Effectiveness of Citizen Involvement

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Abstract:
Citizen involvement in oil transportation was discussed before the 1989 Exxon Valdez Oil Spill (EVOS). After the EVOS, the Oil Pollution Act of 1990 (OPA 90) added mandatory funding by industry for a citizens' group to provide oversight of the Alyeska Pipeline Service Agency terminal and associated tankers. Currently the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) fills that role. This volunteer organization represents communities and interest groups that were affected by the EVOS.

This paper discusses the history of this organization, the structure and funding of the council, and provides an overview of its projects and research. Some of the successes involving citizen input include a requirement that all tankers going into Prince William Sound be double hull by 2015; a world class system of tugs escorting tankers in Prince William Sound; installation of an ice-detection radar on a small island near the site of the EVOS; a guidebook for communities affected by man-made disasters; identification of nearshore locations that should be the first to be protected in the case of another spill; and an installation of a system to capture crude oil vapors when tankers take on cargo. Some current projects being undertaken include invasive species that can be transported in the ballast water of tankers, efficacy of dispersants, soil contamination at the tanker loading site, emission of hazardous air pollutants from ballast water treatment processes, and continual review of contingency plans.

Citizen involvement in industry that affects their community is on the rise with other organizations being formed in Washington State as well as in Europe. This paper offers a discussion of the importance of citizens working with industry, and one example of how it is done.

March 24, 1989 Exxon Valdez Oil Spill

On March 24, 1989, the tanker Exxon Valdez grounded on Bligh Reef, spilling 11 million gallons of North Slope crude oil into Prince William Sound, Alaska. Over the weeks that followed, the spilled oil spread west and south, oiling shorelines and beaches in Prince William Sound, lower Cook Inlet, the Alaska Peninsula and the Kodiak Archipelago. To date, this is the largest oil spill in U.S. history.

The oil fouled approximately 1300 miles of wildlife-abundant shoreline. Spilled oil damaged shoreline from Bligh Reef in Prince William Sound to Kodiak Island and beyond, as far away as 470 miles. The estimated initial death toll of the spill included 250,000 seabirds, 2,800 sea otters, 300 harbor seals, 250 bald eagles, up to 22 killer whales, billions of salmon and herring eggs, and other intertidal plants and animals. Some injured species are still not recovered.

Public and political reactions were swift. The Governor of Alaska convened a special commission to investigate the oil spill and develop recommendations. The Alaska State Legislature passed stronger laws. In Washington, D.C., Congress began rewriting federal pollution laws for what would become the Oil Pollution Act of 1990.

The Idea of Citizen Oversight

The Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) grew out of the March 24, 1989 Exxon Valdez oil spill. The idea of a citizens' oversight group to advise Alyeska Pipeline Service Company, which operates the Trans-Alaska oil pipeline and the Valdez Marine Terminal, had been proposed by local residents before the spill with no results. After the Exxon Valdez oil spill, a change in leadership and attitude at Alyeska welcomed citizen involvement.

Representatives from the municipalities that were affected by the spill and representatives from environmental, Native and commercial fishing organizations and tourism have seats on our board. PWSRCAC currently has 19 volunteers that sit on our board, and another 30 that sit on committees and work on the organizations' projects. There are also non-voting representatives from government organizations and industry. PWSRCAC has 19 paid staff.

Public advisory groups are hardly a new concept, but the PWSRCAC is unusual in several respects: it is mandated by federal law, it is well funded, it is independent, and it has been given not only a high level of access to pipeline terminal facilities but also to federal and state regulators. Public advisory groups are capable of making important contributions to the policy process and are capable of making contributions to new environmental safeguards. The key factor in the success of a public advisory group is a working relationship whereby industry, government and the public, can collaborate as a team to create a safer system.

The First Citizens' Advisory Group for Prince William Sound

In July 1989, after being approached by several Cordova fishermen with the idea, Alyeska pulled together a group representing various communities and interests impacted by the spill to work with Alyeska on oil spill prevention and response in Prince William Sound. In December 1989, a group comprised of some of these same individuals, as well as others, incorporated as the non-profit Prince William Sound Regional Citizens' Advisory Council (PWSRCAC). Then, in February 1990, PWSRCAC and Alyeska signed a contract ensuring for PWSRCAC: absolute independence from Alyeska, access to Alyeska facilities, guaranteed annual funding, and a contract that lasts as long as oil flows through the Trans-Alaska pipeline. In August 1990, when congress passed OPA90, it included language mandating both the Prince William Sound and the Cook Inlet Regional Citizens' Advisory Councils.

The Value of Citizens' Involvement

The 1989 Exxon Valdez experience demonstrated that the oil industry could learn from people who live and work in the region affected by the terminal and tanker operations. A moral imperative also emerged from the Exxon Valdez spill: those people with the most to lose from oil pollution must have a voice in the decisions that put their livelihoods and communities at risk. The PWSRCAC oversight panel ensures that public interests are represented in minimizing environmental impacts and risks of the Trans-Alaska pipeline terminal and the tanker fleet traveling to and from Port Valdez, Alaska.

Responsibilities of PWSRCAC

The primary responsibilities of the PWSRCAC are to advise Alyeska and the public on oil spill prevention and response, and on ways to mitigate the environmental impact of terminal and tanker operations. Responsibilities include monitoring the implementation of spill prevention and response plans, increasing public awareness of Alyeska's current capabilities and spill prevention and response, fostering long term partnerships with industry, government and local communities, and conducting independent research.

Complacency in the oil industry, government agencies and the general public is viewed as a root cause of the Exxon Valdez spill. A primary goal of the PWSRCAC is to prevent complacency from ever again becoming a factor in an oil spill.

GUIDING DOCUMENTS

Oil Pollution Act of 1990

The Oil Pollution Act of 1990, a federal law, was passed in response to the 1989 oil spill and established two pilot programs in Alaska for citizen oversight of oil terminal and tanker operations. The law allowed existing nonprofit organizations to be certified as the required citizens' groups. PWSRCAC met the intent and requirements of OPA90, and continues to be recertified by the U.S. Coast Guard every year as the designated citizens' advisory group for Prince William Sound (Cook Inlet Regional Citizens' Advisory Council is the other citizen oversight group).

The work of the PWSRCAC is guided by its contract with Alyeska and OPA90. OPA90 requires Alyeska (and terminal and tanker operators in Cook Inlet) to establish and fund citizens' advisory groups. Among the findings listed in Section 5002 of OPA90, cited as "Oil Terminal and Oil Tanker Environmental Oversight and Monitoring Act of 1990," are the following:

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B. many people believe that complacency on the part of the industry and government personnel responsible for monitoring the operation of the Valdez terminal and vessel traffic in Prince William Sound was one of the contributing factors to the Exxon Valdez oil spill;

C. one way to combat this complacency is to involve local citizens in the process of preparing, adopting, and revising oil spill contingency plans;

D. a mechanism should be established which fosters the long-term partnership of industry, government, and local communities in overseeing compliance with environmental concerns in the operation of crude oil terminals;

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H. only when local citizens are involved in the process will the trust develop that is necessary to change the present system from confrontation to consensus;

I. a pilot program patterned after Sullom Voe should be established in Alaska to further refine the concepts and relationships involved; and

J. similar programs should eventually be established in other major crude oil terminals in the United States, because the recent spills in Texas, Delaware and Rhode Island indicate that safe transportation of crude oil is a national problem.

PWSRCAC Contract with Alyeska

Alyeska and PWSRCAC signed a contract on February 8, 1990. Under the terms of the contract, in effect as long as oil flows through the pipeline, PWSRCAC monitors terminal and tanker operations, conducts research and environmental monitoring, provides Alyeska with local and regional input, and advises Alyeska and the public on terminal and tanker operations. While the contract between PWSRCAC and Alyeska stands on its own, the relationship is reinforced and codified by provisions of OPA90.

Mission and Goals of PWSRCAC

The PWSRCAC provides a voice for communities and citizens. The PWSRCAC mission statement is: "Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers." The goal of the PWSRCAC is to carry out its advisory role vigorously, but in close coordination and cooperation with Alyeska and relevant government agencies so as to continue to ensure that the transportation of oil through Prince William Sound is the safest anywhere in the world. A PWSRCAC Board Member once described the PWSRCAC as "the most noble experiment that any of us has ever been associated with." As long as oil is transported through the Sound, it will remain of paramount importance that the public has confidence that all that can reasonably be done is being done to prevent a future oil spill, and to expeditiously and efficiently respond to any such spill if one does occur. This "noble experiment" is a key means to help ensure that this goal is achieved.

In the most simple terms, PWSRCAC's mission is to prevent oil spills and pollution from the operations of the marine terminal and tankers. PWSRCAC works closely with industry, regulators and citizens to prevent groundings and collisions. If those efforts fail, we want to prevent the discharge of oil. Once oil is spilled on the water, we want to contain it and prevent spreading and shoreline damage. If the natural resources are damaged, we work to minimize social and economic harm to the people living in the region.

PWSRCAC is very interested in preventing environmental damage from all oil transportation activities, not just spills. Examples include vapor control and ballast water treatment at the terminal and the risk of introduction of aquatic nuisance species via tanker ballast. The responsibility for preventing complacency is shared amongst industry, government and the citizens.

Programs:
PWSRCAC's activities are organized by five major programs.

Terminal Operations and Environmental Monitoring Program: This program monitors actual and potential environmental impacts stemming from the operation of the Valdez Marine Terminal, and reviews operational and maintenance practices. Current projects cover Alyeska's strategic reconfiguration of the terminal, seismic re-engineering of the terminal, and Valdez air quality, and terminal fire protection systems.

Project examples:
Vapor Control: When tankers load, crude oil vapors are forced out as crude oil flows in. Initially, those vapors were vented to the atmosphere, threatening the health of Valdez citizens and terminal workers. The council opposed this practice and called for a system to capture the vapors, backing up its position with a series of scientific studies. In 1995, the EPA adopted a rule requiring such equipment which began operating in 1998 on two of four berths at the Valdez Marine Terminal.

Emission of Hazardous Air Pollutants: More recently, PWSRCAC has worked with the Environmental Protection Agency (EPA) to better develop regulations that would have exempted emission of hazardous air pollutants from crude oil processing operations and from ballast water treatment operations from regulations under development by the EPA. The Council was able to demonstrate using U.S. Department of Energy data for crude oil and actual process measurements that emissions from these sources indeed far exceeded government regulatory thresholds. Emissions from crude oil operations are now regulated and emissions from ballast water treatment are pending regulation.

Fire Protection Systems: PWSRCAC has participated in a long-standing series of activities to investigate, review and upgrade the fire protection facilities at the Valdez Marine Terminal. Third party review of terminal fire protection assets uses the expertise of nationally acclaimed consultants who continue to have the respect of both Alyeska and PWSRCAC. Consultants have made a difference in upgrading foam systems at Alyeska's metering facilities, analyzing the risks associated with internal floating roofs, and conversion from pumped seawater fire system to a gravity-fed freshwater system. Additionally, PWSRCAC continues to follow up on previously made recommendations pertaining to personnel training, emergency preparedness and maintenance of fire protection systems.

Oil Spill Prevention and Response Planning Program: Through this program, PWSRCAC develops positions and recommendations on oil spill response technologies and reviews state and federal contingency plans to promote compliance with and enforcement and funding of existing environmental regulations. Current projects include the Valdez Marine Terminal and tanker contingency plan renewals, establishing weather and sea current studies and identifying geographic response strategies for sensitive area protection.

Project examples:

Contingency Plans and Operating Permits: The environmentally safe operation of the Valdez Marine Terminal and associated tankers is fundamentally driven by state and federal regulations. The greatest challenges for PWSRCAC include the need to reach internal agreement on complex issues among diverse interest groups and to develop reasonable and technically correct advice and comments to industry and government. PWSRCAC's official positions must be balanced, based on sound technical information, and not overly influenced by extreme positions. Federal and state legislative and rule-making activities are routinely monitored and opportunities to promote PWSRCAC's mission are sought. Utilizing the local knowledge and experience of our volunteers and the citizens living and working in our region, we are able to recommend changes or additions to federal or state regulations to ensure that there is a balance between producing and protecting our resources. Review of various state and federal contingency plans and operating permits continues to be a major responsibility for PWSRCAC.

Weather and Sea Currents: This project studies wind, water currents and other environmental factors near the Valdez Marine Terminal, in Prince William Sound and the Gulf of Alaska that may affect the ability to prevent, respond to, contain, and clean up an oil spill. Goals of this project include: the continuing development of a current measuring and circulation computer program; promoting maintenance of a weather information database and weather buoys; and developing increased weather tracking infrastructure in the PWSRCAC region.

Geographic Response Strategies: This project promotes region-wide response capability, focusing on the Prince William Sound tanker contingency plans. It supports the development of geographic response strategies as the primary mechanism for the protection of sensitive areas and resources. Project objectives include monitoring industry, state and federal contingency plans and response planning to ensure the development and corporation of geographic response strategies into relevant plans and participating in sensitive areas working groups and encourage the development of geographic response strategies for the protection of sensitive sites and resources.

Oil Spill Response Operations Program:

This program encompasses the on-going activities that are designed to promote the operational readiness of oil spill response personnel, equipment and organizations. During an oil spill drill or actual exercise, PWSRCAC is charged with observing the response efforts, providing independent verification of response efforts, informing citizens of response activities and decision-making processes, and providing advice to the Incident Commanders based on independent observations, local knowledge and citizen concerns.

Project examples:
Preparedness Monitoring: This project enhances our ability to observe, monitor, verify and report on activities that reflect the state of readiness to prevent and respond to oil spills in our region.

PWSRCAC also prepared a contingency plan to deal with the human impacts of an oil spill. The need to repair the social and economic damage of manmade disasters was largely unaddressed until the council took it up in the early 1990s. After studies of the impacts of the Exxon Valdez spill on the community of Cordova, the council created "Coping with Technological Disasters," a guidebook for communities hit by oil spills and other man-made catastrophes. PWSRCAC produced a four-part video and DVD to train community members in peer listening, a counseling technique utilized in the guidebook

Maritime Operations Program: Through this program, PWSRCAC monitors and reviews port organizations, operations, incidents and the adequacy and maintenance of the U.S. Coast Guard Vessel Traffic System. Projects include the ice detection radar being installed to provide real-time data on ice conditions to Alyeska's ship escort and response vessel system, the U.S. Coast Guard, tanker captains and mariners and the creation of a tanker database to track pollution incidents and ship integrity.

Project examples:
Ice Detection Radar**:** The ice detection and avoidance project provides real time ice information to the U.S. Coast Guard, Alyeska and mariners. PWSRCAC was the primary stakeholder in promoting and facilitating the installation of the ice detection radar on Reef Island, located adjacent to the Columbia Glacier and the tanker shipping lanes. The conventional radar system includes a Sigma SeaScan signal processor. In the most basic terms, this processor minimizes the sea clutter of conventional radar, thereby making the icebergs easier to track on conventional radar.

Double-Hull Tankers**:** PWSRCAC has been a staunch advocate for double-hull tankers to minimize the risk and size of future crude oil spills. The arrival in July 2001 of the first double-hull tanker built specifically for the Valdez oil trade under OPA90 was a major positive step for Alaska, the oil industry, and PWSRCAC.

Escort Tugs : One of the recommendations of the Tanker Risk Assessment included changes to the systems and vessels used to escort laden tankers. PWSRCAC played a lead role in forming a partnership of citizens, industry and government to examine a series of technical studies that led to the design, construction and deployment of the most powerful tractor tugs serving tankers in the world today.

Environmental Monitoring Program: This program encompasses site-specific and region-wide monitoring activities. Current projects include the on-going long-term environmental monitoring for hydrocarbons at sites in Prince William Sound, researching how potentially harmful non-indigenous species invasion can be detected and avoided and dispersant toxicity and effectiveness.

Project examples:
Long Term Environmental Monitoring: Under direction from OPA90, the Long Term Environmental Monitoring Program (LTEMP) was initiated in 1993. The LTEMP study design requires continual sampling as long as oil flows through the pipeline. Ten sites in Prince William Sound and the Gulf of Alaska are sampled for hydrocarbons twice a year via mussel tissue. Mussels from the Port Valdez sites are sampled three times a year, and sediments twice a year, due to the documented increase in hydrocarbon load in that area. The PWSRCAC evaluates its environmental monitoring strategy regularly to ensure that the data is cohesive, efficient and useful. Information based on the LTEMP project is used in various elements and in the decision-making process for recommendations and advice given on a multitude of other PWSRCAC projects and issues.

Aquatic Nuisance Species: This project is designed to research the risk of harmful invasion of Prince William Sound by aquatic nonindigenous species as a result of oil tanker ballast water discharge, and to research means by which that risk can be mitigated. Specific objectives include: investigating how the green crab and Chinese mitten crab could impact Prince William Sound and how they can be detected; researching and participating in the testing of ballast water treatment technologies; coordinating the PWSRCAC-sponsored nonindigenous species working group; and developing recommendations for the reauthorization legislation to the National Invasive Species Act of 1996.

Chemical Dispersants: Of the various response options, PWSRCAC endorses mechanical recovery as the primary response option in line with State and Federal directives. Accordingly, PWSRCAC strongly recommends that dispersant effectiveness in Prince William Sound and the ecological risks associated with chemically dispersed oil be understood prior to utilizing dispersants as a primary oil spill response strategy. The main objectives of this project are to determine if chemical dispersants stockpiled in our region are effective; to review toxicity research annually to determine if toxicity (photoenhanced, long-term fate and effects) is of concern; to promote additional research on the topic; and to promote the incorporation of knowledge and local input into the dispersant use decision making process.

PWSRCAC Effectiveness

The work of PWSRCAC takes several forms. PWSRCAC submits written comments on oil spill contingency plans, legislation, regulations and permits, and industry policies and procedures. The comments usually include recommendations for

changes and positions on specific issues and support for that which we believe is already being done well. PWSRCAC's positions are generally based on recommendations from staff, committees and technical consultants. Individual board members with extensive knowledge on particular issues also make recommendations to the full board.

PWSRCAC commissions reports and funds independent scientific research. Reports and findings may be used to develop policy positions and recommendations, or they may be made available to the public as general information.

PWSRCAC participates in working groups and joint projects with industry and government representatives and is a major funding source for many of these joint projects. Some of the joint working groups and projects include issues ranging from tanker transportation risks in Prince William Sound to fire safety and pollution discharge permits.

Joint projects have been especially successful in promoting effective working relationships among citizens, industry and regulators. Joint projects generate a cooperative spirit of shared problem-solving. When stakeholders develop and manage a project together, disagreements may be worked out early. Stakeholders are able to focus on action, rather than reaction, and they more often avoid no-win debates among dueling scientists. Joint projects minimize conflict and lead to common ground.

Working Relationships

Today, the oil industry and regulators routinely consult PWSRCAC and vice versa on oil transportation and related environmental issues. PWSRCAC does not always agree with these other entities, and they don't always rely on our advice, but they consider our views and recommendations, and, in most instances, act upon them. A good example is the Valdez Marine Terminal Ballast Water Treatment Working Group mentioned earlier.

There are also times when our working relationships have led to us having a better understanding of why something is being done the way it is and in the end we agree with the industry. We were formed in a climate of adversity, but we have learned that working together in partnership is better and more productive and that it is important to give praise as well as criticism.

CONCLUSION

We believe that complacency on the part of industry, government, and the public was a contributing factor to the Exxon-Valdez oil spill in 1989 and that OPA90 provided a mechanism to close that gap. There were, of course, other contributing factors that have been addressed through scientific, technical, and operational measures, none of which would have been possible without the cooperative efforts of industry, government, and local citizens.

In the past seventeen years, PWSRCAC has learned that communication and transparency are the keys to combating complacency. Partnerships among stakeholders working to resolve issues early in the process leads to good policies, safer transportation of oil, better oil spill response capabilities and improved environmental protection practices. Providing a forum for public input gives the citizens a voice and an avenue to offer information and advice, including alternative solutions based on local knowledge and experience. This forum is the most basic tool to ensure that the necessary balance between industry, the environment and the people exists to produce and protect resources.

If citizens lack a forum to provide a voice on issues that directly impact their lives, the result can be increased costs and permitting delays. Costly litigation and resulting delays caused by remedying environmental, human health and socio-economic impacts are examples of the problems that can be avoided by giving local citizens a voice in developing our resources.

PWSRCAC has grown and changed since 1989, and continues to strive for increased effectiveness. Clear successes are outlined in the following section. PWSRCAC's effectiveness is proven in that the citizens in our region have a more influential voice than seemed possible considering the political climate before the 1989 oil spill. Oil transportation in the region is indisputably safer, and citizens and industry are working together to solve problems.

References:

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