake in the region.

The RCAC monitors terminal and tanker operations in the area impacted by the Exxon Valdez oil spill, conducts independent research and advises industry and government on ways to prevent oil spills and respond effectively if spills do occur. The RCAC is funded through a contract with Alyeska Pipeline Service Company. The RCAC, or a similar citizens' advisory group, is required by the federal Oil Pollution Act of 1990 (OPA 90) as a demonstration program that eventually may be applied in other U.S. ports.

Citizen advisory groups do not necessarily prevent complacency among the general public, but they can serve as an early warning system to alert industry, government
cially-fitted Escort Response Vessel, or ERV, equipped with containment boom, oil skimmers, a work boat to deploy boom, storage capacity and a trained crew. The second escort may be another ERV or a tug.

Since 1980, when the tanker Prince William Sound drifted powerless for approximately 17 hours, tankers calling at the terminal have carried towing packages to facilitate hook up with an escort vessel (see "Areas of concern").

DOUBLE-HULLS

One of the most important steps taken to prevent and reduce oil spills is the federal requirement that by 2015, all tankers in U.S. waters must have double hulls. Double hulls are to be phased in, with certain vessels to be converted or scrapped on schedules based on size and age of the vessel.

Double hulls are important because studies indicate that double hulls could have prevented five of the six major oil spills in Alaskan waters between 1975 and 1990. In the case of the Exxon Valdez, one study said a double hull could have reduced the amount of oil spilled by 60 to 80 percent.1

Double-hulled vessels existed long before 1989, and more have been built since then. However, no double-hulled tankers are currently used in the trans-Alaska pipeline system (TAPS) trade. Most of the tankers calling at the terminal in Valdez were built in the 1970s. Approximately one-third of the tankers now coming to Valdez have double bottoms.2 On three of the double-bottom tankers, the wing tanks are left empty, making them de facto double-hulled tankers.

TANKER INSPECTIONS

The structural integrity of the tanker Exxon Valdez was not an issue in its grounding. However, in 1988, a report issued by the Coast Guard identified the TAPS trade fleet as disproportionately affected by structural failures. The problem was underscored in January 1989, when the tanker Thompson Pass spilled 71,000 gallons of crude oil at the terminal because of cracks in its hull. The Coast Guard now requires more stringent inspections of tankers vulnerable to structural failure.

This ICS integrates the party responsible for the spill, the State of Alaska and the Coast Guard in a unified command structure that expands according to need. It also establishes a pre-determined decision-making process and a common language that significantly reduces confusion and misunderstandings among personnel from different organizations. The ICS structure has been adapted by industry and government agencies to define and coordinate their roles and responsibilities in the event of a spill. The ICS structure has been tested and practiced extensively in drills.

Other requirements added since 1989 put more emphasis on shoreline protection, identification of sensitive areas such as hatcheries, and wildlife protection. A new term was coined – Nearshore Response – to describe the effort to protect shorelines threatened by spilled oil that has escaped initial containment.

Nearshore response is a major component of spill response, in which local personnel, knowledge and resources can be used to protect critical resources and shorelines. Industry groups, RCAC and regulatory agencies have worked cooperatively to develop nearshore response plans. The nearshore response plan for Prince William Sound appears strong, but strategies for implementing it still need to be developed (see "Areas of concern").
STATE ROLE IN SPILL RESPONSE

After the Exxon Valdez oil spill, an existing spill response fund was expanded to ensure that reserves would be available to respond to a major oil spill and provide funding for the state's spill prevention and response programs. The money for this expanded role comes from a five-cent conservation surcharge on every barrel of oil produced in Alaska. The surcharge ceases when the fund reaches $50 million.

One of the projects to be paid for from this fund is the volunteer response corps and emergency response depots to ensure prompt response in the event of another major spill. However, little progress has been made to set them up (see "Areas of concern").

OTHER FEDERAL CHANGES

To ensure that money will be available to pay for responding to and cleaning up a major spill, the federal Oil Pollution Act required establishment of a $1 billion oil spill liability trust fund, funded by the oil industry. The Oil Pollution Act strengthened federal authority to order spill cleanup action and requires the Coast Guard to direct spill response actions when any spill poses a risk to public health or safety. It also provides tougher criminal penalties and higher civil penalties for the spiller.

CITIZEN PARTICIPATION

Local citizens are involved in actual spill response and drills in several different ways. One of the jobs of the RCAC is to monitor the adequacy of spill response. RCAC representatives convey local concerns, advice and observations to response officials and help communicate developments in the response effort to local communities.

from returning to their vessels through the terminal. Under new alcohol screening procedures instituted by Alyeska, all tanker captains are given breath tests an hour before sailing. Crew members suspected of consuming alcohol are tested; any with blood alcohol content of .04 percent or greater are denied access to the terminal and their vessel.

A state-certified ship's pilot must be on board all tankers transiting between Bligh Reef and the terminal. A federally-licensed pilot or two licensed deck officers must be on watch on the bridge while the vessel is under way in Prince William Sound between Bligh Reef and Seal Rocks. Federal law also now limits the number of hours crew members may work, to reduce the risk of fatigue-induced accidents (see "Areas of concern").

TANKER ESCORTS

Spill prevention measures begin before a tanker leaves the terminal. State regulations now require that all tankers docked at the Valdez Marine Terminal be surrounded with containment boom while cargo is transferred.

The Coast Guard has always required laden tankers to have one tug escort through the Valdez Narrows. Now, the State of Alaska requires each laden tanker to be accompanied to Hinchinbrook Entrance by at least two escort vessels. Up to two additional tugs may be required through the Valdez Narrows, depending on weather conditions and vessel size. Federal law, under the Oil Pollution Act, also requires two escort vessels in Prince William Sound. The Coast Guard is writing regulations to implement that requirement.

The escort vessels have two functions: to assist a tanker disabled or in trouble and to provide the first line of defense should a spill occur. At least one of the escorts is a spe-
ordered escort vessels to stay within one-quarter mile of the tanker through the Narrows.

In the past, tankers could request permission to deviate from the traffic lanes altogether. Tankers now must remain in the traffic lanes, although they may request Coast Guard permission to move from one lane to the other if circumstances warrant.

**Weather Considerations**

Weather restrictions on tanker traffic were instituted after the Exxon Valdez oil spill. Now, the Coast Guard closes Port Valdez to tanker traffic if sustained winds are 40 knots or more. If sustained winds are between 30 and 40 knots, the Coast Guard requires additional tugs through the Valdez Narrows: a total of two tugs for tankers up to 100,000 dead weight tonnage (DWT) and three tugs for tankers over 100,000 DWT. Alaska suspends escorts altogether in sustained winds over 40 knots, because such weather would render spill response impractical, if not impossible. If escort vessels encounter such winds while under way, they normally proceed. In more severe weather conditions, escorts may turn back, but that occurs infrequently (see "Areas of concern").

While severe weather was not a factor in the grounding of the Exxon Valdez, it has been a factor in other major spills, most recently the Braer off Scotland's Shetland Islands. After the Braer incident, the Coast Guard Captain of the Port in Valdez evaluated conditions at Hinchinbrook Entrance and instituted new weather restrictions there. Outbound laden tankers may not transit Hinchinbrook Entrance if sustained winds in the Gulf of Alaska are 60 knots or more, or if seas reach 15 feet or greater.

**Tanker Crews**

Until April 1989, signs of alcohol use did not prevent tanker crews legislative session, oil industry lobbyists attempted to restrict the fund to actual spill response. Though unsuccessful in 1993, those efforts are expected to continue in 1994.

While the bill didn't pass, the message was not lost on the legislature. Most of the Fiscal Year 1994 budget cuts made in ADEC's Spill Prevention and Response Division (SPAR) are projects and programs paid for out of that fund. The result will be significant delays in programs designed to mitigate environmental impacts of terminal operations, prevent another major spill and improve response should oil spills occur. By reducing those programs, the legislature ensured that the fund will reach its $50 million cap sooner, resulting in less industry taxes.

**Implementation by State Agencies**

Separate from political pressure on the response fund, there have been staffing and organizational problems. Positions in ADEC's Spill Prevention and Response (SPAR) Division have gone unfilled. As of...
June 1992, 16 positions were vacant or unfilled, representing about 18 percent of the division’s total staff. 5 Between 1989 and 1992, the legislature appropriated nearly $10 million from the spill response fund to establish a volunteer response corps and emergency depots. Yet little progress has been made to set it up and much of the funding has lapsed because it wasn’t spent. 6

**Towing Equipment & Capabilities**

Although all laden oil tankers coming into Prince William Sound must carry special towing equipment, there is significant disparity in how the towing equipment is stowed. Stowage affects how quickly the equipment can be deployed. On some tankers, towing equipment can be deployed in 15 minutes or less with a deck crew of two. On others, however, deployment would take a crew of eight at least one hour, with power, and at least three hours, without power.

Although not currently a federal requirement, emergency towing equipment is being proposed under rules to implement provisions of OPA 90.

Efficient towing packages are only part of the solution. Any towing package would be of questionable value to a tanker that loses power in the Valdez Narrows, where the navigable water shrinks to a width of 0.5 nautical mile. A tanker disabled at the narrowest portion of the Narrows could hit the rocks in less than 10 minutes. Averting a grounding in that situation would depend on the escort tug’s ability to push or pull the tanker away from the rocks. It is not clear that the assist tugs and ERVs now being used in the Narrows are capable of doing so.

A study co-sponsored by the RCAC, industry groups and regulatory agencies is investigating the adequacy of current towing practices and equipment, and escort vessel deployment. The study is expected to be completed by the end of 1993.

At the center of the issue is whether the more-maneuverable tractor tugs should be required in Prince William Sound. Unlike conventional tugs, tractor tugs could be more safely attached to a tanker before it enters the Narrows. The study findings will be considered by the Coast Guard when it develops federal regulations on escort requirements.

**Reducing the chances of a spill**

Operations have been upgraded. New repeater towers installed by Alyeska allow better two-way communications between tankers and the Valdez Marine Terminal. Coast Guard personnel now track and plot tanker positions every three minutes while the tanker is in the Valdez Narrows and every six minutes elsewhere in the radar coverage area between the terminal and Bligh Reef. If a ship moves from one traffic lane into another, to avoid ice for example, fixes are taken every three minutes until the vessel re-enters its correct lane.

A new tracking system, to begin operating in mid-1994, will enable the Coast Guard to track tankers beyond Bligh Reef. The new system will provide a visual display of all tankers between the terminal and approaches to Hinchinbrook Entrance. The new system will automatically transmit tanker position data, determined by a satellite-based global positioning system, back to the Vessel Traffic Center.

A fixed navigational aid tower has been installed on Bligh Reef. Studies required by federal law are investigating additional navigation aids and the adequacy of tanker navigation safety standards.

**Vessel Traffic System**

- Traffic lanes
- Watch supervisor added
- More radar coverage
- Navigational aid—Bligh Reef
- Tracking system (to come)

**Speed Restrictions**

The Exxon Valdez was traveling, unaccompanied by an escort vessel, at 12 knots and accelerating when it approached icebergs northwest of Bligh Reef. Tankers now must be accompanied by escort vessels and must stay within one-half mile of the escorts. Alyeska limits the maximum speed of the escort vessels to 10 knots in Prince William Sound, thereby indirectly limiting the speed of the tanker, as well.

Since 1977, the U.S. Coast Guard has restricted laden tankers to a maximum speed of 6 knots through the Valdez Narrows. After a steering malfunction in 1992 on the tanker Kenai, Alyeska
Historically, once oil is spilled on water it is never fully contained and recovered. Despite improvements in containment and cleanup technology, it has been virtually impossible to recover all the oil from a major spill, even in the most favorable conditions. Indeed, the best-laid response plans in the world are no guarantee that any spilled oil will be recovered since severe weather conditions can render even a good response plan useless.

The first line of defense must be prevention.

Vessel Traffic and Navigation

The U.S. Coast Guard's Vessel Traffic Service (VTS) system functions as the waterway manager for major shipping including tankers traveling to and from the Valdez Marine Terminal. Numerous changes have been made to update and improve the system. These changes enhance the Coast Guard's ability to monitor and provide traffic advisories to inbound and outbound tankers from its Vessel Traffic Center in Valdez.

Radar coverage has been upgraded to provide better resolution in varying weather conditions and at an extended range.

The Exxon Valdez left the tanker lanes altogether to avoid ice. Now, if a vessel of 1,000 or more gross tons encounters ice, the one-way zone—which has always applied through the Valdez Narrows—is extended to Bligh Reef. The extended one-way zone allows a tanker to avoid ice by using any portion of the traffic separation scheme, without risk of collision with an on-coming vessel.

A third permanent position, watch supervisor, was added to the Vessel Traffic Center, to supervise the radar and radio watch standers. Qualifications and training for watch standers have also been upgraded and expanded.

Reporting and communication lack of reliable weather data

Lack of information about weather conditions in Prince William Sound and Hinchinbrook Entrance is a problem. Because of wind patterns and local topography, readings from the wind measuring station at Potato Point are not always a reliable gauge of actual conditions. Inadequate reporting stations through the Sound mean that frequently the only information available about wind and sea conditions is from a vessel already under way.

The problem is lack of funding. During the Exxon Valdez oil spill cleanup, the National Oceanic and Atmospheric Administration (NOAA) temporarily placed reporting stations at numerous sites in Prince William Sound, but later removed them. The Coast Guard has requested NOAA install weather stations at various locations in Prince William Sound to provide real-time weather information to aid in better vessel traffic management.

Over-worked, under-staffed crews

While federal law now limits the work hours of tanker crews, questions about other human factors have yet to be answered. Meanwhile, the U.S. Congress has yet to ratify international protocols for crew certification and training, even though such protocols would improve the safety and technical training of crews on foreign vessels calling at U.S. ports.

Issues such as the adequacy, qualifications and training of crews are to be addressed in a U.S. Coast Guard study. Such a study is expected to be released in 1995. Minimum requirements for pilots also need to be re-evaluated; that issue will also be addressed in a Coast Guard study.

OVERSIGHT

- Coast Guard given more authority & responsibility
- ADEO given more authority and funding
- Citizens have a voice

PROBLEM AREAS:
- State politicians cutting back on spill programs
- Transfer of spill response to spiller (criteria vague)
ADEQUACY OF NEARSHORE RESPONSE

The nearshore response plan for Prince William Sound is good, but more work needs to be done to implement and test it. Strategies must be developed, equipment must be tested and personnel trained and drilled. The nearshore response plans are expected to be addressed more fully in future major drills, beginning in fall 1993.

RCAC continues to be concerned about the adequacy of response capabilities and preparation outside Prince William Sound. Oil from the Exxon Valdez washed up on the beaches of Kodiak Island and the southern Kenai Peninsula, yet little has been done to assess the needs of those areas or provide them with response resources. There are no specific detailed plans describing what resources and equipment will be provided, where they will come from, and how they will be transported to the region within the time period required.

RCAC is also concerned about whether the storage capacity outlined in Alyeska's contingency plan will be sufficient to meet actual needs in the event of a spill. This is especially critical for nearshore response. Available storage capacity affects recovery of spilled oil, because skimming can proceed only so long as there is somewhere to store the recovered oil and water.

TRANSITION OF RESPONSE MANAGEMENT

Under its state-required contingency plan for tanker spills in Prince William Sound, Alyeska may transfer management of a spill response to the actual spiller, i.e., the vessel owner or operator. The transfer of spill management from Alyeska to the spiller must be approved by the Department of Environmental Conservation (DEC) and the U.S. Coast Guard.

However, RCAC has several concerns about the transition of response management. The criteria used to determine whether the responsible party is capable of managing the response are vague. Also vague are the criteria for determining whether the responsible party is financially able to respond. RCAC also questions whether responsible parties have the experience and training to take over in the middle of a crisis.

Changes since the spill

Liance is essential to ensure that protections aren't diluted and that gains are not lost as political memory dims.

Much has changed since 1989, mainly because of new and revised federal and state laws and regulations spurred by the Exxon Valdez oil spill. The goal of this publication is to provide the general public with information about many of the changes implemented, and some of the gaps that still remain, as a measure of how much the risk of major oil spills has been reduced.

This publication was produced by the RCAC, an independent non-profit organization formed after the Exxon Valdez oil spill to promote environmentally safe operation of the crude oil terminal in Valdez, Alaska, and the tankers it serves.

Under a contract with Alyeska Pipeline Service Company, RCAC monitors and advises Alyeska on terminal operations, spill prevention and response planning, and other environmental issues. RCAC conducts independent research, monitors regulatory activity and advises tanker owners and operators, regulatory agencies and the public, on issues related to oil transportation and its environmental impacts.

RCAC's 18 member organizations include communities affected by the Exxon Valdez oil spill and interest groups with a stake in the affected region.

The federal Oil Pollution Act of 1990 requires an industry-funded citizens' advisory group for Prince William Sound; the RCAC is certified as the entity that meets the requirement.

The views expressed in this document are those of the RCAC, which is solely responsible for the content.*

—June 23, 1993
The Exxon Valdez oil spill was not simply a freak accident. While Exxon as the spiller should be held fully accountable and responsible for the spill and its impacts, there were myriad other factors that allowed it to happen. The oil industry, government agencies, elected officials and, to some extent, the citizens of Alaska also share varying degrees of responsibility for conditions that allowed the spill to occur and failed to ensure prompt, effective cleanup.

The oil industry failed to maintain adequate prevention and response systems. Regulatory agencies failed to protect public resources because of ineffective or inadequate monitoring, oversight, and enforcement.

State and federal elected officials were unwilling to pass laws strong enough to protect the environment and give regulatory agencies the funds they needed to protect public resources.

Most Alaskans simply weren’t paying attention.

The Exxon Valdez oil spill was caused by the ship’s master and crew. It could have been prevented by stronger prevention practices and vigilant government oversight. Once the spill occurred, better response planning could have lessened the impacts.

This publication provides an overview of how factors that led to the nation’s worst oil spill have been addressed in the ensuing four years. Are the resources and communities of Prince William Sound and the Gulf of Alaska better protected from a major oil spill than they were four years ago? Can Alaskans now breathe easier?

The Regional Citizens’ Advisory Council of Prince William Sound (RCAC) believes Prince William Sound and communities in the path of tanker traffic clearly are much better protected now. Yet, continued vigilance is needed to protect public resources.

RCAC believes Prince William Sound is better protected from major oil spills and better prepared for an effective initial response should a spill occur. Important steps have been taken to prevent oil spills from occurring. Crews are better trained and monitored. Masters are held to more stringent requirements. Measures have been taken to reduce the possibility of accidents.

Several important prevention measures, such as double hulls on tankers and a study of human factors in tanker operations, will take time to implement. Getting laws on the books is only the first step and the federal rulemaking process is slow. Many of the actual requirements and specific decisions have yet to be clarified and formalized in final regulations. Laws that appear strong when enacted can be weakened through vague regulations and inadequate funding. Laws must be implemented through clear, strong regulations and enforced by committed agencies that are given the funding necessary to monitor, oversee, and enforce compliance.

Yet, industry and regulators are actively demonstrating the importance of learning from experience. During 1993, the Coast Guard and Alyeska’s SERVS division instituted safety changes in response to potential problems that came to light from the Braer spill in Shetland and the Krasnaya incident in 1992.

Response capabilities in Prince William Sound have improved dramatically. Alyeska, through its SERVS division, has done an excellent job of acquiring, stockpiling, testing and drilling spill response equipment and training personnel.

The fact that there is room for improvement in some areas should not detract from the very substantial overall progress that has been made by both industry and regulatory agencies.

In the face of such progress, it is all the more alarming to see the State of Alaska backing off its commitment to oil spill prevention and response. Alaskans who care about the safe transportation of oil and environmental protection must defend ground gained since 1989, continue to monitor implementation of new laws, strengthen weak areas and close gaps that remain.
References


6. Ibid.

Additional References

• Draft Final Report: Implementation status of specific recommendations made by the Alaska Oil Spill Commission, D. Kelso, for the Citizens’ Oversight Council on Oil and Other Hazardous Substances, January 1993.


RCAC
mission
Citizens
promoting
environmentally
safe operation
of the
Alaska
terminal and
associated
tankers.
Then and Now

changes since the

Exxon Valdez Oil Spill

Regional Citizens' Advisory Council
Prince William Sound