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incinerators that could handle more volume — and would, most likely, generate much greater air emissions with much greater concentrations of particles, carbon monoxide, and other noxious gases and compounds. The public, alerted in part by an environmental group that warned (somewhat specutively) of emissions of the dangerous carcinogen dioxin, wanted to be included in any decision to consider where the incinertor would go and what levels of emissions were safe. In essence, the public wanted the kind of access to the decision-making process that they are entitled to have under state environmental regulations and public meeting laws.

As noted in chapter one, the state had insisted from the start that regardless of the cleanup command structure, its public agencies would retain their usual authority to consider and issue permits for land use, waste disposal, and so on. The permitting process was, in fact, one of the few points of direct access and control the general public had over the cleanup. In this case, the public wanted to be considered in any decision that could transform shoreline pollution into air pollution.

But ultimately, the problems with the incinerator – like Corexit, like bioremediation, like the shoreline disputes and clashes of authority – were rooted in the fact that people were trying to deal with complex public policy and technical problems under crisis conditions.

Exxon applied for air quality permits in June, even though the incinerator wasn't yet in Alaska, and even though it had not been decided which type of incinerator would be used. There were several options, including at least one device that didn't actually exist yet. The permits went to public hearing.

Anyone who has worked on a siting process for an industrial facility or a landfill would recognize the kinds of questions and issue raised at the meetings. Naturally, no one wants to have an industrial site for a new and unexpected neighbor, and everyone wants full assurance that if the plans go through, that they won't get sick and their kids won't get sick from the emissions. This type of process usually takes a fair amount of time, involving at least two sets of information and interpretation (one from the government, one from the permitee). The resolution of these issues generally has less to do with technical issues than with a general issue of trust: The public will not oppose, or will limit its stipulations to a permit, based largely on whether it trusts the permittee to be careful and it trusts the government to keep an eye on the situation. This always takes time, and it always demands good communication and negotiation skills.

The process is not well-suited to an emergency, especially an emergency that had generated so much fear, uncertainty, and mistrust in the communities. Exxon's first visits to communities in the early days of the spill were difficult, partly because people were angry, partly because Exxon didn't get representatives to a number of places quickly, and partly because they didn't always respond well to the situation once they got there. Generally, people in the communities did not trust Exxon.

In addition, the public was unsure about the state's ability to take control of the situation. They saw Exxon running some things, the Coast Guard running others, and the state without a direct way to make Exxon or the federal government do what the people wanted done. They didn't trust the system to work for them.

Not surprisingly, these attitudes — coupled with the usual and well-documented process involving environmental health permitting — made Exxon's proposal rather unpopular. By August, Exxon had an incinerator, and the site it wanted — a sheltered area of Viekoda Bay on the west side of Kodiak Island. The site was, however, "upstream" from the village of Port Lions, and the people didn't want to have the incinerator emissions blowing into town or passing over the village's drinking water source, a lake in the mountains between the bay and the village. The opposition was exacerbated by the dioxin issue raised by the environmental organization earlier in the summer. The group said that burning seawater-soaked waste would probably cause chemical changes that would create dioxins, which would come out the smokestack. It wasn't a completely solid argument, but it wasn't so far-fetched, either.

However, "dioxin" is synonymous in the public mind with the town of Times Beach, Missouri, the little southern hamlet whose soil and waters were so contaminated with dioxins that the federal government moved everyone out and started a highly publicized, enormously expensive Superfund cleanup. In the public mind, dioxin *plus* people *equals* cancer. Port Lions wanted nothing to do with Exxon's incinerator. The people in the village did not want to be the victims of a second pollution

problem caused by the Exxon spill.

After much debate and public discussion, DEC granted Exxon an air quality permit for the incinerator on August 28. However, the Kodiak Island Borough, citing certain provisions of the federal Coastal Zone Management Act, said the permit was flawed because the state had failed to determine whether the permit was consistent with Kodiak's local coastal management plan. The state did not contest Kodiak's claim, but the issue became suddenly moot on September 9, when Exxon decided to cancel the incinerator plan and ship the waste instead to a hazardous waste disposal site in Oregon. The company was bitter about the whole issue, and sent out a stinging press release, complaining that state roadblocks and bad faith had killed a logical and local solution to the waste disposal problem.[71]

On Sept. 15, the day the Governor announced the state's winter plans, the Coast Guard resolved the issue of whether Exxon would return for cleanup in the spring.

The reality of the situation was considerably short of what Exxon claimed. For one thing, Exxon had a lot of trouble getting the Kodiak incinerator to burn hot enough and completely enough. Mechanical problems plagued the burner, and it was not clear whether the thing would have worked anyway. For another, Viekoda Bay was not Exxon's only option. The company could have tried to take the incinerator to another, more remote site, but the most logical alternatives were primarily in or near national park and preserve lands. Air quality permits in those types of areas carry an additional set of requirements designed to protect the wilderness qualities of the federal parklands. Exxon apparently didn't want to test that system.

But ultimately, the problems with the incinerator — like Corexit, like bioremediation, like the shoreline disputes and clashes of authority — were rooted in the fact that people were trying to deal with complex public policy and technical problems under crisis conditions.

Had the industry done effective research and development on shoreline cleaners such as Corexit years before, there would have been no reason to shoehorn several years of research and regulatory activity into a few weeks or months during an emergency. Had large-scale solid waste disposal been a part of the area's oil spill contingency plan, the battle over the incinerator might not have turned so bitter. Had the governments and industry worked out a better unified command system for spill response before the spill — and drilled it many times — issue management and decision-making might have been smoother and less confrontational. Had the public been presented a more realistic picture of the relative effectiveness of oil spill response during the building of the pipeline, perhaps citizens would not have been so outraged when the response efforts failed so completely, so quickly.

## 3.5 Transition, 1989-90

The scheduled date for "demobilization" was September 15, but Exxon began scaling back operations on Kodiak and in the Kenai Peninsula zones as early as August 2, citing safety and logistical demands. Exxon's plan was to pull back to Prince William sound's relatively sheltered areas before the onset of fall and winter storms, then phase out the Sound's cleanup by the September 15 deadline.

The Coast Guard had expressed some support for the state's position that Exxon should finish the job, even if it took longer than the 1989 season. But the issue of whether Exxon would return in 1990 remained unanswered right up through the final days of the 1989 season. Exxon had submitted a "winter plan" on August 15, which was limited largely to overflights and some beach monitoring to track changing conditions.

The state felt that there was still time to conduct shoreline cleanup past September 15, using smaller, more mobile crews and sticking to sheltered areas. Exxon flatly disagreed, saying it was unsafe to be on the water during fall and early winter. The Coast Guard remained neutral, although its commanders went along with the Exxon demobilization and gave a stamp of approval to the company's winter monitoring

plan.

State officials began preparing the government's own winter plan, a modest, $21 million effort that would include some shoreline monitoring, overflights of some problem areas, scientific analysis of the fate of the spilled oil, and a small cleanup effort conducted by individual communities. The winter plan also included $960,000 in grants to mental health providers in the region who would use the funds for counseling, crisis intervention, and treatment for depression, substance abuse, and domestic violence.

On Sept. 15, the day the Governor announced the state's winter plans, the Coast Guard resolved the issue of whether Exxon would return for cleanup in the spring. Commandant Paul Yost, speaking at one of the many press conferences held in Valdez that day, praised Exxon's effort to put together the cleanup army and navy. However, he added, "They didn't finish the job. There is more work to be done and Exxon will have to come back in the spring to do it." The Coast Guard also added that Exxon had made a commitment to both Yost and U.S. Secretary of Transportation Samuel Skinner that the company would return for cleanup.[72]

That issue settled, each of the main parties to the response settled back to plan for the coming year.

## The "walk-a-thon," winter surveys, and evaluation of conditions

DEC employees conducting the first comprehensive shoreline survey at the end of August of 1989, Cape Douglass, Alaskan Peninsula. The survey was conducted on foot and covered what the agency had identified as all oiled areas from Prince William Sound to the Alaska Peninsula. Photo by Vanessa Vick

During most of the first season, different entities carried out shoreline and resource surveys, sometimes on their own and sometimes together. The first resource assessment teams included state and federal officials working with Exxon, while the first shoreline cleanup assessment teams were hired and staffed by Exxon.

At the close of the 1989 cleanup season, DEC launched the first comprehensive shoreline survey, covering what the agency had identified as all oiled areas from Prince William Sound to the Alaska Peninsula. Unlike earlier surveys, which sometimes included visual inspection of surface conditions from the air, the DEC "walk-a-thon" covered all areas on foot; cliffs or other steep, exposed rocky faces were inspected at close range from skiffs.

The result of the survey was 1,100 pages of maps and oiling data that DEC staff used to evaluate several important kinds of conditions.[73] The maps described where the oil was, the state of the oil (asphalt, tarmat, mousse, etc.), and the extent of the oiling (heavy, moderate or light). The survey located debris and forgotten caches of used pom-poms and boom, other garbage, and even gear such as hardhats and shovels left behind from the 1989 cleanup season. DEC noted trash or debris at 421 locations in the spill area, and picked up what they could given the limitations of manpower, transportation, and storage.

Teams identified 117 miles of shoreline[74] that remained heavily or moderately oiled. Of that total, more than 30 miles of serious oiling was located in sheltered areas, where wave and weather energy was limited. These were the areas that would rise to

the top of cleanup priority lists, not only because of the oiling conditions, but because the sheltered areas were, naturally, the places animals and people tended to use heavily.

The survey also showed that even shorelines exposed to heavy weather and wave action were holding oil; 85 miles of heavy and moderate oiling were in relatively exposed areas. This was interesting from the standpoint of persistence of oiling, or as a partial judgment of the effectiveness of cleaning over the summer. As a practical matter, these shorelines were not likely to be high-priority cleanup sites six or seven months later; the winter storms and high-energy pounding at exposed sites were expected to reduce the surface oiling considerably. And indeed, that is what happened, for the most part. As early as November, some of the most exposed beaches — Point Helen at Knight Island's southern tip — were already fairly clean-looking on the surface. The pounding of the waves, and the grinding of the large cobbles were scouring even tough, tarry coat off much of the shorelines. Mid-winter surveys in January conducted by state, federal and Exxon teams confirmed that high-energy shorelines were losing surface oiling fairly quickly.

The 1989 DEC "walk-a-thon" shoreline survey discovered 224 locations where subsurface oiling was significant enough to note. In some places, oiling began five or six inches below the surface; in a few places, it was as deep as 28 inches. The problem persists, as shown here during another survey in Northeast Herring Bay in 1991.
Photo by Patrick Endres

The walk-a-thon teams and the mid-winter surveyors also began to confirm known problems and discover some new ones as well. The most frustrating problem was the widespread presence of oil underneath the beach surface.

The DEC walk-a-thon discovered 224 locations where subsurface oiling was significant enough to note. It varied in both depth, character and distribution. In some places, oiling began five or six inches below the surface; in a few places, it was as deep as 28 inches.

Teams identified 117 miles of shoreline that remained heavily or moderately oiled, more than 30 miles of serious oiling was located in sheltered areas, where wave and weather energy was limited.

It got into beach sediments several different ways. In some cases, it was a combination of heavy oiling and slow cleanup progress. Oil sat on the beaches so long that it began to seep down between boulders and cobbles and saturate the fine sediments underlying the rocky "armor" of the surface. In other cases, the oil was pounded into the sediments by wave action, high-pressure hoses, or some combination of the two. And in still other cases, wave energy threw clean cobbles and gravel from one part of a beach on top of oiled gravel, literally burying the problem. This occurred primarily during storms, high tide cycles, or a combination of the two. This particular subsurface oiling problem would be among the most persistent of the entire spill response period, since the oiling was pushed into the uppermost stretch of the beach. This area, generally referred to as the "storm berm," was the least morphologically active zone, and therefore the oiling was not subject to the frequent pounding, grinding, or washing action in the lower, more active beach zones.

In the summer of 1989, oiling was initially described simply as heavy, medium or light.[75] But during the walk-a-thon, oiling characteristics became just as important. Oil

weathered at different rates and took on different forms. Surface oil (especially as weather turned colder) became less mobile, stickier, and tended towards a tarry crust, coat or stain that was hardened on the rocks. In other places with finer sediments near the surface, oil and mousse consolidated with beach material into patches of asphalt and tar, not unlike what happens to a dirt road where oil has been sprayed as a dust control technique. These asphalt patches and tarry mats, where they occurred, were scattered across the beach surfaces like islands, although in some cases the patch could be tens of meters wide and long. In boulder fields, and on beaches with bigger cobbles, tarmats and asphalt formed in the cracks and niches between the rocks.

The subsurface oiling ranged from fine sediments with traces of oil to others that were completely saturated with oil or mousse. Occasionally, where larger cobbles had been buried under layers of clean rocks thrown up by wave action, one could dig and scrape through a foot or more of bigger rocks before reaching the oil-coated layers now deep in the beach.

Figuring out the distribution of the oiling — especially in the subsurface areas — was very difficult, not only in terms of observation but in terms of physical effort. The standard tool used in the analysis was a short-handled clam shovel, which has a longer, thinner blade than the usual garden spade. Survey crews used previous oiling information, practical knowledge of oil movement, strong backs and arms and the clam shovels to dig deliniation pits all over a shoreline segment. Ironically, this process — geomorphological analysis, knowledge of what kinds of sediments or formation tend to hold oil, drilling of discovery and delineation "wells" — was just a manual, small-scale variation of how oil companies look for oil when they are trying to find some to sell. And, as in discoveries of oil in commercial fields, the survey crews found that subsurface oiling was frequently scattered and discontinuous. It was often hard to truly "map" a subsurface deposit because of the amount of physical labor involved. A surveyor might start following a lens or streak of oil-saturated sediment, but he or she might be limited by the amount of gravel that had to be moved, or the amount of time allocated for the survey itself. The result, however, was remarkably useful and fairly dependable, especially considering the level of the technology.

The DEC walk-a-thon was significant for both strategic and technical reasons.

The state's survey became its baseline for analyzing information gathered in subsequent surveys. It also gave some definition to the subsurface oiling problem that had been generally anticipated, but not fully described, during the 1989 cleanup season. The techniques, terms, and operational goals set and achieved by the survey also became, more or less, the basis for a standard survey methodology. There were more exact ways to figure out where the oil was and what it was like — rigid transects and chemical analysis, for example — but for the purposes of figuring out cleanup plans, the survey was the right mix of common sense observation and technical accuracy.

After the log boom construction of Exxon and the hatchery defense of the state and the Cordova fleet, area citizens were largely relegated to the sidelines.

Strategically, the survey was especially important for both the state agencies and the Alaska public. The walk-a-thon was the first and last comprehensive, truly independent government survey conducted on the shorelines. It helped set the agenda for the spring 1990 survey and cleanup process.

However, each subsequent area-wide survey through 1992 would become a "joint" operation, planned by a state-federal-Exxon planning team and orchestrated logistically by Exxon. The areas to be visited, the schedule and timing of the surveys, the description of the problems, the definition of the threat, the setting of cleanup goals based on the survey — all these would become a "joint" process.

There were some obvious benefits to this. The logistical demands of an area-wide survey and the enormous amount of data interpretation that followed would be difficult for a relatively small state organization to handle consistently. Also, there was the issue of duplication of surveys by various organizations, which was neither cost-efficient nor likely to produce consensus. Subsequent surveys were designed such that all the organizations were looking at a given problem at the same moment in time, so the information generated was as close to standard as possible.

However, the "joint" survey system, like the "joint" cleanup command and management structure, had disadvantages for the state. On all subsequent surveys, shoreline crews would debate definitions, argue over scheduling and progress, and disagree about how many pits should be dug or how far they ought to follow a lens of buried oil. The state's fall 1989 walk-a-thon, however, gave state shoreline monitors extensive information and practical experience that would allow them to work within the "joint" system from a position of technical strength and confidence.

In July of 1989, a group of volunteers calling itself the Homer Area Recovery Coalition raised money from private donations and headed for Mars Cove, a heavily oiled area in the Kachemak Bay State Wilderness Park on the Kenai Peninsula.

Photo by Vanessa Vick

## Local response

Not surprisingly, the people the of the spill area wanted to be involved in the response. There was a general sense that the oil spill was threatening not just the economy and resources of the year, but the very existence of the coastal communities themselves.

Unfortunately, people weren't sure where they fit in the response system. DEC was largely a technical agency and its primary role was oversight and monitoring, not independent cleanup action. And in any case, no part of state government was prepared to organize and deploy volunteers. The Coast Guard is a military organization; nothing in the National Contingency Plan, which defined the Coast Guard's mission, was aimed at community response. Other federal agencies had specific, resource-based responsibilities — national forest or parklands, marine mammals, etc. — so their focus was away from communities as well. And, of course, there was Exxon, a private corporation building its response plans and organization from the top down, not from the communities up.

DEC and the Cordova fishing fleet did work successfully together on a volunteer response effort at the Sawmill Bay hatchery site, where local Chenega Bay residents also went to work for wages or as volunteers with the state. However, this effort turned out to be unique, and the arrangement short-lived; Exxon took over contracting, planning, and logistics in May.

Exxon did realize that it made sense to include local people in the response, even if it were little more than an expression of good faith or an act of good public relations. The company did put some locals to work in both Kodiak and Homer, where people built improvised booming systems made from felled logs bound together with cable. However, while some log boom made it into the water, far more was left on the docks and in boatyards, and what was used proved only marginally useful. After the log boom construction of Exxon and the hatchery defense of the state and the Cordova fleet, area citizens were largely relegated to the sidelines.

Many found employment as shoreline cleanup workers or rented their vessels and services to Exxon and VECO. In many Native villages, everyone who wanted to work, could work — for VECO or Exxon — but this was not quite the same thing as true

community-based response. The plans were made by the remote response leaders, and the orders came from Exxon or VECO supervisors. People couldn't dictate where the crews went, and couldn't establish cleanup standards for the areas near their towns. They couldn't direct VECO to do something differently and couldn't implement innovations or better ideas about cleanup. In some cases, they couldn't even have the tools they wanted — even something as simple as shovels.[76] Many felt alienated and used rather than involved.[77]

Throughout that first summer, state representatives from DEC and Fish and Game, right up to the Governor's office, reported repeated requests for a state-based response from community activists and leaders. Finally, in July, a group of volunteers calling itself the Homer Area Recovery Coalition (HARC) raised money from private donations and headed for Mars Cove, a heavily oiled area in the Kachemak Bay State Wilderness Park on the Kenai Peninsula. The stated intention was to clean every rock, and to show that community-based cleanup was a real alternative to Exxon's corporate cleanup. HARC's leaders also intended to demonstrate a small rock-washing device developed by local residents.

In March and April of 1990 more than 150 people from Kodiak Island, Cordova, Whittier, Chenega Bay, Valdez, and Chignik picked up 128,000 pounds of oily waste – 15,000 pounds of it oily debris left behind by workers in 1989.

The idea caught on with Governor Cowper, who was sympathetic to the idea of community-based cleanup and a believer in home-grown technological innovation. DEC, with Cowper's approval, came up with a modest grant program designed to provide incentives to organizations that had better ideas about how to conduct shoreline cleanup. HARC received about $40,000 in support from the state, and Kodiak residents got a small grant to help them expand a home-grown testing program that used an absorbent fabric called "geotextile" in several different cleanup configurations. Neither technique got much further than testing and limited application; HARC's Mars Cove project ran through early September, and fell somewhat short of its goal to clean all of the cove's shoreline. If community-based response were to happen on a larger scale, it would require more funding and wider planning and logistical support.

In August, during an annual strategy session between the Governor and his Cabinet, Steve Cowper asked DEC commissioner Kelso to come up with a plan for community-based cleanup. Kelso and DEC management staff used the tools — and the funding — they had at hand: Under the statutes governing the state's response fund, DEC could execute memoranda of agreement with local governments under which communities could undertake response actions on behalf of the state. The statute allows the DEC to reimburse communities for the cost of response actions.

The Governor announced the program on September 15. However, it took six weeks and considerable drafting and redrafting of work plans and agreements before the program firmed up. On October 31, DEC announced that it would spend $6 million on community-based response through the spring of 1990. The bulk of the money was slated for shoreline cleanup, ranging from $2.1 million to the Kodiak Island Borough to $172,000 to the village of Tatitlek. Local coordinators, working under the umbrella of the city or borough government, would hire and train workers and put them in the field.[78] Unfortunately, the workers didn't make it to the shorelines until late winter and early spring of 1990.

The Local Response Program was, at first, plagued by the same kinds of problems experienced by the Oiled Mayors in their search for "impact funding" or some other broadly defined support from the state and/or Exxon.

Ideally, the communities wanted to put crews in the field to do the cleanup they wanted, the way they wanted, without interference from Exxon, the Coast Guard, or, to a certain extent, the state too. Cordova, for example, wanted to use its grant, in part, to implement an idea that had been floating around since the early days of the spill: Locals would put to sea, collect oil, and return it to Cordova where they would be paid a "bounty" based on how much they collected. While that may have worked to some degree had the bounty program been instituted when oil was fresh and on the water, it was less practical in fall and early winter, when the problem was on the shorelines. It raised the question of judging the "worth," for the purposes of a bounty payment, of oil or mousse with varying concentrations of weathered oil and water and sand. It

raised questions about management and liability, handling and disposal of oily waste, safety of people going out for the bounty, and other problems. DEC felt the bounty proposal was less effective than other methods — i.e., conventional manual shoreline cleanup by vessel-based work crews — and not as safe. DEC turned down the Cordova cleanup plan and asked the locals to come up with something else.

Eventually, Cordova came up with a plan that concentrated on picking up spill-related trash and cleaning certain high-priority shoreline, and, in fact, it got good results. But Cordovans didn't like the fact that DEC had, in effect, overruled popular will about cleanup. Similar planning problems occurred in other spill-area communities on the program.

The problems were a result of high expectations on each end: The locals had high expectations about what they could do and how they could do it; the DEC had high expectations about safety of the workers, effectiveness of the program, and accountability for spending public money. If the government were going to pay for a shoreline cleanup program, the government had to make sure that its cleanup crews complied with federal and state labor safety laws, state waste disposal regulations and land use permits, and so on. The DEC also had to make sure that any public money spent on cleanup was spent on something that produced good results for the money invested. More specifically, since the money was coming from the state's response fund, any cleanup had to meet the standards governing how the fund is used. By law, DEC has to try to recover any expenditures from its response fund from a third party — the federal cleanup fund or a spiller, primarily. To certify that local response was recoverable, DEC had to make sure the local cleanup met some basic standards for need and for effectiveness. To make sure of all this, the DEC required that communities submit a work plan, and that they do only work that was approved by DEC. Communities didn't necessarily like this, and the preapproval was one of the stumbling blocks to speedy implementation of the Local Response Program.

A bigger stumbling block, from the local governments' standpoint, was the cost. There were some minor financial and administrative problems — most communities had to buy additional insurance to meet the increased liability of putting workers on remote shorelines, example — but the biggest problem was the reimbursement provision. Under the law governing the state's response fund, the DEC commissioner can *reimburse* communities. But the communities wanted *grants* — money up front. They argued, probably correctly, that most communities didn't have the ability to finance million-dollar cleanup programs — which they hadn't budgeted for — from existing cash flow or cash reserves. They also complained that the reimbursement process would require them to do more paperwork, and that it would take too long to get their money back. The work plan requirement would eventually work itself out, but the financing problems were more fundamental and would take even longer to resolve.

In December, long after everyone had concluded there would be no local response in 1989, the state and the communities each swallowed their concerns and the program went ahead in March and April of 1990. More than 150 people from Kodiak Island, Cordova, Whittier, Chenega Bay, Valdez, and Chignik picked up 128,000 pounds of oily waste — 15,000 pounds of it oily debris left behind by workers in 1989. Communities mounted a similar effort in October 1990, after the close of the Exxon summer cleanup.

The local response model — small crews, small vessels, flexible workplans — was more like what the state thought was appropriate and effective on the cleanup after the big summer of 1989. The crews demonstrated that cleanup did not have to always be on the same large scale mounted by Exxon, and that shoreline cleanup could proceed safely and effectively before and beyond the limits set by Exxon.

## Newport Beach

The basic strategy for the 1990 summer cleanup was developed and discussed at a

meeting during the first week of February in Newport Beach, California. Exxon sponsored the technology workshop, which was attended by state and federal resource agencies, consultants to both Exxon and the state government, and the Coast Guard. Several follow-up sessions, some held solely among state agencies, were held in Anchorage over the second and third weeks of February.

Bioremediation gained state approval for cleanup in 1990. Mechanical equipment was used much more widely that summer. Tons of oily sediment were actually removed, rather than simply exposed.

These meetings largely determined what techniques would be used in 1990 and what the process would be for making cleanup decisions. In a more indirect way, the participants framed several important policy and technical issues, such as establishing the risk from the remaining oil, and determining in a general way what types of cleanup would prove more harmful than leaving the oil in place.

The first document used for planning purposes was a summary of expected field conditions and draft cleanup recommendations prepared by National Oceanic and Atmospheric Administration (NOAA) staff, who served as science advisors to the federal on-scene coordinator.

NOAA staff suggested that based on experience from other spills in similar environments, high energy beaches would probably be "relatively free of oil." Sheltered areas probably would not have changed much over the winter, NOAA suggested, and subsurface oiling would still be present. The cleanup strategy, the agency felt, should tend towards less activity rather than more, with an emphasis on manual work with hand tools or bioremediation. The exceptions to this general rule would probably occur in sheltered areas covered by large tarmats or asphalt stretches, or where subsurface oiling was very heavy. In those cases, the mechanical equipment would be acceptable, but only under close supervision. Further, NOAA said, tilling should be delayed until fall, when commercial fishing seasons were mostly over. The rationale was that tilling would release oil into the water and could jeopardize fishing activity. Where heavy subsurface oiling threatened shellfish beds, bioremediation should be used to reduce the threat.[79] The Coast Guard staff elaborated slightly on the NOAA draft, adding, in a recommendation to the federal on-scene coordinator, that bioremediation be considered a "primary" treatment.[80]

The state agreed in very general terms with the NOAA strategy; it was, of course, important to be prudent about the use of mechanical equipment, and careful that cleanup not unduly disrupt sheltered environments. Bioremediation would, indeed, be a good way to address these concerns, but only if certain questions about its effectiveness and toxicity were answered — which, at the time of the NOAA draft, they had not. And, of course, protecting commercial fishing openings was, as usual, among the state's highest priorities.

However, the state had several concerns about the NOAA/Coast Guard approach. The first was the assumption that bioremediation was a treatment of choice at that point; it was not. The second was that bioremediation would work well on subsurface oil; the only data to support the assumption came from limited Exxon laboratory tests.

The third, and perhaps most difficult for the state to accept, was the overall implication that oil should only be broken up and exposed to sun and wave action; this apparently ruled out actual removal of oiled sediments, or actually cleaning beaches with water, a rock-washing machine, or some other technique. It also appeared to limit or exclude the possibility that work crews could boom off work sites, as they were supposed to do in 1989. Although there had been serious problems with proper worksite booming by crews the previous summer, there was no reason to believe that the effectiveness could not be improved by better supervision and more care.

"The state should clearly object to this proposal on the basis that significant quantities of oil still remain, and treatment should continue if technologies exist to allow further recovery without undue harm to the environment," the state Department of Fish and Game wrote in its comments on the recommendations.[81]

Also on the table at Newport Beach was discussion of a "decision key," which

was essentially a flow chart that would serve, ostensibly, as a guide to determine which oiling conditions would trigger which cleanup technique. As part of the decision key, the terms describing oiling conditions, which would become standard *Exxon Valdez* lexicon, were introduced formally.

The decision key would be used in the Technical Advisory Group (TAG), a new working group that would prepare site-specific cleanup recommendations for the federal on-scene coordinator's review and approval.

Underlying the standard terms, the decision key, and the TAG was the premise (really a paraphrase of both state and federal cleanup requirements) that cleanup should never do more harm than good, or, as it was later phrased, that it should achieve a "net environmental benefit."

## Areas of disagreement over 1990 cleanup plans

- **Throughout 1990, survey crews and work supervisors clashed over definitions of oiling conditions;** one monitor's OP – which triggered more aggressive cleanup – was another organization's HOR – which triggered a less aggressive or easier-to-accomplish technique.
- **Decision-makers and field monitors fought about the decision key**; one organization's "guideline" was another monitor's "requirement." One of the most prominent disputes revolved around the issue of when it was appropriate to go beyond the "least intrusive" technique available.
- **Exxon's role and state authority over cleanup were never properly or satisfactorily defined in the Technical Advisory Group,** which replaced the Interagency Shoreline Cleanup Committee. It was not made entirely clear whether work orders represented the practical limit of cleanup under both state and federal standards. The "sign-off" process was not well understood at all levels and generated disputes on the shorelines.
- **Bioremediation became the goal for Exxon and federal cleanup supervisors, while the state was skeptical of its effectiveness under all conditions,** especially heavier and subsurface oiling. Proper site preparation before bioremediation became a major shoreline issue.
- **Newport Beach proceedings placed a high priority on all parties reaching consensus about cleanup decisions.** As time passed, consensus was treated by both Exxon and the federal government more as an institutional requirement and less as simply a desirable working goal. The state's officials would become increasingly uncomfortable with a system that seemed to place consensus equal to, or even above, the state's authority to enforce its environmental standards.
- **The concept of "net environmental benefit" emerged as a de facto cleanup standard,** with its own sets of definitions and its own administrative procedures. State officials were concerned about the flexibility of the definitions, the vagueness of the standard, and its potential effects on existing state environmental standards and practices.
- **The premise behind the Newport Beach meeting was that it was possible to develop a single, consensus cleanup strategy.** State officials felt it was, indeed, a valid concept, but only if federal and state cleanup goals and requirements were harmonized, and any special state requirements were included in the federal-directed program.

Some of the areas of disagreement worked themselves out because actual conditions in the summer proved different than assumptions made over the previous winter. Bioremediation gained state approval. Mechanical equipment was used much more widely in the summer of 1990 than NOAA suggested; tons of oily sediment were actually removed, rather than simply exposed; worksites were tilled all summer, not just in the fall, and crews did a much better job of booming off work areas. At many sites, nearly everyone was surprised at how much subsurface oil remained, or how much certain beaches "bled" when warm weather liquified oil and mousse. Surveys during the cold weather months of November, January, February, March and April often did not detect or properly gauge the seriousness of some oiling conditions because ice, snow, and cold temperatures obscured or "locked up" oil concentrations.

The disagreements that persisted, however, were over policy and procedural issues, all of which affected decisions

about where, why, and how cleanup should proceed. All of these had their roots in the documents and charts presented at Newport Beach. (See figure on preveious page.)

Yet even within the state's organization, there were few hard and fast policies about how far cleanup should proceed. The state's basic regulation guiding cleanup states simply that cleanup shall continue until the parties reach the limit of the cleanup technology, or until removing the pollution is more environmentally harmful than leaving it in place. This regulation is designed to deal with every possible cleanup, from the fuel tank leak in Quinhagak to the drilling mud disposal pit in Soldotna. There is nothing in the regulations that addresses, in a specific manner, the questions on everyone's minds that winter and spring of 1989-90: How clean is "clean" in Prince William Sound?

Do we leave asphalt to break down slowly? Do we bleach stained rocks? Is subsurface oil acceptable on a beach outside a state park, but unacceptable at a beach inside a park? There was substantial internal debate on this issue among state agencies throughout 1989-90. The state Fish and Game and the Natural Resources departments argued for a written policy that spelled out the details, to the extent it was possible. For example, areas around salmon streams, or in state parks, would carry a more stringent standard than other sites.

DEC argued instead that the existing statute was flexible enough to deal with those considerations, and that being too specific might limit the state's options on a site-by-site basis. State officials wound up sticking with the basic regulatory standard, although they agreed to seek more intensive or complete cleanup at certain high-priority sites. Left unanswered was the question of what to do should the federal government choose not to honor the state's stricter standard. DEC officials told their fellow agency managers that the state could resort to court action to force Exxon to do the cleanup to state requirements, however, there was some question about whether that was an efficient way to go about it, or whether the courts would agree to such an order.[82] While the internal debate continued at various levels and various times over the winter, resolution was difficult because there was much uncertainty — among all parties, not just at the state level — about what conditions would be like in the spring, how effective cleanup techniques might be, or even which cleanup techniques would be approved.

The "how clean is 'clean' " issue went dormant for the rest of the winter, although it would emerge again in the spring after the surveys ended and cleanup started.

## FASST and SSAT surveys

Between January 28 and February 18, state-federal-Exxon survey teams began getting a picture of what would confront them when cleanup began in May and June. Six teams of surveyors fanned out, in three stages, to survey selected sites in both the Sound and the Gulf of Alaska during the Fast Assessment Shoreline Survey Team (FASST) program.[83] They found that the scouring of high energy beaches observed by the DEC teams three months before had continued, while sheltered beaches and subsurface oiling did not appear to have changed much. Asphalt and other hardened, tarry residue predominated.

Where 53.3 total miles were described as heavily oiled by DEC in the walkathon of fall '89, only 14.8 miles, nearly all of it in Prince William Sound, were described as "heavily" oiled in spring 1990.

"The vast majority of the free oil left on the shorelines is below the surface and cannot be removed with the techniques used last year," a DEC survey leader concluded.[84]

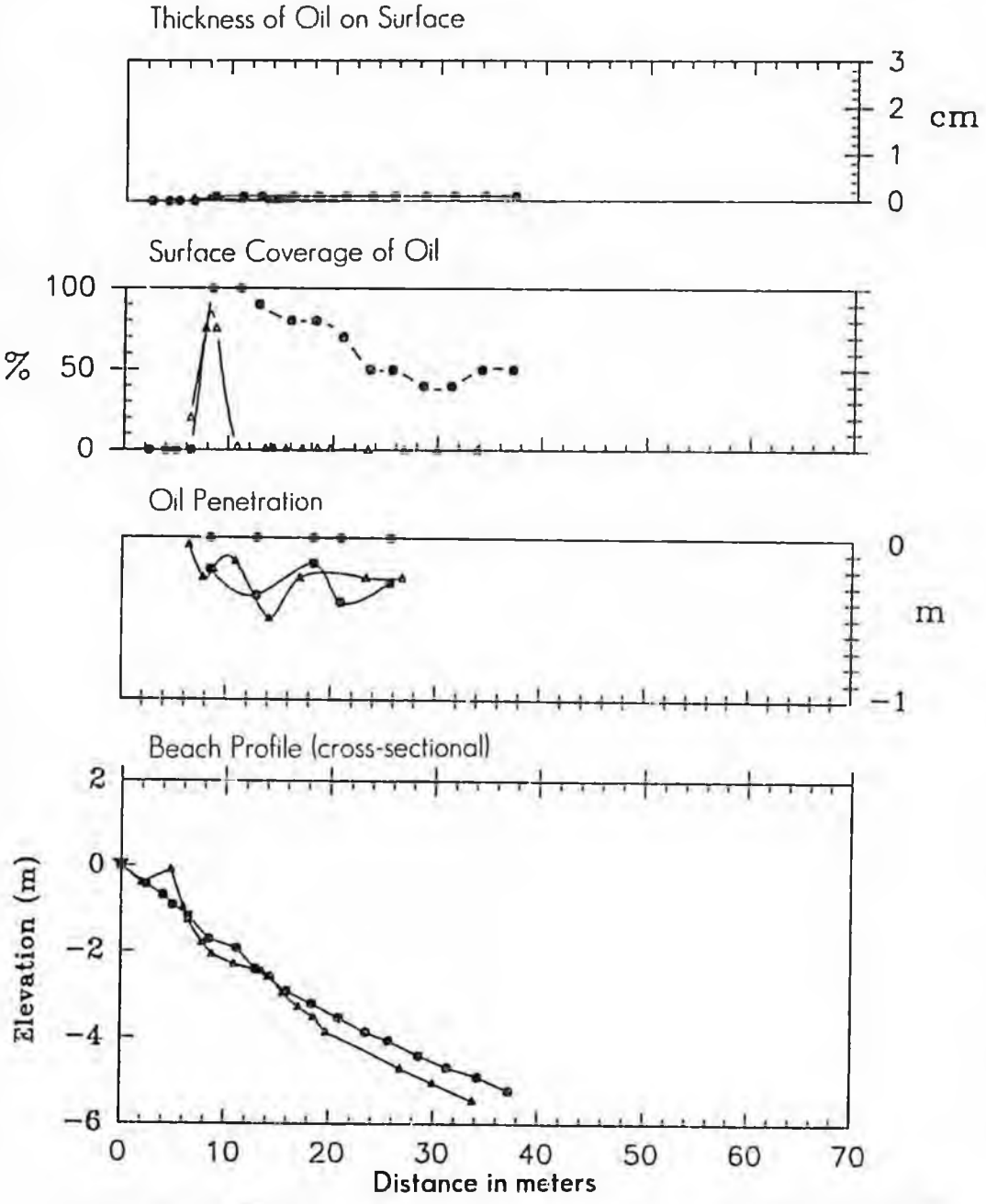
In late March, 20 more teams launched a more comprehensive shoreline survey, the Spring Shoreline Assessment Team program (SSAT). Indeed, the winter weather had made a substantial impact on the surface oiling conditions. Overall, oiling was reduced by almost 20 percent from October 1989 to May 1990, from 490 miles oiled to 396. And, perhaps more significant, oiling designated as "heavy" had decreased most dramatically. Where 53.3 total miles were described as heavily oiled by DEC in the walkathon of fall '89, only 14.8 miles, nearly all of it in Prince William Sound, were described as "heavily" oiled in spring 1990. This was still a massive pollution problem,

## Pre- and Post-Winter Shoreline Oiling

**Meares Point, Perry Island, Prince William Sound**

Segment PRO16 Station 094

**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION**




● December 5, 1989 △ March 20, 1990

A comparison of shoreline oiling before and after the first winter post-*Exxon Valdez* spill. Note in the second table that surface oil is virtually gone after the winter. But the third table shows that oil remains under the surface. The fourth table simply shows the dynamic changes in beach profile due to a combination of factors, including storm berm formation, and beach erosion from storms and/or the washing away of fines during beach cleaning.

of course, but measured against the enormity of March and April of 1989, conditions were substantially improved a year later.[85]

Again, however, such an assessment was merely relative. The SSAT teams surveyed 784 shoreline segments or specific 1989 worksites, and 702 contained some oil. The bulk of it — about 65 percent of the sites — were recorded as "lightly" oiled, a general term that included everything from a patchy pattern of small asphalt mats to hardened mousse around boulders and to stain and crust on large rocks. Although the joint SSAT project did not survey subsurface oiling, state surveyors dug as many delineation pits as they could in search of buried oil. They recorded subsurface oiling conditions at 232 of the 784 SSAT sites. Again, this number covers a wide range of conditions, from thick, saturated sediments at a few sites to the dull gray colored sand that betrayed light or moderate oil residue.

The survey teams sent their results to the Technical Advisory Group members, all of whom had spent considerable time on the shorelines. The TAG was the forum for the negotiated cleanup work orders, some of which represented a clear consensus and some that were merely the best settlement possible for one dissenting agency or another. More often than not, Alaska officials found themselves attempting to convince Exxon and the federal officials that more aggressive techniques — mechanical tilling and/or removal of oiled sediments — undertaken in a short and intense 1990 program, were more practical and more desirable than a passive approach. This was not another visit to the high-pressure, hot-water debate; rather, state wildlife managers and environmental officials felt that it was important to get as much as oil out of the system as possible, as fast as possible. If that meant using a small trackhoe instead of shovels and rakes, that was acceptable to the state. The federal government, however, was wary of such efforts. This fundamental strategic difference ran through negotiations on nearly every issue of the 1990 summer season cleanup.

State officials began to get a hint that the TAG reduced state influence over some key decisions. One of the principal reasons was that in the TAG, the state lacked an important ally: the Alaska and American public. Unlike the deliberations of the Interagency Shoreline Clean Committee, the TAG talks were closed to public scrutiny. The federal on-scene coordinator would not allow the public to observe, let alone participate. This caused a brief confrontation between the new state on-scene coordinator and the Coast Guard admiral serving as federal coordinator in April and May 1990. When state officials pressed the Coast Guard on the issue, the admiral flatly refused to allow public access, arguing that federal law did not require him to open the meetings. The new Coast Guard commandant, Admiral William Kime, backed up his on-scene coordinator when state officials appealed the closed meeting decision.

Public pressure had played a key role in pushing certain cleanup issues in 1989, often those that the state felt were important. The isolation of the TAG, however, meant that state wildlife managers and environmental officials were usually in the minority during TAG deliberations. This caused some friction during the first months of the TAG operation, but as state officials began to get a better sense of the decision-making dynamic, they were able to work out acceptable compromises with their counterparts from Exxon and the federal government, in most cases. The cleanup program laid out by the TAG after the spring survey was generally less aggressive than the state preferred, but the differences were probably measured in degrees rather than by orders of magnitude. Again, as in other cases on the cleanup, the *ad hoc* nature of the *Exxon Valdez* response system probably had a greater effect on working relationships than actual decisions and technical positions.

The impressions of the TAG and the decision-making system formed in these early weeks of the organization's existence in 1990 were the ones that obtained right through to the end of the response in 1992, even though the TAG gradually began to work more smoothly as personal working relationships both lengthened and improved. And for the state, the lasting impressions were of an organization stacked against it: the company and the federal government reps held one position, the state held another, but the

final arbiter of the TAG recommendations was a federal official, the Coast Guard admiral serving as federal on-scene coordinator.[86] Moreover, the public, which had helped the state apply pressure on important points in 1989, was pointedly excluded from the discussions.

## 3.6 1990 Cleanup

The federal on-scene coordinator approved Exxon's proposed cleanup plan the first week of April. The company's plan detailed a much smaller operation than the army and navy of the previous season; where there had once been several thousand workers on the shorelines, there would probably be no more than 200, total. The high-pressure hoses and omnibooms were gone, and workers would rely mostly on hand tools and fertilizers. The plan leaned away from mechanical treatment, and labeled removal with loaded terms such as "placer mining."

Although the plan had federal approval, it would be another month before fertilizers received approval for use by the state. The federal approval also left unanswered an issue critical to the state: subsurface oiling. The state wanted to know how Exxon

In the 1990 cleanup the high-pressure hoses and omnibooms were gone, and workers relied mostly on hand tools and fertilizers. Exxon's plan detailed a much smaller operation than the army and navy of the previous season; where there had once been several thousand workers on the shorelines, there would probably be no more than 200. Photo by Richard Newman

proposed to deal with subsurface oiling. Specifically, state officials wanted to know if Exxon and the federal government were going to work on development of a rock-washing device of some kind.

Based on the NOAA recommendations of January 1990, federal officials were wary of aggressive cleanup. Exxon did not appear to want to move ahead on rock-washing

technology or excavation of oiled sediments, regardless of the state's wishes, without firm direction from the Coast Guard.

However, the intensive TAG review of the information gathered during the SSAT survey produced a cleanup program that targeted more than 400 specific oiled sites, most of them in Prince William Sound. By far, manual pickup was the most often prescribed treatment, supplemented by fertilizers. The TAG wrote 78 work orders that called for tilling, and 14 more that called for aggressive excavation and removal.

Frequently, a backhoe crew would discover a new lens of buried oil at a worksite, and find that the small lens marked on the survey map and work order was really three times as big as the survey team had thought.

The cleanup began in May. It was a very different kind of operation, from the standpoint of technology, than in 1989. The first summer, cleanup centered on washing relatively mobile oil and mousse into containment pens, where it could be skimmed or absorbed. The second summer, cleanup was more site-specific, with crews targeting specific patches of hardened materials or oil-saturated sediments. Workers used shovels and trowels to scrape mousse from between boulders during what became known as "rock and roll" operations, as crews pulled back the rocky beach armor to get at mousse and asphalt trapped underneath.

Throughout the summer, but especially as weather got warmer and oil began to become more mobile, it became obvious that the spring surveys had not fully discovered or described the extent of the problems.

As crews pulled back beach armor, they began to discover that oiling was frequently more serious than originally thought. Warmer temperatures and ground water moving through beach sediments frequently worked more oil towards the surface. Asphalt patches that were scraped away often exposed more liquid mousse underneath; unless that newly exposed mousse (and the sediments a few centimeters down) were removed, it would simply form another "scab" and create another asphalt mat where the last one was. The firm, tarry residue around the base of large rocks turned out to be just the tip of the problem at many sites. Boulder fields, where surveyors couldn't dig pits to determine the extent of subsurface oiling, often turned out to have more serious hidden oiling than originally thought; no matter how many times workers scraped away the accummulations around the big rocks, more oil seeped out to harden in the same place.

DEC's 1990 surveys included an underwater study. Photo by Sandy Wiley-Echeverria

The tilling and excavation operations often exposed even bigger hidden problems. A backhoe could, of course, dig more, deeper, wider pits than people could using hand tools. Frequently, a backhoe crew would discover a new lens of buried oil at a worksite, and find that the small lens of "OP" (the heaviest, oil-saturated sediments) marked on the survey map and work order was really three times as big as the survey team had thought.

The surveys had missed these problems for a variety of reasons. The winter of 1989-90 was relatively snowy, so when some of the crews hit the beaches in the spring, some of the oiling conditions were hidden below snow and ice crust, especially in shaded and/or north-facing areas. The cold weather kept oil immobile; late winter lighting sometimes obscured telltale

colorations; cold and rainy weather sometimes caused crews to move more quickly. And, because of the demands of the survey schedule, crews simply could not take the time to do the kind of painstaking excavation necessary to "follow" every lens of oil, or roll back large sections of beach armor.

The *Exxon Valdez* cleanup management system was not well suited in early 1990 to dealing with the problem of the oil "discoveries" after the survey. The survey was the basis for the work orders developed by the TAG. Coast Guard and Exxon supervisors were reluctant to do work not specified on the work order, often insisting on a literal and strict interpretation.

"As a result, necessary treatment was sometimes neglected. In the first few weeks [of 1990 cleanup], it was not uncommon to have an area of oiling that matched the description for removal on the work order, but since it was 5 to 10 meters outside the circled area on the map, it was restricted from cleanup work," state monitors wrote in their cleanup summary in 1992.[87]

A secondary, but related problem developed over the use of fertilizers. Bioremediation was not authorized unless the site had been properly prepared, i.e, mobile oil, heavier oiling concentrations, and asphalt scabs were removed. The point, from the state's perspective, was that oiling that could be easily removed should be taken away, not left to slow decomposition. Many of the work order disputes revolved around whether the site had been properly prepared; one side would argue that it hadn't, often because of "discovered" oiling, while the other would say that the site was ready because the work specified on the work order had been completed.

After a particularly acrimonious incident over bioremediation site preparation at the Bay of Isles on Knight Island in May, the *Exxon Valdez* organization created a kind of appeals process.

These disputes were handled one of several ways, some formal, some informal. After a particularly acrimonious incident over bioremediation site preparation at the Bay of Isles on Knight Island in May, the *Exxon Valdez* organization created a kind of appeals process. Under this plan, state monitors could seek an amendment to any work order if new oiling were discovered. Sometimes the amendment was done in the field, either officially, by a Coast Guard area supervisor, or unofficially by agreement of all parties right on the shoreline. If agreement wasn't possible at these lower levels, the dispute could be elevated to the TAG, which would make a site visit and new determination.

As in other disputes over authority and jurisdiction, lines of authority were often blurred and procedures not always well established or well understood. Some Coast Guard shoreline monitors deferred to Exxon, while some insisted on firm control on decisions. Some DEC and Fish and Game monitors went around the Coast Guard and worked directly with Exxon. Depending on the personalities involved, Exxon sometimes did extra work without a work order amendment, or sometimes the Exxon supervisor read the work order like the Bible. Further complicating the situation was the matter of time. Theoretically, a state monitor could appeal every decision, every day; however, tides, weather, and a limited summer season meant that monitors did not have an unlimited amount of time to pursue appeals and amendments.

As June turned to July, state officials became increasingly concerned that the system of "joint" response proposed conceptually in 1989 was turning into a strictly federal response. The state members of the TAG felt that they were forced into endless compromise; state monitors felt that cleanup was falling far short of what was needed and what was possible; bioremediation, they felt, was being misused and overused; the work order system was rigid and the amendment process impractical.

Swirling around just above the field level was a developing jurisdictional dispute over state and federal authority to require cleanup, and over whose standards should apply. The TAG was increasingly being billed by Exxon and the Coast Guard as an arbiter of technical issues, not as a forum in which compromises and consensus developed based on practical considerations. State officials became concerned that Coast Guard and other federal decisions could be portrayed as tacit state approval or agreement with all federal actions. Field monitors were unsure what their signature really meant when they "signed off" a work order: Did it imply agreement with federal actions? Did it imply that the state felt the site was as clean as it could get? Or did it

mean simply that the federal work order was complete, even though there was oil left over?

Federal field monitors weren't always clear on the concept either. They frequently insisted that DEC monitors sign the work order, even if they weren't satisfied with the job; they objected when DEC monitors would make notes on the sign-off sheets about other oiling problems.

There were a lot of hard feelings on the shorelines. However, beyond the personal conflicts and general questions about who was in charge, the evolving *Exxon Valdez* administrative system was raising some potentially serious short- and long-term problems for the State of Alaska.

What did shoreline "sign-off" mean? If the state tried to impose additional cleanup requirements on Exxon at the completion of the Coast Guard-directed effort, did these sign-off sheets imply some agreement, and could Exxon use them in their arguments to avoid further work? Could Exxon use the administrative record of the TAG to argue that the best technical solution for cleanup had already been addressed, and therefore the state's additional requirements lacked technical support? Was the state's participation in the TAG — with its supposedly "consensus" decisions — tacit acceptance of the cleanup standards championed by NOAA or even Exxon?

Whether the issue was bioremediation, "net environmental benefit," or the authority of the TAG, the state was merely an advisor to the federal government's authorities, with no more standing than Exxon. State officials found this arrangement dangerous and unacceptable.

In mid-July, DEC commissioner Dennis Kelso and federal on-scene coordinator Rear Admiral D.E. Ciancaglini exchanged various correspondence that attempted to assert, explain, dispute, or define state and federal authorities. They didn't get very far. Ciancaglini took the state's letters to mean that Alaska was attempting to overrule federal authority, a misapprehension that was as preposterous as it was unconstitutional. The state took Ciancaglini's statements to mean that the federal government would accept some state requirements for cleanup, but not necessarily others.

On a technical level, the state's cleanup managers were concerned that bioremediation was being used as an alternative to active removal, even when removal was possible and not any more disruptive than spraying the beach with fertilizers. The fertilizers had been billed as benign and natural cleanup enhancers that protected fragile plants and animals from disruption. This seemingly less "intrusive" approach would better help the cleanup achieve a "net environmental benefit." But in fact, the operation was not quite so low-key. The fertilizer solution included some noxious elements that stressed animals and plants nearly as much, if not more, than physical disruption with hand tools or even a backhoe. And the whole idea of "net environmental benefit" minimized the importance of human uses and values of the shorelines.[87]

Additionally, state monitors frequently reported that Exxon was doing incomplete and/or improper site preparation before applying the fertilizers, and often with the concurrence of the Coast Guard monitor, and over the objections of the state's representative. The emphasis on bioremediation, rather than removal, meant that the federal government's cleanup policy was becoming the *de facto* standard. As mentioned elsewhere in this report, NOAA and the Coast Guard were more tolerant of leaving stranded oil behind to be degraded over time, even when removal was possible and practical. Theoretically, the state could order the material removed under its own authority; of course, it was silly to order removal of material that the federal government had just authorized to be sprayed with fertilizers. But when the fertilizers went on the beach, as a practical matter it meant the end of cleanup for 1990 at the site, especially as July turned to August. bioremediation was, in the state's view, being used more as a primary cleanup technique and not as the "finishing" or "polishing" technique stipulated in the state's guidelines for using fertilizers. And because determining whether the site was ready for "polishing" often depended on subjective judgments by the Coast Guard or strict readings of an incomplete work order by Exxon, bioremediation was being used more frequently, more extensively, and on types of oiling conditions for which the technique was neither intended nor appropriate.

During this period of high-level jousting in July, the state tried to get a handle on the technical application of fertilizers. DEC technicians calculated roughly how much oil the fertilizers might be able to degrade over the course of a year — about five grams

of oil per kilogram (2.2 pounds) of beach material — and proposed that the figure serve as the trigger for authorizing fertilizers at a given site. Rather than relying on subjective eyeballing of the conditions, selected testing would help calibrate monitors' eyes to a more objective standard.

Rather than helping the debate or the disputes, the 5g/kg number caused the Coast Guard to harden its positions concerning state and federal authority. The Coast Guard interpreted the numbers to mean that DEC was trying to impose a "numerical standard" on the "how clean is clean" question. The Coast Guard doesn't have a numerical standard, the federal on-scene coordinator wrote to Kelso, and the state had no authority to try and impose one on Coast Guard operations.

At its root, this high-level conflict was really about just what the "joint" response was supposed to mean. The state thought that "joint" response meant that the federal government would direct things, as a matter of practicality, but that it would include all relevant state cleanup requirements in its directions to Exxon. The Coast Guard apparently felt the "joint" response meant something different. In all but name only, the *Exxon Valdez* response had become federalized, in the sense that Exxon did what the Coast Guard said and federal direction took precedence over any state actions or requirements. The state was providing "input," as the Coast Guard liked to say, but in fact, the state had no legal standing to impose its own requirements on Exxon through the Coast Guard. Whether this was all a result of a misunderstanding or some active strategy at some higher level, what it meant to the state is that the State of Alaska had limited authority to influence the cleanup of a massive oil spill on the shorelines of the state. Whether the issue was bioremediation, "net environmental benefit," or the authority of the TAG, the state was merely an advisor to the federal government's authorities, with no more standing than Exxon. State officials found this arrangement dangerous and unacceptable.

Under federal law, the state had the right to require more extensive cleanup, as long as its requirements were not in conflict with federal law or its efforts did not impede the federally-directed response. Under the law, the Coast Guard also had the option of including all state requirements in its orders to Exxon.

It was clear, however, that the Coast Guard would not necessarily agree to order Exxon to meet state requirements. Moreover, the *Exxon Valdez* cleanup administrative system — improvised during an emergency and institutionalized over time — gave the state less power than it would normally have, and threatened to shut off options normally available to it. The final straw, for state officials, came in late August 1990, when the federal government allowed Exxon to bulldoze thousands of pounds of heavily saturated sediments into the active tidal zone on Ushagat Island in the Barren Island group, just north of Kodiak and part of a maritime wildlife refuge. The state objected strongly, going so far as to send the Coast Guard a letter signed by all three of the state's resource commissioners. The federal on-scene coordinator went ahead with the order, and within a week high tides pulled the oil into the ocean.

The 1990 cleanup season had been a tedious and frustrating exercise for the State of Alaska. Fertilizers and natural weathering — accelerated by techniques such as plowing oiled sediments into areas where waves and sun could get at them — were gradually taking the place of actual cleanup. The state neither accepted this approach nor felt it appropriate. At the very least, state officials wanted to make sure that Alaska's ability to protect and clean its own shorelines were not washed away as well.

When the Coast Guard commandant announced that Exxon would return for more work in 1991, state managers decided to ride out the season and make their adjustments the following spring.

## 3.7 The state response plan

State spill managers in late 1990 judged that the problems encountered with Exxon

and the Coast Guard lay in the system, not with individuals or specific organizations. Where there was uncertainty and a lack of clarity, misunderstandings and hard feelings were sure to follow. To be sure, some people just didn't get along, and some people pursued agendas separate from the agenda dictated by a common desire to clean up the shorelines. Turf battles, political intrigue, and hints of legal manuevering surfaced from time to time, as one might expect in a highly charged, highly public, high stakes operation that included two governments and one of the world's largest corporations. However, these machinations were symptoms, not causes in themselves.

At the close of the 1990 season, state managers boiled the situation down to these fundamental questions:

1. How can we make sure that cleanup is completed to state standards?
2. How can we avoid a situation in which other entities — federal or corporate — set *de facto* state standards that may become poor precedents for future cleanups?
3. How can we reduce the stress on the shorelines for all workers, not just ours?
4. How can we better involve the Alaska public in the decision process?

The answers to all the questions came down to two basic points:

1. The state must clarify its positions and explain them more completely before the start-up of 1991 cleanup.
2. The state must make clear that it is ready to exercise its option to conduct or order cleanup on its own.

The result was the 1991 State Response Plan, a relatively brief document that explained what the state wanted done, why it wanted it done, where it wanted it done, how the work was to be done, and where the state got the authority to require that it be done just so. The document concluded with a section that stated plainly that the state would carry out the details of the workplan if the federal government was unable to, or chose not to. Finally, the state spill response office released the document for public comment and held a series of public meetings to further gauge community wishes.[89]

The goal of the plan was to take every vague issue and make it specific. The intent was to remove doubt about state intentions or standards from the minds of Exxon and Coast Guard officials. As a practical matter, the state plan was a way to match up disagreements and personality conflicts with actual issues; as long as people were discussing issues, working from a written set of standards and policies, they were less likely to become sidetracked by personal or procedural disputes.

For the most part, the plan worked. The state set its goals independently, but worked cooperatively. Where the state took independent action, it did so as a supplement to federal-directed activities, not as a challenge or a substitute to federal authority or action. In short, the state did exactly what it was entitled to under the law. The Coast Guard, no longer viewing state actions or requirements as a challenge to its authority, helped the state accomplish its goals more often than not.

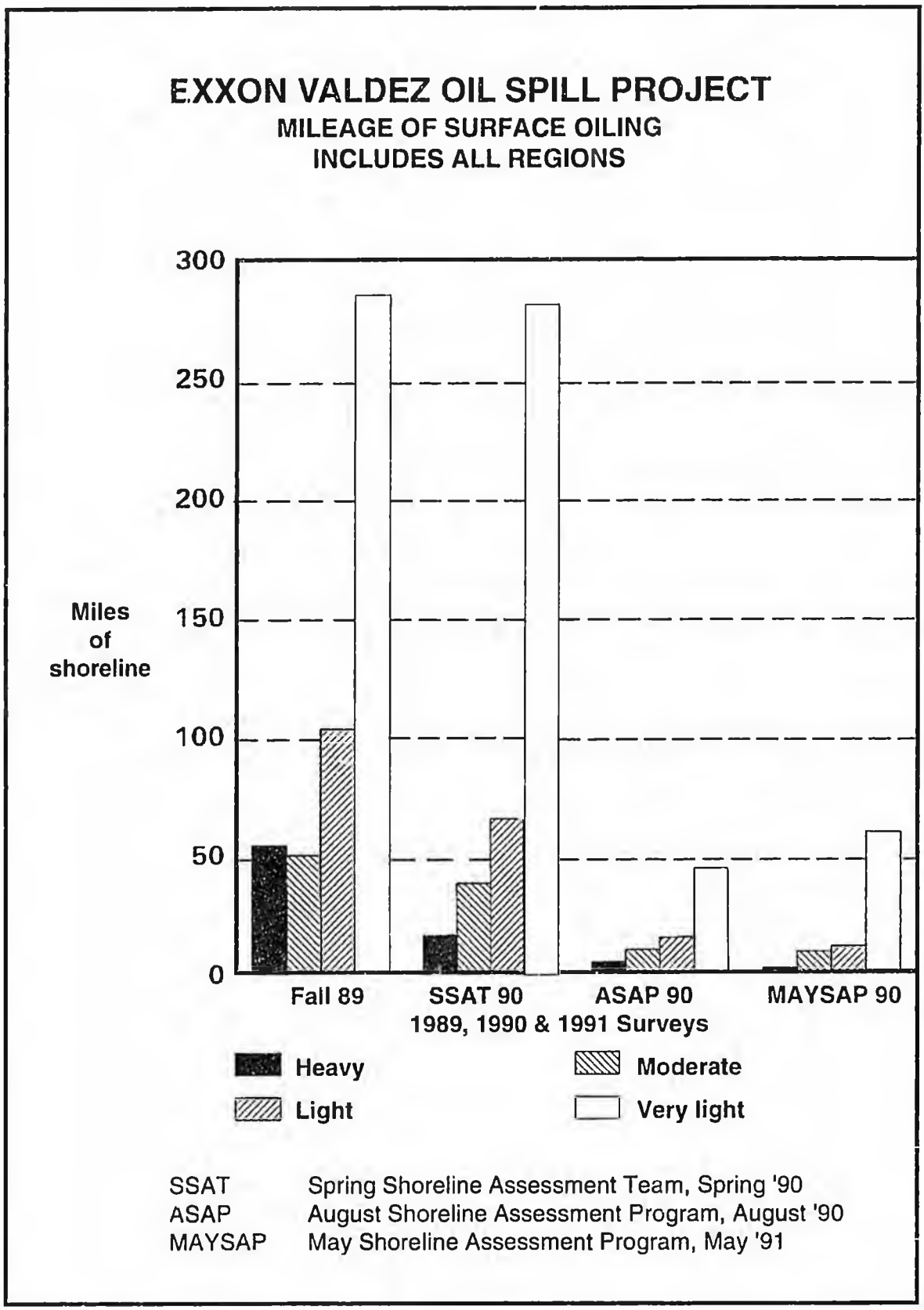
The state plan, released in November 1990, helped set the stage for an efficient and reasonably cooperative effort during the remaining two seasons of cleanup. Ironically, the state plan was little more than a formalized version of what the state attempts to do on every spill: be cooperative, protect state interests, exercise its full range of jurisdictional powers.

## 3.8 Cleanup, 1991-92

In conjunction with the state response plan of November 1990, state spill managers produced a list of nearly 600 shoreline segments and subdivisions that it intended to survey in the spring of 1991. This list underwent a few additions and a few deletions

during planning meetings with Exxon and the Coast Guard over the winter, but essentially it formed the basis for the spring survey.

The survey, called MAYSAP, or the May Shoreline Assessment Program, started later in the spring than the 1990 survey. The later start was intended to avoid some of



the problems of the previous year, when shorelines and oiling conditions were covered by snow or stiff from the cold. The MAYSAP teams also included one or two laborers, who picked up debris or broke up and removed simple oiling conditions encountered during the beachwalks. The goal was to get a jump on cleanup, or to finish cleanup altogether at sites where oiling was limited; there was no reason to make a separate visit for cleanup later on. The workers picked up debris or oiling at more than 200 sites during the MAYSAP.

Conditions were similar to those encountered during the 1990 survey, only on a smaller scale. As in 1990, oiling tended to be likely at sites that were sheltered from wave energy, or behind large rocks and outcrops. Surface oiling was generally discontinuous and made up of asphalts and tar that were heavily weathered. A few sites that were among the most heavily oiled in 1989 still showed significant patches of surface oiling, as well as thick lenses of subsurface oiling.

In fact, subsurface oiling appeared in a few cases not to have weathered or changed much from 1989 or 1990.

In fact, subsurface oiling appeared in a few cases not to have weathered or changed much from 1989 or 1990. The northern tip of Latouche Island and the southern tip of Knight Island, both of which were deluged with oil in 1989, still showed widespread and chemically fresh subsurface oiling. The state's monitors attempted to get a better handle on the extent of subsurface oiling at the survey sites, and even deployed a separate, state-only vessel that did follow-up work as part of a subsurface mapping project. Although the subsurface survey was not as extensive as the surface survey with Exxon and the Coast Guard, the state found significant subsurface oiling at dozens of sites in the Prince William Sound spill zone. Cumulatively, the disparate patches of buried oil came to more than 17 miles of shoreline. Like all the "miles of beach" figures, this one was statistically weak in terms of precision, however, it did give a sense of how persistent subsurface oiling can be under Alaska conditions.

Of the 588 shoreline subdivisions surveyed in 1991 (most in Prince William Sound), the TAG recommended no treatment at 486. The remaining sites were treated primarily with hand tools such as shovels and rakes. From May through mid-July, cleanup crews removed about 700 tons of oily sediment from the shorelines. A dozen sites, all within the Sound, were treated with mechanical equipment. Backhoes tilled, turned over, or removed oiled sediments at these subdivisions.

State workers did additional cleanup with hand tools at 25-50 sites around the Sound. At 26 sites where the state had decided to conduct cleanup to a stricter standard than the federal government, Exxon eventually went in and did the work. The Coast Guard officially added the state's work orders to the federal program, which made the supplemental state cleanup proceed quickly and in conjunction with federal-directed operations.

At most of the sites (with the execption of fish spawning streams), Exxon added fertilizers when manual cleanup was deemed complete. In addition, the company requested that it be allowed to add fertilizers to more than 50 sites after July 15, which was the end of the 1991 cleanup. Bioremediation played a minor role in the 1991 cleanup operation, largely because the oil had weathered so much that biodegradation could not be enhanced significantly. Based on independent scientific review over the winter of 1990-91, the state decided that it would not allow bioremediation to substitute for the simpler, more definitive technique of removal of oil with hand tools. Alaska did not object to fertilizers, but the state saw no reason to depend on them; most scientists concurred.[90]

Over the winter of 1991-92, state environmental and wildlife officials targeted about 60 sites for observation and survey in the spring. The federal on-scene coordinator decided to participate as well, dubbing the 1992 survey the FINSAP, or Final Shoreline Assessment Program. A handful of state, federal and Exxon cleanup supervisors went into the field in late May and the month of June, wielding shovels and plastic bags. They removed some sediment, but for the most part, the teams broke up or scattered heavily weathered, small patches of asphalt at a few dozen sites. The state and federal coordinators declared the cleanup complete on June 12, 1992.[91]

The decision to end the cleanup was based on federal and state regulations and

guidelines that give managers some parameters for making such a call. Determining the cleanup "complete" does not mean that there was no longer any oil in the area. Much of the spill area was, indeed, free of oil by that time. However, some areas showed persistent oiling — underneath boulder fields, buried in cobble beaches, trapped under the thick mats of "hair" and sediment that underlie mussel beds. The oil that remains is either heavily weathered at or near the surface — literally, like asphalt that goes into making highways — or packed in sediments that get little or no oxygen or sunshine that would help degrade the oil naturally. The large boulders or bedrock outcrops that help make up the rugged coastline also help to deflect wave energy that might also break up or turn over oiled sediments. Based on observation and sampling, most of the persistent oiling at various sites is either mixed heavily with water, creating a mousse, or made up of the asphaltene fractions whose molecular construction tend to make these compunds slow to degrade. The asphalts are probably close to inert, biologically, but it is hard to say what toxic fractions remain in the mousse or buried sediments until more sampling and analysis is complete.

The state and federal agencies charged with managing restoration efforts have put a survey operation into the field in 1993 to help get a better sense of the character and extent of persistent oiling conditions in the spill area.

## Notes, Chapter 3

[1] *Transcript of Valdez press conference, March 24, 1989.*

[2] *Iarossi, F., Deposition taken August 5, 1992, at various points.*

[3] *From the standpoint of sea conditions and seamanship, wind-driven waves and chop are more difficult to deal with than much larger, open ocean waves; the former is irregular in both wave heighth and rhythmic frequency, while the latter tends to be rolling and more regular. The relatively small vessels (especially shallow-draft skimmers and seine skiffs and barges) involved in the response were at significant risk attempting to operate in such disturbed seas.*

[4] *The storm of March 26-27 interrupted the operation briefly. During that time, the wind was so strong that the* Exxon Valdez *twisted 12 degrees on its perch upon the reef.*

[5] *Actually, this was more of a restoration than creation; Alyeska had maintained spill response crews in the first several years of terminal operations. These crews were phased out in the early 1980s and the personnel reassigned to regular terminal duties as a labor-saving and cost-cutting measure.*

[6] *Governor Steve Cowper, personal communication, May-June 1989. See also Cowper's interview with the Alaska Oil Spill Commission, the summary of which is dated Nov. 28, 1989. Cowper acknowledged that direct state intervention could have some affect on the state's ability to prove full liability for damages against Exxon or Alyeska, but he was not especially concerned about it.*

[7] *Hull, R. Exxon Valdez Report, Northwest EnviroServices, Inc., 1989, p. 6.*

[8] *Ibid., p. 6.*

[9] *Dennis Kelso, personal communication, May 1989.*

[10] *Judy Bittner, State Archeologist, Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation, personal communication, September 1992. Bittner said the problem of looting and disruption was actually more acute in the Kodiak area, partly because of increased access, but primarily because the Kodiak archipelago has a longer history of extensive human habitation and use, and is therefore culturally "richer" than most areas inside Prince William Sound.*

[11] *Artifact hunting and collecting is actually against the law on Alaska public lands, and it is universally banned by Native corporations on their land.*

[12] *This has obvious implications for archeological disruption, but it also has implications for sport hunting, sport fishing, and unauthorized use of private lands.*

[13] *The best example were USFWS restrictions on activities near active (and in some cases, inactive) bald eagle nests. Air traffic, especially by helicopters, was central to nearly every government or Exxon effort; every day, on every approach to a shoreline site, pilots had to consult a specially created map that identified every eagle nest in the Sound. If there were a question of whether a nest were active or inactive, USFWS biologists made a special trip to the site to make a determination. Pilots sometimes had to seek special clearance for a landing at a questioned site, which occasionally involved a radio call from Prince William Sound to Anchorage, then a phone call to USFWS, and finally a call back on the radio to the pilot circling the shoreline. Anyone violating the buffers could have, theoretically, been charged with a violation of federal wildlife protection law. This issue was so sensitive (and its implications so cumbersome on field visits) that the Coast Guard sought and received high-level federal absolution for any accidental disruption — known as a "taking" under the federal terminology — caused because of cleanup activity. And even then, the federal variance only guaranteed that the unintentional offender would not be charged with a crime or other violation; USFWS was stern and clear in its explanation that it was not* authorizing *disruptions, but rather, it was protecting innocent offenders from prosecution or a citation.*

[14] *An exception may be herring, which spawn relatively close to the surface and against certain kinds of shorelines.*

[15] *A Belgian man allegedly died from botulism poisoning after eating Alaska canned salmon. The death, while real enough, turned out to be the result of other causes. However, the canned market — a staple of the Alaska industry, especially for pink salmon — was briefly but devastatingly undermined.*

[16] *The spring bloom of the plankton caused a similar phenomenon. There were several reports of oil that turned out to be plankton.*

[17] *There is some mixing of wild and hatchery-raised stock, but fisheries managers try to keep them separate by strategically opening and closing various fisheries in different areas.*

[18] *Through a variety of complex formulae, the oil companies can deduct costs such as prevention and response investments from the taxes and royalties they pay the State of Alaska. The Alaska Governor's Office estimated in 1990 that the mandated improvements at Alyeska would mean, for the state, a drop of about $10 million a year in expected oil revenue.*

[19] *This theoretical ratio came to economic life in 1990, when a volcanic eruption and the threat of lava and flood loomed over a large tank farm at the Drift River on the west side of Cook Inlet. As the state contemplated an emergency shutdown of the facility, which served as storage for wells just offshore, producers pointed out that closing the terminal would mean shutting in wells. And the wells, they emphasized, weren't so easy to start up again: An extended shutdown would drop the pressure in the reservoir, making start-up problematic at best and impossible at worst. The bottom line — literally — was that the old wells were already marginal producers, and they may not be economical to operate at lowered production levels caused by a shut-in. Ultimately, the threat passed and an extended shutdown of the terminal was not necessary. However, the state, the local government and the industry were faced with a decision, for a time, about the known value of oilfield jobs vs. the unmeasurable threat from an oil spill.*

[20] *A setnet fishery in the Alitak District opened, and 87 fishermen worked a total of 114 days there. A seine fishery also opened in Karluk Lagoon in mid-September; five boats took part and caught less than 5,000 fish, according to the Department of Fish and Game.*

[21] *This is somewhat of a generalization, and applies more to Chenega Bay, Tatitlek, Port Graham, Seldovia and English Bay — the villages of the Sound and Lower Cook Inlet — than to the villages on Kodiak Island. Kodiak had a somewhat different set-up than other areas. The city government of Kodiak could deal with one set of immediate issues, while the borough government — with staff and a strong, established network of village contacts — could put more energy into coordinating island-wide issues. Further, the Kodiak borough had an emergency response network already in place when the spill happened. The system may not have been perfect, but village issues were a regular part of the deliberations of the Kodiak emergency committee.*

[22] *This beach segment, SM005, was immediately dubbed "Quayle Beach," and the name was used interchangeably with its official designation throughout the response.*

[23] *Author's note: The author of this report was at the meeting.*

[24] *DEC officials were in Tatitlek shortly after the spill to meet with villagers. In the middle of the meeting, a helicopter landed in the village, unannounced and unexpected. High-ranking Exxon officials came to the meeting, spoke briefly, did not answer questions, and left quickly. The visit, however well-intentioned, involved very little real communication or interaction, and probably hurt Exxon's outreach effort more than helping it.*

[25] *These problems are cited throughout the staff papers prepared for the Alaska Oil Spill Commission on the effects on the local communities.*

[26] *The ADF&G's subsistence division had, fortunately, a solid pre-spill set of data on subsistence harvest and patterns of use in the spill region. The division has, over the past 15 years, developed and supplemented a region-by-region, village-by-village survey of subsistence use in Alaska.*

[27] *ADF&G, Division of Subsistence, various papers, 1985-92.*

[28] *Division of Subsistence, various papers, 1986-91.*

[29] *Fall, J.A., "Subsistence Uses of Fish and Wildlife and the Exxon Valdez Oil Spill," Arctic Issues Digest, (University of Alaska Fairbanks, October 1991). Fall is the regional manager for the subsistence division of ADF&G in Anchorage. The example of sharing of the harbor seal in English Bay comes from a 1985 paper by Ron Stanek, ADF&G, Division of Subsistence.*

[30] *Fall, ibid.*

[31] *Fall, ibid.*

[32] *Fall, ibid.*

[33] *Fall, ibid.*

[34] *Or, in some cases, processed food products have been integrated into a traditional food. In some western Alaska Yupik villages, sweet leaves or berries that were once served with whipped seal oil are more frequently mixed with Crisco shortening instead. Crisco has not entirely replaced seal oil, of course — residents may drizzle some of the pungent oil on the Crisco mix — but the shortening is an acceptable everyday substitute for seal oil. The point here is that subsistence is not static or ritualistic.*

[35] *Abnormal fin development, frayed or thin fins, etc., are strong visual clues to biologists that a fish is not healthy.*

[36] *It has been noted that Exxon's first overtures to village residents were often clumsy, and in many respects, Exxon's community relations efforts either did not improve much, or were not accepted well throughout the spill. However, the state's subsistence officials interviewed for this report said Exxon, once it realized the magnitude of the issue, was extremely helpful.*

[37] *Fall, op. cit. See also Walker, A., and Field, L., "Subsistence Fisheries and the Exxon Valdez:*

*Human Health Concerns," Proceedings of the 1991 International Oil Spill Conference, American Petroleum Institute, March 1991.*

[38] *National Research Council, Steering Committee for Petroleum in the Marine Environment Update. "Oil in the Sea: Inputs, Fates and Effects." (National Academy Press, Washington, D.C., 1985.) (Cited in Walker and Field, 1991.)*

[39] *Fall, op. cit.*

[40] *Walker and Field, op. cit.*

[41] *Fall, J., "An Update on Subsistence Uses in Alaska Native Villages following the Exxon Valdez Oil Spill." Alaska Dept. of Fish and Game, Division of Subsistence, Anchorage, March 1992.*

[42] *Fall, 1992 update.*

[43] *Quoted in Fall's 1992 update.*

[44] *Fall, October 1991 article.*

[45] *Minutes of "Oiled Mayors" meeting, June 8, 1989. Seward's city manager also noted that, as in Valdez, VECO and Exxon were setting up operations in town without properly consulting local government authorities or following city permitting requirements.*

[46] *Exxon tended to be a good deal more efficient and timely in its financial dealings than its contractors.*

[47] *The company's estimate of what it spent on the cleanup in 1989.*

[48] *State of Alaska, Office of the Governor, September 1989.*

[49] *Alaska Oil Spill Commission, staff reports, February 1990. It is unclear from the reports whether the original figures citing 90 percent of the people "affected" by alcoholism counted sober children of drinking parents, or whether it meant 9 of every 10 people actually drank. In any case, Ahkiok's struggle with alcohol is not drastically unlike the situation in many Alaska villages. Alaska State Troopers estimate that nearly 100 percent of all rural crime — murder, domestic violence, assaults, etc. — is alcohol-related. Alcohol is also cited as the principal contributing factor in a majority of boating accidents, suicides and other non-criminal death and injury. Communities that are successful in reversing alcoholism problems generally do so by relying on traditional activities, such as subsistence, local tribal government, and community-based support networks, rather than outside law enforcement or treatment programs.*

[50] *It is probably no coincidence that the governments with fulltime, paid mayors often got better results with Exxon and the state and federal governments. These mayors, such as in the Kodiak and Kenai boroughs, had the legitimacy of authority (they were elected) and the time and management structure to stay on issues (they were supposed to do that, since it was their paid job).*

[51] *The Kenai borough mayor, Don Gilman, successfully lobbied Exxon and got a commitment for $2 million in response funding. Kodiak got a commitment for $500,000.*

[52] *Ernest Piper, field memoranda, 1989.*

[53] *Alaska Conference of Mayors, Oiled Mayors Committee, "Economic, Social, and Psychological Impact Assessment of the Exxon Valdez Oil Spill." November 15, 1990.*

[54] *There is little hard or coordinated data to accurately measure the extent of these social problems and disruptions against pre-spill conditions in the affected communities. The Oiled Mayors used a state grant to commission a broad study of social and economic impacts, but this was one of the few efforts to quantify the problems. Reading the study, it is obvious that the spill created some problems and exacerbated others. However, the survey methods and the lack of a clear baseline in most cases limited the researchers' ability to pinpoint conclusions. They could, for example, compare reports of substance abuse or treatment against pre-spill years, or measure the increase in visits of individuals to mental health facilities. It was easy to conclude that stress increased on children and families and individual adults, but difficult to conclude how much. As general reading, it is a good source of more detailed information about the trends of social disruption in the towns. Also*

*see: J. Steven Picou and Duane A. Gill, "Long-term Social Psychological Impacts of the Exxon Valdez Oil Spill," Exxon Valdez Oil Spill Symposium Abstract Book, February 1993, Anchorage, sponsored by the Exxon Valdez Oil Spill Trustee Council, University of Alaska Sea Grant Program, and the American Fisheries Society, Alaska Chapter. See also Symposium Proceedings, slated to be published in 1994. See also other papers by Dr. Picou on this subject.*

[55] *Shoreline cleanup crews were hired and managed by VECO International, an oilfield services and construction company, and Norcon, a VECO affiliate that employed a union labor force. On some of the early beach-cleaning forays, union and non-union crews worked the same stretch of shoreline, separated — literally — by brightly colored ropes laid along the cobbles of the remote beaches.*

[56] *Exxon Daily Report, Sept. 16, 1989.*

[57] *Exxon received a fair amount of criticism, especially from Congress, for using the term "treated" instead of "cleaned." In fact, the state had originally insisted on this change in terminology because DEC felt "cleaned" was misleading, as in " x miles of beach have been cleaned to date." The change in terms was important, the state felt, so that people would understand that the cleanup was not as effective as the verb "to clean" implied.*

[58] *Exxon pamphlet, "The Valdez Cleanup: A Progress Report from Exxon," summer, 1989.*

[59] *Governor Steve Cowper, press release, July 24, 1989.*

[60] *See Art Davidson's In the Wake of the Exxon Valdez, Sierra Club Books, 1989, pp. 211-212. Also, Exxon's W.D. Stevens, appearing before a Senate committee in Washington, D.C. after the Otto Harrison memo appeared, said he doubted whether Dennis Kelso, the state's chief cleanup official, really wanted to make sure the oil was cleaned up.*

[61] *Gardner, D. and others, unpublished DEC review of cleanup activities, June 1992. This report lists improper deployment and maintenance of boom around washing sites as an operating problem listed "more often than any other" in a review of approximately 1,000 instances of operating violations or errors in 1989.*

[62] *Hull, R. Northwest Environservices, Exxon Valdez final report, December 1990, p. 54.*

[63] *Hull, ibid, p. 57.*

[64] *Gardner and others, op. cit.*

[65] *Hull, op cit, p. 47. It was not clear whether the foreman was from VECO or Exxon.*

[66] *Gardner and others, op. cit.*

[67] *The technical debate about Corexit is discussed in chapter 2, p. 69.*

[68] *Hull, ibid., pp. 64-65.*

[69] *The roles of the ISCC and the TAG are described in Chapter 1 of this report; see pages 30-43.*

[69] *The disputes continued into 1990, but the adversarial roles were defined a little differently, and were indications of a slightly different problem. This is discussed later in this section.*

[70] *E. Piper, State of Alaska, Office of the Governor, site visit, July 1989.*

[71] *Exxon did use one of its barge-mounted incinerators at Herring Bay on Knight Island from Sept. 11 to Sept. 17, burning about 2 tons of oily waste before shutdown for the season.*

[72] *Yost quoted in the state's "Oil Spill Chronicle" newsletter, vol. 1, no. 11, September 19, 1989. The DEC published this newsletter weekly, then later monthly, from July 1989 through June 1992. It had replaced "Soundings," a newsletter and fact sheet published by a team of public information specialists from the Alaska National Guard. The small group of Guard personnel, on active duty, compiled the fact sheet from various sources and sent it by mail and facsimile machine to villages, news organizations, and other parties every day from May through the middle of July 1989. It was frequently the only daily source of information that went out area-wide. As the summer wore on, more state organizations started preparing their own newsletters and sending them into the facsimile machine network. The Governor's press office consolidated the effort into the Oil Spill Chronicle in an attempt to make sure that information given by the state was cross-referenced with*

*others and the positions expressed in the newsletters were consistent throughout state government.*

[73] *ADEC, "Impact Maps and Summary Survey of the* Exxon Valdez *Spill Site," September 11- October 19, 1989. Five volumes (2PWS, 1 Seward, 1 Homer, 1 Kodiak).*

[74] *Regardless whether "miles of shoreline" was the most accurate way to describe the extent of oiling, it became the standard unit of measurement. DEC's data report from the 1989 fall survey included a statistical disclaimer acknowledging that even its miles of shoreline number had a wide possible margin of error. However, although it became less symbolically significant than it was in the 1989 season, mappers never got away from using miles of shoreline in one way or another. The Coast Guard actually attempted in 1989 to come up with a better way to describe progress than "miles of beach." Admiral Clyde Robbins toyed with a measurement unit that was based, in part, on what kind of beach was cleaned (heavy oiling, light, etc.) and what kind of results were coming in; his staff dubbed the unit a "clyde." However, it was hard to describe. reporters didn't pick up on it, and it passed unnoticed into history.*

[75] *Exxon used the terms "wide, medium and narrow," instead, but that terminology never caught on with the rest of the organizations.*

[76] *Cleanup was classified by Exxon as either Type A — manual pickup and washing — or Type B — which was mechanical or involved removal of beach material. Some areas and crews were designated for Type A cleanup only (especially in the Homer and Kodiak zones); VECO and Exxon would not allow some work crews to have shovels because digging would, in their view, constitute Type B cleanup.*

[77] *See especially the staff reports done for the Alaska Oil Spill Commission about the impacts of the spill on communities. They are contained in appendix N to the commission's final report in February 1990.*

[78] *Most communities also intended to use the state money to pay extra administrative costs associated with spill response, and to maintain staff who handled spill-related planning, questions, and contact with the state, Coast Guard and Exxon.*

[79] *NOAA Recommendation for 1990 Cleanup of the* Exxon Valdez *Oil Spill, Draft, January 4, 1990. This was the draft circulated to state agencies for comment.*

[80] *Captain D.E. Bedron, memorandum to the Alaska Regional Response Team members, January 2, 1990.*

[81] *Kuwada, M., Alaska Dept. of Fish and Game, memorandum to Steve Provant, DEC, state on-scene coordinator, January 29, 1990.*

[82] *Kuwada, M., ADF&G, notes from Feb. 16, 1990 meeting of state agency cleanup teams.*

[83] *Each of the joint surveys after 1989 carried its own acronym based on the status of the cleanup or the stated goal. The FASST surveys were intended to be a fast snapshot on selected shoreline changes. The SSAT was the Spring Shoreline Assessment Team program in 1990. It was followed by the ASAP, which referred not only to its actual name — the August Shoreline Assessment Program — but to the fact that it was supposed to be done quickly before the weather changed from summer to winter. The spring 1991 survey, done in May, was called MAYSAP, and the last joint survey in 1992 was dubbed FINSAP, or the Final Shoreline Assessment Program. There were a multitude of acronyms for programs, equipment, or institutions, but many were not planned to "read" quite as well as the joint survey designations. One of the most humorous configurations was for the 1989-90 Winter Interagency Monitoring Program, known, of course, as WIMP.*

[84] *Clay Robinson, ADEC, quoted in the state's Oil Spill Chronicle, Vol. 2, No. 7, Feb. 13, 1990.*

[85] *The reader should take these figures, like all other oiling statistics, with a grain or two of salt. The numbers, despite the specificity implied by the presence of decimal points, are somewhat imprecise. For one thing, the total sample changed from year to year: Surveyors did not walk every mile every year, but rather, returned only to to those places where oil was reported during the visit immediatcly previous (survey or cleanup). So, each data set was based on a sample smaller than, and selected differently from, the data set recorded before*

*it. It was a practical approach for targeting cleanup, of course, but the methodology isn't exactly rigorous, from a statistical standpoint. In addition, data reports were significantly affected from year to year by factors such as weather (surveys done in the rain almost always disclosed less oil than surveys done in nice weather), the experience of surveyors (some people were more skillful at finding oil than others), and whose hand was on the pencil recording the data in the field (one person's "heavy" was another person's "moderate." Finally, and most important, the joint survey figures do not include subsurface oiling.*

[86] *See Chapter 1 for a more complete examination of this issue and for citations from state documents supporting this general description of the state's perceptions.*

[87] *Gardner, D., and others, unpublished DEC summary of shoreline cleanup titled "Shoreline Treatment/Cleanup Monitoring: Review of Field Activities During the Exxon Valdez Oil Spill Treatment Operation," June, 1992. This problem of disputes about "exceeding the work order" were numerous; some were probably honest differences in interpretation, but other disagreements were over blatant refusal by Exxon or the Coast Guard field monitor to remove obvious oiling. The DEC and Fish and Game monitors began sending in reports of these, which were later compiled in a June 21, 1990 DEC memorandum.*

[88] *See Chapter 1, page 33, on the role of the TAG and the "net environmental benefit" debate. See also Chapter 2, page 73, on bioremediation.*

[89] *State of Alaska, Exxon Valdez Oil Spill Response Center, "1991 State Response Plan: Policies, Requirements, Guidelines," April, 1991.*

[90] *Exxon's did not.*

[91] *Joint U.S. Coast Guard/ADEC Press release, June 12, 1992.*

# Chapter 4: Legal, Regulatory and Administrative Changes

The grounding of the *Exxon Valdez* prompted both the state and federal governments to significantly alter the laws, regulations and strategies relating to oil pollution. At the state level, between April 1989 and May 1990 the Alaska Legislature passed a dozen new laws dealing with prevention, response and oversight. Among the most significant was a law boosting the state's emergency oil and hazardous substance response fund to $50 million — 50 times what the fund contained at the time of the Exxon spill. The Legislature also mandated a complete rewrite of the state's oil spill prevention, response, and contingency planning regulations, and increased both liability and penalties for polluters. The fund has since become the state's primary source for spill response planning and development, including funding for a new, special division of the Department of Environmental Conservation (DEC) dedicated solely to oil and hazardous substance spill issues.

The changes at the federal level were rolled together in the Oil Pollution Act (OPA) of 1990, which became law less than 18 months after the initial grounding of the Exxon tanker. This was especially significant, since the legislation that became the foundation of OPA '90 had been languishing in various Congressional committees for nearly 15 years. Like the state measures, the federal act raised liability limits, mandated new prevention measures, and set up a new federal response fund.

Neither the state nor federal measures sailed unimpeded through a newly "greened" political system. It took considerable pressure from a variety of sources to free the federal bill from the House of Representatives subcommittee presided over by the late Walter Jones of North Carolina, who had sided with the wisdom of the shipping industry for a decade and a half. And while there was an initial burst of activity in the Alaska Legislature in the spring of 1989, by 1990 the remaining cluster of oil spill bills were being held in Senate committees almost until the brink of the 120-day session.

In the end, the various legislative factions at both the state and federal government level worked out their differences and produced the new laws that are now the foundation of the spill response planning and prevention system in Alaska and the rest of the nation.

## 4.1 State legislation

The *Exxon Valdez* hit Bligh Reef on March 24, when there were about 40 days left in the state legislative session. In that short span, the state Legislature and the Governor introduced a brace of new spill bills, and seven were considered and passed in little more than a month. This was a remarkably short time for any group of related bills, but even more remarkable because one of the seven was a major tax bill.

But before the Legislature got to the new tax bill directly related to the spill, it considered an old tax bill that was completely unrelated. This was the extremely controversial measure that proposed to roll back a tax incentive given to Alaska oil producers in 1980. The incentive was known as the Economic Limit Factor (ELF), which was designed to lower severance taxes on oil produced from the so-called "marginal fields," a generic term that included basically everything other than the lucrative and high-production Prudhoe Bay unit.

Oil tax analysts and economists in the administrations of both Governor Bill Sheffield and Governor Steve Cowper argued that by the mid-1980s, the ELF was providing a generous and unintended tax break to producers on what had turned out to be high-production, high-profit fields such as the Kuparuk field next door to Prudhoe. They suggested that the tax code be amended so that fields such as Kuparuk would be taxed at the Prudhoe Bay rate, while the ELF would apply to a number of

smaller fields that had either not been yet developed, or were in the early stages of development. Cowper made repeal of the ELF one of his highest resource management priorities.

The oil industry said that the Cowper tax analysts had it all wrong and that the incentive was working as intended, as oil companies drilled more wells, which in turn helped put more oil field service workers on the job. Oil companies also objected to yet another change — this time a potential flip-flop — to the tax system in less than a decade. Oil exploration and development plans are based on long-term projections, the industry argued, and constant instability hurt their ability to look and plan ahead properly. The industry, along with trade and commerce associations, made the stability of the tax system one of their highest legislative priorities. The vote, whenever it came, would certainly be close.

The vote came shortly after the tanker had run aground, and the ELF was repealed by a narrow vote in the Alaska State Senate. Several legislators who were usually supportive of the industry on key issues voted against this one. It was not an "oil spill bill," but it marked the beginning of a decisive period for the Legislature. In short order, both houses approved in 1989:

- revised contingency plan requirements;
- creation of volunteer response corps in coastal communities;
- an increase in civil penalties for oil spills;
- a sharper definition of liability for oil and hazardous substance spills;
- creation of the Alaska Oil Spill Commission;
- a change in tax law that prevented Alyeska and Exxon from deducting any cleanup costs from state severance taxes; and
- a major revision in the funding and operation of the state response fund.

A second oil tax bill was debated and approved within a few weeks of the ELF repeal in 1989. This was the "nickel-a-barrel" bill that swelled the state's oil spill response fund to a maximum of $50 million.

In the 1990 session, the Legislature followed up with several, more detailed bills that:

- revised or specified response standards;
- strengthened DEC's ability to enforce contingency plans
- gave DEC authority to inspect tankers;
- broadened the Governor's authority to use the spill response fund in a disaster;
- clarified the roles and responsibilities of DEC and the state emergency services division in a declared disaster;
- created the Citizen's Oversight Council on Oil and Other Hazardous Substances; and
- defined and set up penalties for certain environmental crimes.

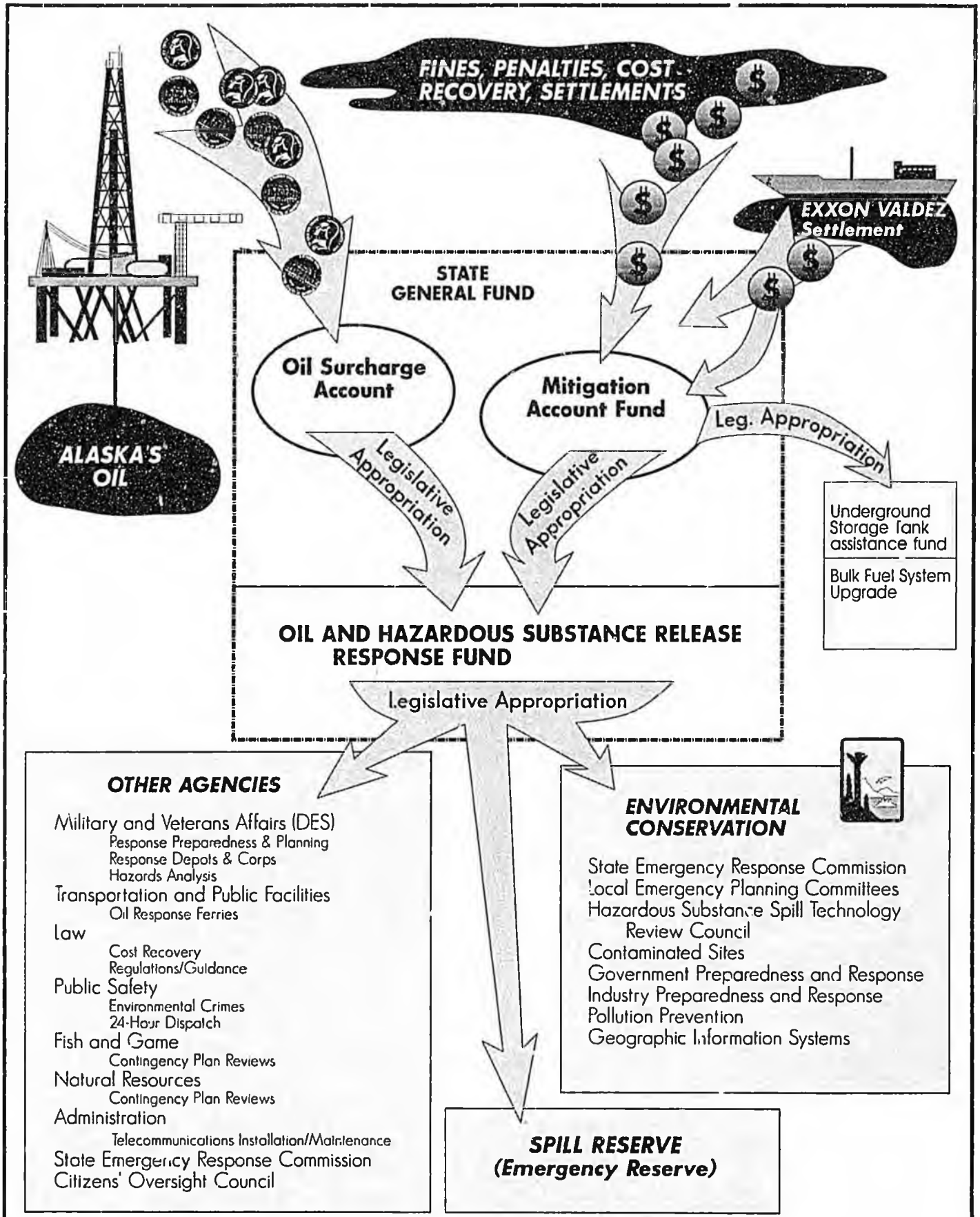
## Oil and Hazardous Substances Release Response Fund

It would have been considered unusual for one major tax bill to pass in a session (especially the first year of the two-year session, since historically the legislature deals with its biggest issues in the second year), but a second oil tax bill was debated and approved within a few weeks of the ELF repeal in 1989.

This was the "nickel-a-barrel" bill that swelled the state's oil spill response fund to a maximum of $50 million. Senator. Jay Kerttula sponsored the move to impose a "conservation surcharge" of five cents per barrel on all oil coming down the pipeline. The money would be earmarked for the state Oil and Hazardous Substance Spill Response Fund (known in government vernacular as the "470 Fund," named so because of the number of an earlier piece of legislation dealing with the fund).[1]

The response fund had been around for some time, but it had never contained much more than a million dollars at any one time.

In the case of the Exxon spill, DEC had a responsible party that would reimburse the state for cleanup-related expenses. However, the scale of the response and the extraordinary amounts of money involved were galloping far ahead of conventional spending and reimbursement procedures. Most spills are small enough that out-of-pocket expenses can be covered either by reserves in the response fund, or by borrow-




Alaska's Oil and Hazardous Substance Release Response Fund — Prepared by ADEC 4/93

ing from other parts of the regular budget, a fiscal practice allowed under emergency circumstances. However, the government can only spend what the Legislature gives it. In the case of the *Exxon Valdez* response, the regular agency pockets were not so deep that agencies could keep spending cash on hand without starving other, unrelated operations.[2]

In the case of the *Exxon Valdez* spill, DEC's out-of-pocket expenses for the response were quickly adding up to as much as $1 million per month. Without a source of funding for state response, DEC would quickly run out of legal ways to pay for the work it was supposed to do. In each of the three major seasons of cleanup, DEC's *Exxon Valdez* budget (which included money it passed through to other agencies) ranged from a high of $18 million to about $4 million. Without the cash flow from the beefed-up response fund, paying for state oversight and cleanup activities would have been much more complicated.

Lawmakers modified the response fund rules so that the $50 million account could be used as a source of cash for a wide variety of emergency response expenses during a major oil spill.

The 1989 session also saw an additional change, allowing the state to use the fund to pay for spill planning, prevention and response measures, a landmark change in state fiscal policy. In the past, the Legislature approved a DEC budget in which all programs competed for a piece of a common appropriation. Since the expansion of the response fund, spill planning, prevention and response activities have their own source of funding; theoretically, they do not have to compete with general water quality programs, or solid waste disposal, and so on.

A 1990 law further broadened the allowable uses of the response fund, allowing the Governor to use the response fund as a general disaster relief fund in a declared disaster *related to an oil or hazardous substance spill.* This seemingly minor change in procedure was the focus of a major internal struggle over the roles and responsibilities of the DEC and the state emergency services division within the Department of Military and Veterans Affairs.

The debate really went back to May of 1989, when the initial rush to response was settling into something that could best be described as a sustained emergency. Once the oil was on the shorelines, the job was not really to respond to an emergency, but to manage a large contaminated site cleanup. Until that time, the state Division of Emergency Services (DES) under the Department of Military and Veterans Affairs had played a high-profile, central role in the state response. But in May, when the 30-day disaster declaration bringing DES into the picture expired, the Governor appointed Dr. Robert LeResche as the state's executive branch oil spill coordinator and assigned all other major response duties to DEC.[3] The directors of the emergency services division vigorously opposed this reassignment, and over the next year and a half the division made its case with the Legislature and the Alaska Oil Spill Commission, arguing that the state's emergency management experts needed a stronger role and better access to cash during a catastrophic oil spill.

The oil spill commission and the Legislature agreed, to a certain degree. The spill commission found that DEC had neither the expertise nor authority to handle all aspects of a catastrophic emergency, and recommended a stronger role for DES. Following that recommendation, the Legislature in 1990 turned over the responsibility for the volunteer response corps and depots to DES. In addition, lawmakers modified the response fund rules so that the $50 million account could be used as a source of cash for a wide variety of emergency response expenses during a major oil spill.

This was the last of the major changes to the state's oil spill response fund, which until 1989 had been extremely limited in both funding and application. Before the *Exxon Valdez* spill, the "470 Fund" was strictly a petty cash account that paid for direct DEC cleanup of oil and fuel spills large and small. By 1992, it had, literally, a tax and a budget of its own, and it funded nearly half the activities of a major state agency.[4] The Legislature had a renewed interest in the fund's oversight and appropriations, and other executive branch agencies had managed to get at least a finger on a fund that had always lived entirely at DEC. Where once the fund was solely under the administration of DEC's commissioner, it now was elevated to an emergency response fund to which the Governor had direct access.

## Levels of Contingency Planning

| PLAN | PURPOSE | IMPLEMENTOR | AUTHORITY |
|---|---|---|---|
| **National Contingency Plan** | Details how federal agencies will respond to spills and sets up a mechanism for the federal government to take over and manage response to large spills; state participation through Regional Response Teams | National Reponse Team chaired by the Environmental Protection Agency and U.S. Coast Guard. | Sect. 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) |
| **State Emergency Plan** | To prevent and minimize injury and damage caused by natural and man-made disasters. State Master Plan is an annex to this plan. | Division of Emergency Services, Alaska Dept. of Military and Veterans Affairs. | Governor of Alaska and A.S. 26.23.040 requires DES to prepare. |
| **State Master Plan** (Statewide Mater Oil and Hazardous Substance Discharge Prevention and Contingency Plan) | Provides coordination of state resources during a spill of oil or hazardous substances, and is an annex to the State Emergency Plan. | Alaska Dept. of Environmental Conservation (DEC) in coordination with all state agencies. | In 1989, Senate Bill 261 amended Alaska Statute 46.040.200 to require DEC to prepare and annually review and revise. |
| **Regional Master Plans** (Regional Master Oil and Haz. Substance Discharge & Prevention Contingency Plans) | Define the response resources for each of ten regions, local spill notification, local response equipment, and information on the Local Emergency Planning Committees. | Alaska DEC. | A.S. 46.040.200 |
| **Local contingency Plans** | Local Emergency Planning Committees (LEPCs) must conduct local planning for hazardous materials emergencies. | Local governments and State Emergency Response Commission approve the plans. | SARA Title III (Federal Emergency Planning and Right-to-Know Act) 42 USC 11001 - 11005 |
| **Vessel & Facility Spill Plans** (Oil Discharge Prevention and Contingency Plans) | Vessels that transport oil as cargo or certain facilities that store and transfer large quantities of oil must have plans that describe how they will prevent spills and organize and use their resources to contain and cleanup their potential spills. | Operators have primary responsibility to submit plans. DEC has lead responsibility to review and approve or disapprove. | A.S. 46.04.30 |

Source: Alaska Department of Environmental Conservation

## New Standards for Contingency Plans

(Alaska Statute 46.04.030)

**OIL TERMINAL FACILITIES:**
Must plan to contain or control and clean up a discharge equal to the capacity of the largest tank at the facility within 72 hours.

**CRUDE OIL TANK VESSELS OR BARGES:**

- Vessels smaller than 500,000 barrels of oil storage capacity must plan to contain or control and clean up a 50,000 barrel discharge and have the equipment within the region of operation within 72 hours.
- Vessels with more than 500,000 barrel capacity must plan to contain or control and clean up a 300,000 barrel discharge and have the equipment within the region of operation within 72 hours.
- All crude oil tank vessels or barges must demonstrate access to other equipment outside of the region of operation to clean up a realistic maximum discharge, and the ability to have that equipment deployed and operating at the discharge site within 72 hours.

**NON-CRUDE TANK VESSELS OR BARGES—**

- Must plan to contain or control the greater of 15% of the total oil storage capacity of the vessel or the realistic maximum discharge within 48 hours.
- Must clean up the discharge within the shortest possible time consistent with minimizing damage to the environment.

### Contingency plans and response standards

Two pieces of legislation, one each of 1989 and 1990, set the stage for a revision of the state's oil spill prevention and response rules, which Alaska officials say in 1992 are the toughest in the United States.

The 1989 legislation was largely aimed at DEC's review and update of contingency plans. The agency is now required to update all regional and statewide plans every year. The 1990 legislation was more sweeping and directed at contingency plan holders. The measure, introduced by Governor Cowper as House Bill 567, wound up setting specific standards for cleanup for various types of products, at various types of facilities and vessels. It elevated contingency plans to a status closer to a requirement than a set of general guidelines. It eliminated some of the blurry lines of responsibility, better pinpointing who was responsible to act and who would be liable for costs. It gave DEC more authority to inspect facilities such as tank farms, vessels, and barges, so the agency could better judge compliance with contingency plans. It also added a "good Samaritan" clause designed to limit the liability of responders who made a mistake while attempting to implement an approved plan.[5]

This bill had a good deal of support, but it also raised a lot of questions. Many businesses, such as remote-site fuel suppliers, argued that the increased cost associated with increased liability and response requirements — typically, insurance or some other bonding — would be prohibitive for smaller businesses. Ultimately, opponents and proponents worked out a series of compromises that led to final passage of the bill. A similar working group helped develop the regulations to implement House Bill (HB) 567 between 1990-92.

The major highlights of HB 567 were the specific response performance criteria and the increased levels of financial responsibility.

Under the new law, smaller tankers (under 500,000 barrels capacity) must be able to contain and clean up a 50,000 barrel spill within 72 hours, while vessels carrying over 500,000 barrels (most of the fleet that calls at the Alyeska terminal), must demonstrate two levels of control and cleanup ability: 1) They must have access within the region to equipment necessary to deal with a 300,000 barrel spill (the *Exxon Valdez* dumped about 240,000-260,000 barrels), and 2) they have to show that they have access to enough equipment elsewhere to control and clean up the maximum realistic discharge, and that they can get that equipment to the site within 72 hours.

The term "realistic maximum discharge" was the focus of considerable debate during both the legislative and regulation-writing periods. Some lawmakers and interest groups argued that the word "realistic" was a loophole, and that facilities and vessel-owners ought to be able to handle what came to be called "the full bucket," i.e., an amount equal to the total capacity. When the legislation passed without the "full bucket" provision, proponents argued during the regulation-writing process that the "realistic maximum discharge" was, in fact, the "full bucket;" they pointed to the reality of the *Exxon Valdez* spill as an example. Opponents of the "full bucket" provisions said the *Exxon Valdez* spill was an anomaly, and that current technology simply was not able to control and clean up a spill of, say, a million barrels within the 72 hours required under the law. Such a provision was an impossible standard, they said.

Based on oil spill histories and risk modeling, DEC concluded that *Exxon Valdez* spills, though devastating, are in the upper one percent of all spills. The regulations on which the department and the working group settled are, the department says, tough enough to require cleanup of 99 percent of all oil

spills within the 72 hour standard. And, DEC argued additionally, even without the "full bucket" provision, the Alaska standards are the highest and most specific of the 50 states.

## Liability, penalties, fines

Just as the response structure had not fully recognized what it would take to handle a spill the size of the *Exxon Valdez*, the civil and criminal liabilities and penalties were dwarfed as well. The Governor decided relatively early in 1989 that the state would not even bother to apply the civil and criminal penalties and fines on the Alaska

### Proof of Financial Responsibility

(Alaska Statute 46.04.040)

| Type of Facility | Before June 1, 1991 | After June 1, 1991 |
|---|---|---|
| **OIL TERMINALS** | | |
| Oil Terminals/Crude (5,000 barrel (bbl.) and up) | $10 per bbl. of storage capacity or $1,000,000., whichever is greater, $50,000,000 maximum | $ 0,000,000 per incident |
| Oil Terminals/Non-Crude (10,000 bbl. and up) | Same as above | $25 per bbl. of storage capacity or $1,000,000., whichever is greater, $50,000,000 maximum |
| Oil Terminals/Crude and Non-Crude combined | Same as above | If mostly crude - $50,000,000 per incident. If mostly non-crude - $25 per bbl. of total capacity |
| **PIPELINES & EXPLORATION FACILITIES** | | |
| Pipelines and Offshore Exploration or Production | $35,000,000 per incident | $50,000,000 per incident |
| Onshore Production | EXEMPT | $20,000,000 per incident |
| Onshore Exploration | EXEMPT | $5,000,000 per incident |
| **VESSELS & BARGES** | | |
| Tank Vessel & Oil Barge/Crude | Trans-Alaska Pipeline related: $14,000,000. Other tankers: per Clean Water Act or $20,000,000, whichever is greater. Other barges: per or CWA or $1,000,000. | $300 per bbl. per incident storage capacity or $100,000,000, whichever is greater |
| Tank Vessel & Barge/ Non-Crude | Same as above | $100 per bbl. storage capacity per incident or $1,000,000., whichever is greater, $35,000,000 maximum |

books. Part of the reason lay in the fact that most of the possible civil and criminal penalties seemed puny in relation to the event. After the spill both the Governor and the Legislature introduced various measures to put another order of magnitude on the civil and criminal scale.

In the 1989 session, lawmakers concentrated on a measure that raised the maximum civil fine from $100 million to $500 million. It also raised the assessments based on how many gallons were spilled. Now, the fine stands at $8 per gallon for spills under 420,000 gallons and $12.50 per gallon for spills above that. Under both the old and new laws, the fine can be multiplied several times if the spill were intentional, or due to an act of gross negligence. The 1989 law also added an additional, significant definition of negligent behavior that would trigger the multiplier: failure to respond in accordance with an approved oil discharge contingency plan. This clause, coupled with other provisions in other new laws, re-enforced the point — both legally and practically — that contingency plans are performance plans, not just guidelines.

Governor Cowper felt that criminal law at the time of the spill did not sufficiently address the range of criminal responsibility that could be involved in environmental crimes involving corporations. As part of Cowper's oil spill package introduced in 1989, the Governor included two bills that would have:

- Raised the stakes for some environmental crimes — reclassifying several as felony offenses;
- Made corporate officers criminally responsible for environmental crimes;
- Given the state courts the discretion to fine environmental criminals up to twice the amount of the damage caused by the act.

Both bills made it through the Legislature in 1990, although the Legislature dropped or amended several of Cowper's more vigorous provisions. Lawmakers made only one crime a felony (reckless operation of a tanker), dropped the proposal to hold corporate officers criminally responsible for their company's actions, and approved several more modest increases in criminal fines.

## Access, enforcement, and oversight

The most controversial of all the oil spill bills was one that did not pass. HB 409 was a measure that would have strengthened the DEC's inspection and administrative authorities.

The most controversial of all the oil spill bills was one that did not pass. HB 409, originally introduced by Rep. Mike Davis (D-Fairbanks), was a measure that would have strengthened the DEC's inspection and administrative authorities. Specifically, Davis sought to give DEC the authority to make unannounced inspections of major facilities, such as the Alyeska terminal. It also would have given the department the authority to assess administrative penalties against violators of environmental laws, and to require environmental "audits" of facilities.

In many ways, DEC would have assumed similar kinds of authorities as the U.S. Environmental Protection Agency (EPA). EPA (and some state environmental regulators around the country) do not need to get a warrant or any special permission to inspect a facility to make sure it is complying with its permits. EPA also has the authority to assess fines of "x" dollars per day against violators who are reluctant or unwilling to bring their operations into compliance. As a practical matter, the threat of the administrative fine is used more than the fine itself; however, Davis and the Cowper administration felt that DEC needed this leverage.

More important, the bill would have given DEC other options for enforcement. Former DEC commissioner Bill Ross, who had presided over the revamping of the Alyeska contingency plan from 1984-86, pointed out to the Alaska Oil Spill Commission that DEC's options in dealing with Alyeska were limited to negotiation, court proceedings, and the "nuclear" weapon of shutting down the pipeline. If Alyeska were out of compliance with its air or water discharge permits, DEC would first suggest a compliance schedule. If Alyeska resisted (which it had repeatedly over the years), DEC had the option of asking the courts to intervene. In either case, the process was likely to

be compromising or time-consuming; meanwhile, the pollution violations would continue. The last option was to shut down the pipeline by emergency order. This, to Ross, seemed like a much bigger hammer than was justified in most situations.

"If there is an enforcement policy that has as its only option the nuclear one, it's not a very good enforcement policy," Ross told commission staff.

HB 409's provisions giving DEC the ability to levy administrative fines through the agency — as opposed to seeking a court order — were an attempt to give the agency an enforcement option that had some weight, could be implemented quickly, and was not so drastic as shutting down the source of a quarter of America's domestic oil production. Not everyone saw HB 409 in this light.

"This bill," reads the department's official summary of legislation," was very controversial." This was a substantial understatement.

The Anchorage Times dubbed the measure "the Gestapo Bill" in one of its editorials. Less colorful opponents of the measure simply said the heavy-handed approach to enforcement was anti-business, and that it put too much environmental policing power into the hands of regulators. Industry officials said the measure did not properly take into account that disagreements over permit provisions are frequently technical in nature and not black-and-white assessments; the administrative penalty provision, they argued, gave the government too much power at the expense of the rights of private companies. It raised the stakes, but also eliminated the chance for facility operators and the government to find a middle ground, they said.

The bill barely passed the House of Representatives and died in the Senate.

In both 1989 and 1990, the Legislature acted to increase the access and oversight of citizens in the regulatory process. In 1989, lawmakers approved creation of the Alaska Oil Spill Commission, which produced a multi-volume report and specific recommendations for action based on the *Exxon Valdez* experience. One of the commission's major recommendations was the creation of a permanent, government-funded citizen's oversight group. Led by the House Resources Committee in 1990, lawmakers created the Citizen's Oversight Council on Oil and Other Hazardous Substances. The five-member council has broad powers to investigate and analyze the transportation, storage, and regulatory systems relating to oil and other hazardous substances.

The council played a significant role in identifying in 1992 gaps in the Prince William Sound and Alyeska terminal spill response system. Partly as a result of the council's report, the Legislature clarified in law the responsibility of Alyeska Pipeline Service Company to respond to oil spills from both the terminal operations as well as tankers calling at the terminal.[6]

## 4.2 The Oil Pollution Act of 1990

The Oil Pollution Act requires that the federal government "consult" with the state before determining whether a cleanup is complete.

The Oil Pollution Act of 1990 does, at the federal level, the same kinds of things accomplished by the brace of state legislation passed during1989 and 1990. The federal act increases liability and financial responsibility for oil owners and shippers, sets up a new oil pollution response fund that provides money for prevention and research as well, and requires stronger prevention measures for both the government and private parties.

The State of Alaska took an immediate and active interest in the development of the new act, because for the state the stakes were high on several fronts.

First, the state wanted to make sure that federal law cleared up the blurry lines of responsibility that created the confusing "who's in charge" issue that persisted throughout the *Exxon Valdez* spill response. The 1990 federal act did that by strengthening the ability of the Coast Guard to take over a response at any time. Up through the *Exxon Valdez* response, the Coast Guard could not "federalize" a spill unless the spiller was unwilling or unable to perform, and more important, once federalized, the spill response costs came from the federal treasury.

The Oil Pollution Act allows the Coast Guard to actually direct all federal, state, and private party actions when the on-scene coordinator thinks it is time for the Coast Guard to step in. But it also allows the kind of cooperative funding arrangement worked out in the *Exxon Valdez* response (i.e., the Coast Guard directs; spiller writes the checks), without the necessity of the Coast Guard maintaining a passive role.

Further, the Oil Pollution Act requires the Coast Guard to take over direction of the response during what has come to be termed "a spill of national significance.," i.e., a really big and complex spill like the *Exxon Valdez*.

But in calling for the increased federal role, the state's principal concern was to make sure that the new federal law did not preempt any applicable state laws regarding prevention, response, or determination when cleanup is "complete" to state requirements. This was somewhat of a sore point for Alaska, which in 1978 attempted to pass stricter state regulations on tanker safety than those of the federal government. The oil companies sued, claiming successfully that the tanker trade was interstate commerce, and therefore Alaska's stricter tanker rules infringed on the federal government's superior authority to regulate such commerce.

The Oil Pollution Act of 1990 includes a specific disclaimer regarding preemption, one strong enough that it has led states (including Alaska and California) to begin taking steps to insure tanker safety beyond what the federal government requires. Alaska now claims authority to inspect and regulate some safety aspects of tankers operating in state waters. California's comprehensive prevention and response act (also passed in 1990) takes a more aggressive approach to attaching specific state requirements for navigation and other technical safety improvements on tankers. This non-preemption clause is not quite so clear-cut, however; the Congressional conference committee that hashed out the final version of the Oil Pollution Act specifically noted in its statement of intent that the new bill was not meant to address or otherwise alter the 1978 Supreme Court decision that struck down the Alaska tanker rules.

In terms of cleanup, the Oil Pollution Act at several points preserves the rights of states to impose stricter removal requirements than the federal government, as long as those requirements do not conflict with federal law or requirements. The Act requires that the federal government "consult" with the state before determining whether a cleanup is complete; while this does not give the states a veto power over a Coast Guard decision to end a cleanup, it raises the profile of the states in the decision and gives states a bit more public and legal leverage. The act also preserves the right of a state to require the spiller to continue removal to any stricter state requirements after the end of the federal cleanup.[7]

Congress also included in the Oil Pollution Act authorization for two "demonstration" oversight programs in Prince William Sound and Cook Inlet. This led to the creation of the Prince William Sound and Cook Inlet Regional Citizens Advisory Councils, funded through cooperative agreements with oil shippers and storage facility owners in each area.

The Oil Pollution Act also makes available up to $1 billion (per spill) available for response and removal costs. Congress also authorized the Coast Guard to spend up to $50 million a year for planning, preparedness and prevention costs, and makes available up to $27 million a year for oil spill-related research.

Two major sets of new federal regulations are currently being prepared as a result of the Oil Pollution Act. The first is a revision of federal natural resource damage assessment rules, the second is the set of regulations implementing the new prevention and response requirements.

## Notes, Chapter 4

[1] *Under the Alaska Constitution, revenues cannot be collected and dedicated to a specific purpose automatically. (The lone exception is the state savings account, the Permanent Fund, which was added by constitutional amendment in 1976.) To get around the constitutional prohibition against dedicated funds, the nickel-a-barrel was technically added to the existing severance taxes, and the Legislature makes a pro forma appropriation to the response fund in an amount equal to whatever the surcharge added up to in a given year.*

[2] *In the early days of the defense at the Sawmill Bay on Evans Island, the Alaska Department of Fish and Game kept asking Exxon to buy more boom for the hatchery. Exxon's field people told Fish and game to buy it themselves and "back-charge" Exxon to recover the costs. However, the response came at the opening of the last quarter of the fiscal year, and Fish and Game — which was coming into its busiest and most cash-consuming seasons of spring and summer — could not buy boom without pulling large amounts of money out of its regular program budget.*

[3] *This was a reflection of Governor Cowper's general view of the response structure. As early as the first week of the spill, Cowper expressed the opinion that although he wanted a stronger federal role in directing the response, he did not think the Federal Emergency Management Agency (DES's federal counterpart) was the right organization to handle the job. Cowper said FEMA was "a logistics outfit" that did not have broad enough authority or expertise to take over this kind of an operation. (Governor Steve Cowper, personal communication, April 1989. Also, Persily, L., interview with Governor Cowper for the Alaska Oil Spill Commission, summarized in a memorandum to Havelock, J., Nov. 28, 1989.)*

[4] *Under the law, the state collects the conservation surcharge until the fund reaches $50 million. As a practical matter, the Legislature's allocation of some response funds to operations and some to unallocated emergency response means that the fund has not, in its first two years, actually ever reached a $50 million balance.*

[5] *Previously, a responder who botched a response, even if acting in good faith, was exposed to a high standard of liability for the mistake. The standard now is that a responder following an approved plan must show gross negligence, as opposed to simply negligence, to be held liable for damages.*

[6] *This provision originally appeared in a different bill introduced by Representative Mike Davis (D-Fairbanks), but was added to Cowper's bill with the consent of the sponsor.*

[7] *This clause deals with a little bomb that was quietly ticking in the corner throughout the Exxon Valdez spill response. Exxon pointedly excluded state requirements from any statements of intent or promises for conducting cleanup, saying only that the company would "do what the* Coast Guard *requires (Editor's emphasis)." The first official acknowledgment that Exxon would follow through on state requirements was in the civil and criminal claims settlement reached between the governments and Exxon in March 1990. Although that settlement fell through, the subsequent agreement of October 8, 1990, contained the same language.*

# Chapter 5: Restoration

It was, perhaps, inevitable that the *Exxon Valdez* oil spill would trigger lawsuits and other legal action. However, a fairly large volume of claims never made it as far as court; Exxon and many claimants (commercial fishermen, cannery workers, some local governments) chose to make their accord out of court. Exxon paid about $130 million to commercial fishermen for the loss of the 1989 commercial fishing seasons in the spill area, with the bulk of the payments coming within a few months — or less — of the spill. This form of out-of-court dispute resolution was in sharp contrast to the events following the 1967 *T/V Glacier Bay* spill in Cook Inlet, when most of the fishermen who suffered damages did not collect any compensation until — ironically — long after they had been compensated for *Exxon Valdez* losses. However, a number of private lawsuits remain in the courts and, at this writing in the spring of 1993, are awaiting trial in state Superior Court in the spring of 1994.

The State of Alaska had several options for legal action before it in the spring of 1989. The state tried the master of the *Exxon Valdez*, Joseph Hazelwood, on criminal negligence and several smaller charges; an Anchorage jury eventually acquitted Hazelwood on all but one minor misdemeanor, and the acquittal was reaffirmed on appeal. Governor Steve Cowper considered filing criminal negligence charges against the Exxon Corporation in 1989, but he decided that the maximum penalty under existing law — a $100,000 fine — was not worth the time and effort it would take to prepare and try such a case. Cowper instead instructed his attorney general, Douglas Baily, to concentrate on civil action that would produce compensation for damages. On August 14, 1989, Alaska sued both Exxon and Alyeska Pipeline Service Company, claiming that negligent operations and a botched response caused unspecified damages to the environment; Exxon filed a counter-suit on October 24, claiming that the state interfered with Exxon's ability to do what needed to be done.

On August 14, 1989, Alaska sued both Exxon and Alyeska Pipeline Service Company, claiming that negligent operations and a botched response caused unspecified damages to the environment; Exxon filed a counter-suit on October 24, claiming that the state interfered with Exxon's ability to do what needed to be done.

Cowper felt the people of Alaska were owed damages by Exxon, but the Governor did not think a long, drawn-out litigation effort would be productive. He said many times, both publicly and privately, that he expected to settle the case with Exxon, and that he preferred to do it sooner rather than later. Cowper, himself an attorney familiar with maritime law, felt that pursuing protracted litigation extending over many years was bad public policy.[1] Cowper, attorney general Baily, and chief of staff Garrey Peska all contacted Exxon upper management during the summer of 1990 in an effort to move negotiations along.

In August 1990, Baily and Cowper learned that the U.S. Department of Justice, which had filed criminal charges against Exxon, was nearing agreement with the company on a negotiated plea agreement. The state had not been consulted on the matter, and the federal government's plan included provisions that could seriously affect Alaska's ability (and the ability of third-party, private plaintiffs) to pursue their claims against Exxon. Under the proposed deal, the federal government would agree not to press any civil damage claims against Exxon for four years; moreover, the federal government agreed that it would not provide information or assistance to those who had filed civil claims. This, of course, included the State of Alaska. There were other provisions the state found unwise or objectionable; among them were clauses that gave Exxon the right to sue the government if it disagreed with how the federal government spent claims funds, and provided Exxon the opportunity to recover any federal claims money that went unspent over time. But the biggest problem, from the state's perspective, was that the plea agreement would make it more difficult for the state and private plaintiffs to recover damages.

Beyond the fact that Cowper and Baily felt the state should have been consulted, the Governor feared that the plea agreement was raising the chances that the state would become mired in the protracted litigation he wanted to avoid. The state's legal costs were running about $1 million a month at that point, and again, regardless of the

state's likelihood of recovering damages somewhere in the future, Cowper saw years of legal work on the case as a poor use of public funds.

The Governor wanted what was termed a "global" settlement — ideally, a settlement of all public and private claims at one time. His next preferred choice was settlement of all government claims — criminal and civil — at one time. And the reality of the situation was that the state and federal civil damage claims were joined at many critical points.

The state and federal governments were seeking compensation for damage to natural resources owned by the public. However, the specific resources were under a mix of federal and state control: bald eagles and otters under the U.S. Fish and Wildlife Service, spawning salmon under the Alaska Department of Fish and Game, national parkland under the National Park Service, state parkland under the Alaska Department of Natural Resources' parks division, and so on. If the state and federal government were going to pursue their natural resource damage claims separately, each would have to make sure that the right government pressed the individual claims for the right species or resource.

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There were several major problems with this kind of approach. Jurisdiction of certain public resources is pretty clear in some cases (otters, for instance), but it isn't so clear in others (tidelands, for instance). The state and federal governments could go ahead with pressing separate claims against Exxon only if they agreed beforehand who owned what. There loomed the possibility that the state and federal governments would first become mired in jurisdictional disputes for some period before any actual damages could be settled with Exxon. Those disputes could almost certainly include litigation between the two governments; Alaska and the United States, even now, have not fully resolved the issue of who owns the land and resources under certain bodies of water. This issue has been addressed piecemeal in one case, then another and another, all of which has taken more than a decade. And considering that the intertidal areas — sometimes submerged, sometimes not — were among the areas of Prince William Sound most affected by the spill, the prospect of tangled state-federal-private litigation over intertidal damage was enough to give everyone a headache. And even if federal and state jurisdictions over management of a given species was initially clear, the *relationships among different resources* might not be clear.

Let's take sea lions and salmon, just as a hypothetical example. The health and welfare of sea lions, as a public resource, falls to the National Marine Fisheries Service under the guidance of the federal Marine Mammals Protection Act of 1973. Salmon fall under the management of the Alaska Department of Fish and Game.[2] Therefore, the U.S. would collect on any damages caused to sea lions, and the State of Alaska gets the check for salmon damage, right?

Not necessarily. Sea lions eat salmon. If the state collected damages on behalf of the salmon, could the United States claim a piece of the salmon compensation because Uncle Sam's sea lions have lost a food source? Government lawyers could argue this one — and others — for some time. That's before they even talked to Exxon's lawyers.

As a practical matter, the state and federal government agreed early on to seek damages jointly, rather than raise the specter of a long, public court battle while the public waited to recover damages to begin restoration of the public resources damaged by the spill. Arguments over resource ownership might have made for interesting law, but the potential delays made for bad public policy. And, as a matter of legal policy, it made more sense to deal with Exxon jointly on the civil claims.[3]

The collapse of the Exxon-federal plea agreement on the criminal charges in the summer of 1990 caused a flurry of media attention (and some hard feelings between the state and the Justice Department), but it helped set the stage for something approaching the "global" state-federal settlement Governor Cowper sought.

Cowper left office at the end of his term in December, 1990.[4] His successor, Governor Walter J. Hickel, made settlement of the *Exxon Valdez* claims one of his most immediate priorities. Within a few weeks of his inauguration, Hickel telephoned Exxon's chief executive officer, Lawrence Rawl, and asked him to come to Juneau for

initial talks. Rawl and Hickel met for about 45 minutes on January 15, 1991, in Hickel's office, the men speaking in general terms.[5] The circle expanded in later meetings in Washington, D.C., with federal and state officials and additional Exxon executives. On March 13, 1991, the governments announced agreements with Exxon on both criminal charges and civil damage claims.

Under the agreements, Exxon was first to pay a $100 million criminal fine to the U.S. government; the federal government would then pass $50 million of the fine to the State of Alaska as restitution. Then, over 10 years, Exxon would pay $900 million into a court-administered fund to be used for restoration projects. A panel of six government officials — three state, three federal — would decide what projects to pursue and how much to spend.

The governments and Exxon each retained escape clauses in the agreement, however. Included in the agreements was a 30-day public comment period. At the end of the 30 days, the governments had 15 additional days to consider the public comments. During that 15-day stretch, each government retained the right to withdraw from the agreements if public comment demonstrated that the agreement was not in the public interest. Exxon retained the right to withdraw if the package was altered by the court.

The agreements went to U.S. District Judge H. Russel Holland in Anchorage for review and eventual approval.

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In an effort to forge some kind of public consensus on the settlement, Governor Hickel put the agreement before the Alaska Legislature for ratification — even though he could have bound the state to the deal without so much as a consultation with the Legislature. In the public and political arena, the Hickel settlement met with mixed reviews.

Opponents had various, sometimes unrelated problems with the proposed settlement. The first problem was a generic one that tends to crop up whenever the state reaches a large out-of-court settlement.[6] Settlement negotiations are nearly always private, and the public and the Legislature have no way of judging independently whether the state "got a good deal." So, these large settlements are often met initially with some skepticism by members of the public and the Legislature. In this case, the problem was exacerbated by the object of the negotiations. Usually, the state's large out-of-court settlements are based on the arcana of government tax codes, and only a trained legal mind could ascertain whether the state "got a good deal." But the object of settlement in the Exxon case were the publicly owned natural resources. Damage assessment to that time had been kept shielded from public view; members of the public and the Legislature wanted to see the results of the damage studies so that they could judge for themselves whether the $1 billion dollars was a fair sum.

"If someone owed you a bunch of money and you wanted me to negotiate a settlement, wouldn't you want to know what the range of values were?" said Representative Mike Navarre, D-Kenai, during a Alaska House of Representatives hearing on April 16.[7]

However, the attorney general decided that releasing the damage assessment studies was poor legal strategy, both for the state and for the private parties seeking additional damages from Exxon. Releasing the data could, on the one hand, expose the state to liability claims by private parties seeking damages; it also would almost certainly give Exxon an unfair advantage over the private plaintiffs with outstanding claims. If one assumes that the legal issue of damages turned on a judge's or a jury's interpretation of competing sets of damage assessment studies, giving Exxon the government's information in advance would have given the oil company an opportunity to build its defense or its attacks long in advance — without having to divulge the results of its own studies to its opponents.

Regardless of the legal wisdom of this policy decision, there was substantial criticism of the governments — specifically the State of Alaska — because they continued to hold "secret" the results of publicly funded research done to assess damage to publicly owned resources.

On April 8, 1991, the federal government released an 18-page "Summary of Injury" in an attempt to provide some public information on the damage, but the public and lawmakers continued to press for full release of the data. On April 17, Exxon answered by filing with the court — and releasing to the public — 20 company studies that showed, according to Exxon's claim, that "the recovery of Prince William Sound is well on the way - water is clean, fish are abundant and safe to eat, and wildlife is likewise abundant and thriving, and the beaches have been effectively cleaned."[8]

But still, the public did not have the complete picture, and some of the responses sent to Judge Holland connected criticism of the settlement to the lack of full scientific disclosure. Some commenters speculated that government damage studies would show that the damages were far beyond $1 billion.

A second criticism raised by the public was that the settlement seemed too favorable to Exxon. They argued that the criminal fines were too light, and that the payment schedule for civil damages was too long. Allowing Exxon to stretch payment over a decade was too convenient to be considered a sufficient penalty, they said, and the extended-payment plan for Exxon exposed the state and federal government shares to erosion by inflation.

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The state Legislature has its own specific set of criticisms of the settlement. They shared the concerns about lack of information, but the Legislature had serious constitutional problems with the settlement terms as well. Members of the Legislature, led by the House Judiciary Committee, felt that parts of the settlement infringed on their constitutional prerogative to appropriate public funds for specific public purposes. The March '91 settlement — and the October '91 settlement, for that matter — both provide that a group of six executive branch trustees decides how the trust fund money is to be spent. Under the Alaska Constitution, only the Legislature can decide how much money shall be dedicated to a certain public purpose. Lawmakers argued that decisions made by the state-federal trustee council amounted to appropriations, and were therefore subject to Legislative approval.

For this combination of reasons, the March settlement unraveled. On April 24, 1991, Judge Holland threw out the criminal plea agreement, saying in court that the $100 million fine was too low. While the Alaska Legislature never voted as a whole on the settlement, and Exxon ultimately exercised its option to pull out of the civil agreements on May 3, Judge Holland's ruling of April 24 effectively killed the deal reached among Exxon and the two governments.

On October 8, 1991, a new, slightly revised settlement agreement was announced. The total amount remained at $1 billion, but it was divided somewhat differently. The agreements included a larger criminal fine and a provision for formally including the public in the decisions about how to spend civil settlement funds for restoration. After a 60-day period for consideration of any appeals, the settlement was approved by Judge Holland on December 9, 1991.

The civil agreement stipulated that Exxon would pay $900 million to the state and federal governments over a 10-year period to settle civil litigation for natural resource damages brought by the governments which would have been costly and lengthy to prosecute for both sides. This was the largest dollar settlement of its type in U.S. history. Like the previous agreement, this one put the money into a trust held in U.S. District Court. A state-federal Trustee Council would decide how the money should be spent, and the court would then release funds according to the Trustees' plan.

The most significant changes in the settlement came in the criminal plea agreement. As before, Exxon and Exxon Shipping Company pled guilty to violating provisions of the Clean Water Act, the Migratory Bird Treaty Act and the Rivers and Harbors Act. Judge Holland set the criminal fine at $150 million, an increase of $50 million over the March agreement. However, only $25 million of the $150 million criminal fine was actually paid. Of the $25 million, $12 million was paid to the North American Wetlands Conservation Fund, and $13 million into the Victims of Crime Act account. The remaining $125 million was "remitted," or forgiven by the federal government due to Exxon's "cooperation with the governments during the cleanup, timely payment of

## Terms of the *Exxon Valdez* Settlement

**Total $1 billion**

### Criminal Penalties

– For violation of provisions of Clean Water Act, Migratory Bird Treaty Act and Rivers and Harbors Act: **Fine $150 million**

Paid: $25 million paid:
$12 million to North American Wetlands Conservation Fund
$13 million to Victimes of Crime Act account

Remitted: by the court due to Exxon's cooperation [$125 million remitted]

– Criminal restitution: **Restitution $100 million**

$50 million to state government
$50 million to federal government

**Total paid for criminal libility: $125 million**

### Civil Penalties

To state and federal governments over 10 years for natural resource damages **Total $900 million**

(The largest dollar settlement of its type in United States history. The money goes into a trust held in U.S. District Court. A state-federal Trustee Council decides how the money is spent, then the court releases funds according to plan.)

| | |
|---|---|
| Within 10 days of acceptance of settlement terms in 1991 | $90 million |
| December 1, 1992 | $150 million |
| September 1, 1993 | $100 million |
| September 1, 1994 | $70 million |
| September 1, 1995 | $70 million |
| September 1, 1996 | $70 million |
| September 1, 1997 | $70 million |
| September 1, 1998 | $70 million |
| September 1, 1999 | $70 million |
| September 1, 2000 | $70 million |
| September 1, 2001 | $70 million |

many private claims, and environmental precautions taken since the spill.""

While Judge Holland forgave $125 million of the criminal fine, he took back $100 million and placed it in a different criminal category. Under the new agreement, Exxon was to pay $50 million each to the state and federal governments in "criminal restitution." So, putting aside the legal differences between a fine and restitution, Exxon paid a total of $125 million to the state and federal governments for its criminal liability. This represented an increase of $25 million, in actual payments, over the original criminal plea agreement. See chart above for the terms of the civil settlement.

From the initial $90 million in civil penalities paid in December 1991, the state and federal governments repaid themselves for spill-related expenses they had not recovered from Exxon at the time of the settlement. The state recovered $29 million and the

federal government replaced $24.5 million for cleanup monitoring, natural resource damage assessment study costs, and litigation support expenses.

In December 1992, Exxon deducted $39.9 million in expenses for cleanup work undertaken during the 1991 and 1992 cleanup seasons. At the time of the March, 1991 settlement, the cleanup was far from complete. In a provision of the agreement that appeared in the March document and remained unchanged in the final settlement, Exxon was required to continue cleanup until released by both the state and federal governments; however, the company could deduct its expenses for cleanup from its civil claims liability.

The state recovered $29 million and the federal government replaced $24.5 million for cleanup monitoring, natural resource damage assessment study costs, and litigation support expenses.

This provision raised a number of issues for the governments. At the time of the March settlement, Exxon and the state and federal on-scene coordinators had — just five days before — made final their plans for the 1991 cleanup. Until the date of the settlement, Exxon was conducting the cleanup under government direction; it didn't matter to the governments how much Exxon was spending, as long as the work was being done. With Exxon able to deduct its cleanup costs from what it owed the government, essentially, the government was paying for the cleanup. And if the government was paying for the cleanup, the government's managers were obligated, as always, to make sure public money was being spent efficiently and effectively.

One option was to take over the cleanup entirely, releasing Exxon and hiring contractors retained through competitive government bidding procedures. The state and federal coordinators considered this option impractical. After two full field seasons of working together, the governments and Exxon had established procedures for logistics, procurement, communications support, and so on; regardless of whether everyone got along all the time, the fact was, everyone knew the system. For reasons of efficiency and safety, the state and federal on-scene coordinators chose not to hire new contractors.[10]

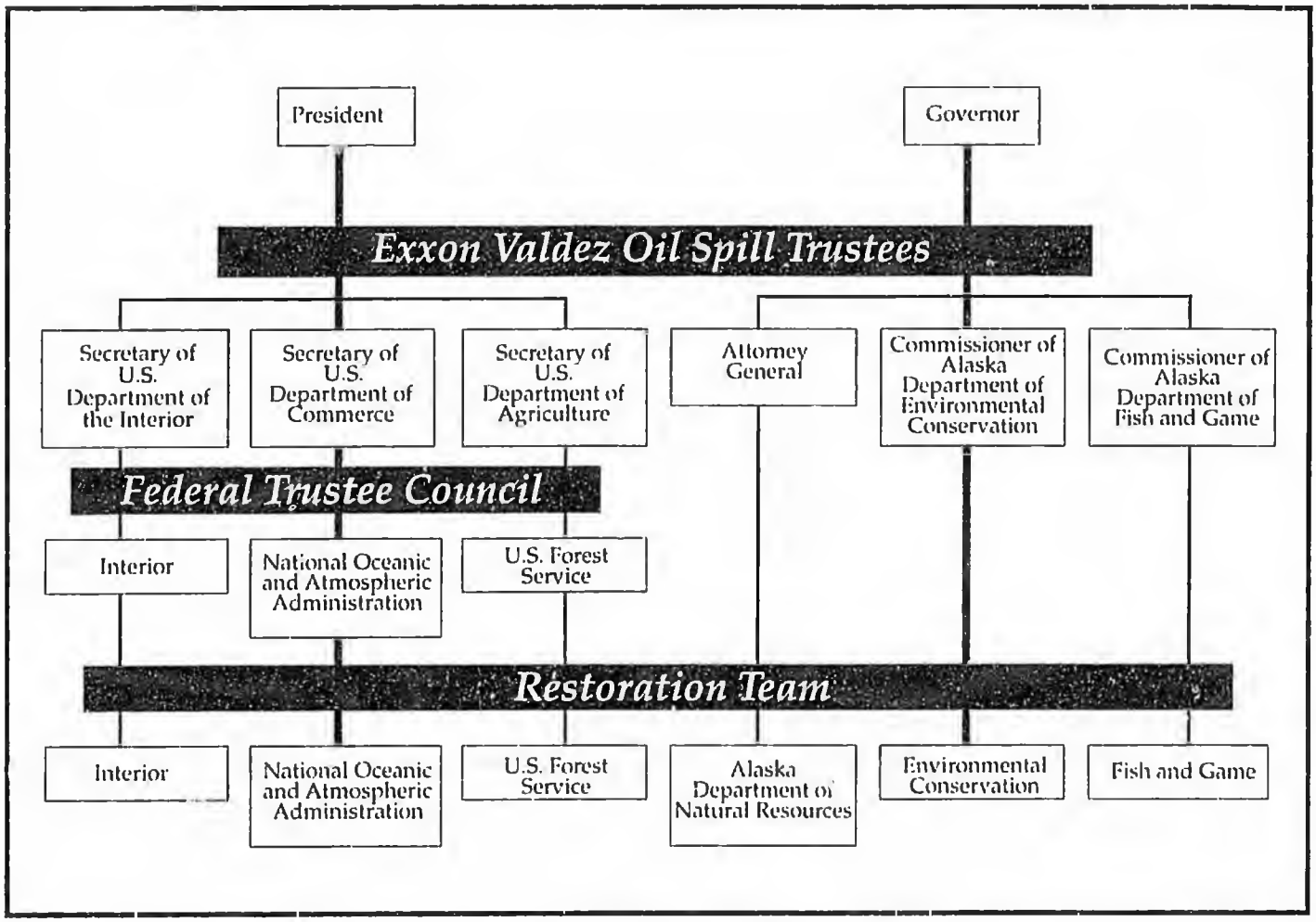
Instead, they set up a system of review and approval of Exxon workplans and cost estimates. The Coast Guard handled the accounting and oversight, and the federal on-scene coordinator retained the prime authority for approving or rejecting Exxon expenditures. Exxon, however, made its cost estimates equally available to both state and federal spill managers. Exxon became, in other words, a sole contractor to the federal and state on-scene coordinators. Expenses in the 1991 field season came to about $40-$45 million,[11] with 1992 expenditures less than half that.[12]

At the close of the 1992 field season in July, 1992, the federal and state on-scene coordinators declared the response phase complete, and Exxon was released from further cleanup responsibility. Any further removal would fall under the general heading of restoration, for reasons based in restoration or damage assessment studies

## 5.1 Restoration structure and funding

The term "restoration" is defined in both federal law and in the court order approving the settlement. It is important to keep in mind that the agreement between Exxon and the governments was to settle *damages to publicly owned natural resources affected by the spill.* This settlement did not include various claims from private parties, including — and especially — Alaska Natives and Alaska Native corporations, which own nearly all of the private land in the spill area. These private plaintiffs are pressing their own claims in court, as well as with the Trans-Alaska Pipeline Fund, a $100 million, privately-administered fund.

Therefore, the entire state-federal restoration structure is designed to deal exclusively with resources that were damaged by the spill, or damages to services directly dependent on those resources. The settlement court order defines the mission this way: "[R]estoration includes restoration, replacement and enhancement of affected resources, acquisition of equivalent resources and services; and long-term environmental monitoring and research programs directed to the prevention, containment, cleanup




and amelioration of oil spills."

The second major leg of the restoration effort rests on the agreement between the state and federal governments to undertake restoration efforts together. The governments "shall jointly use such monies for purposes of restoring, replacing, enhancing, rehabilitating or acquiring the equivalent of natural resources injured as a result of the *Exxon Valdez* oil spill and the reduced or lost services provided by such resources," according to the state-federal memorandum of understanding. Neither government, in other words, has free access to the restoration fund. In fact, any expenditure or project in the restoration effort must have the unanimous approval of all six trustees.

The third basic leg of the settlement is an agreement that all funds must be spent on projects within Alaska, unless the trustees agree unanimously that a specific task cannot be performed within the state.

It is important to keep in mind that the agreement between Exxon and the governments was to settle damages to publicly owned natural resources affected by the spill. This settlement did not include various claims from private

## Organization

There are six trustees. The federal trustees are the Secretary of the U.S. Department of the Interior, the Secretary of the U.S. Department of Agriculture, and the Secretary of the U.S. Department of Commerce.[13] The State of Alaska Trustees are the Commissioners of the Department of Environmental Conservation and of the Department of Fish and Game, and the Alaska Attorney General.

Each Trustee has designated a representative to serve on the Restoration Team,[14] a management and administrative group which carries out the programs and projects approved by the Trustees. The Restoration Team has formed a series of working

# Allocations of *Exxon Valdez* Civil Settlement Funds

**as of June 1993**

| | |
|---|---|
| Civil settlement funds received | $240,000,000 |
| Civil settlement funds allocated and/or expended | $220,308,000 |
| Unxpended balance | $19,692,000 |
| 1992 funds budgeted but not expended, to be returned to trust account | $6,500,000* |

*Includes $1,500,000 in administrative costs

## Categories of Expenditures

***Negotiated in the Settlement:***

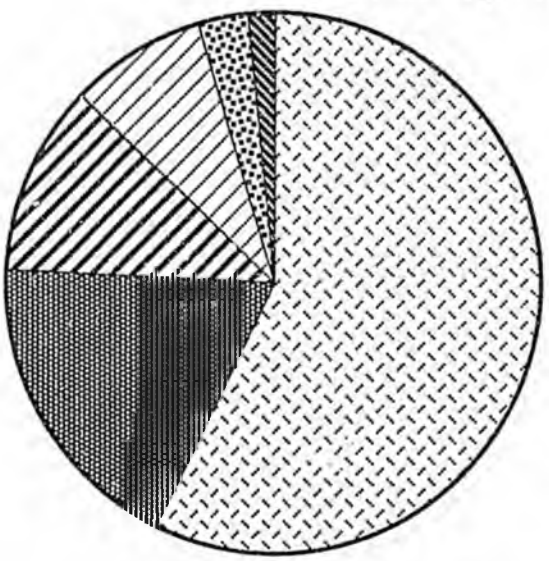
| | |
|---|---|
| Reimbursements to State and Federal governments | $107,500,000 |
| (for cleanup, damage assessment, and litigation costs) | |
| Federal | $49,200,000 |
| State | $58,300,000 |
| Credits to Exxon for cleanup costs in 1991 and 1992 | $39,900,000 |

***1992 and 1993 Work Plan Expenditures Budgeted by Category:***

| *Category* | *Budgeted* | *Percent* |
|---|---|---|
| Habitat Protection | $107,500,000* | 57.2% |
| Restoration Projects | $13,464,000 | 18.7% |
| Damage Assessment | $8,122,000 | 11.3% |
| Administration | $5,841,630 | 8.1% |
| Public Participation | $2,204,570 | 3.1% |
| Independent Scientific review | $1,165,800 | 1.6% |

*Includes $29,950,000 the Trustee Council has tentatively authorized for acquisition of Seal Bay.

## Work Plan Expenditures by Category



| | |
|---|---|
| Habitat Protection | 57.2% |
| Restoration Projects | 18.7% |
| Damage Assessment | 11.3% |
| Administration | 8.1% |
| Public Participation | 3.1% |
| Independent Scientific review | 1.6% |

Note that amount shown here for Public Participation does not include salary allocations for personnel involved in public participation activites except for Oil Spill Public Information Center staff, Public Advisory Group support and the Public Information Office.

Source: 1992 and 1993 Trustee Council Budgets

groups to handle planning, implement programs and oversee projects. The working groups presently consist of: Finance, Restoration Planning, Public Participation, Habitat Protection, 1992/93 Work Plan, Budget and Process, Geographic Information System, and Archaeology.

### Public Advisory Group

The settlement requires that the Trustee Council ensure the decision-making process includes "meaningful public participation;" the settlement also specifies that there shall be a public advisory group.

After a call for nominations was issued on May 6, the Public Advisory Group (PAG) members were selected at Trustee Council meetings in August and September 1992. The PAG comes under the Federal Advisory Committee Act, and certain federal regulations apply which are designed to keep the PAG in line with similar organizations as far as reporting requirements and authority. PAG members are nominated by the Trustees, but actual appointments must be made by the Secretary of the Interior.

The original charter called for the PAG to consist of 15 official members and two ex-officio members, one each from the Alaska Senate and House of Representatives. The 15 members were to be drawn from a variety of interest groups, including the public at large and these principal interests: aquaculture, commercial fishing, commercial tourism, environmental, conservation, forest products, local government, Native landowners, recreational users, sport hunting and fishing, subsistence, and science/academic.

At their September 14, 1992 meeting, the Trustees revised the PAG charter to allow five representatives for the Public At Large category. Nominations were once again opened, and on September 21 final selections were made. The PAG is formed only to advise the Trustees; in the charter as drawn up by the Trustees they have no power to take action independently.

## 5.2 Restoration timetable

In April 1992, the trustees released three documents to the public: Restoration Framework, the Draft 1992 Work Plan, and the Response to Public Comment on the 1991 State/Federal Natural Resource Damage Assessment and Restoration Plan for the *Exxon Valdez* Oil Spill.

The Restoration Framework provides information about restoration planning to date, a summary of injuries to natural resources, proposed injury criteria, and proposed criteria for evaluating restoration options and alternatives. It also initiates a process for public input into developing the Restoration Plan and an Environmental Impact Statement. In August a Restoration Framework Supplement on Habitat Protection and Acquisition was released which outlines options the Trustees could pursue to protect habitat injured by the spill. The Supplement contains a description of the process and a discussion of alternative criteria for habitat protection or acquisition.

The 1992 Draft Work Plan details damage assessment and restoration activities proposed for 1992. The Framework is intended to be a scoping document as part of the process required under the National Environmental Policy Act.

The Framework has been reviewed by the public, and the Trustees intend to release an actual restoration plan in 1994 which will be further refined during public review and comment. Once final, this document will guide the restoration process through the year 2002.

Natural resource damage assessment studies began within days of the grounding of the *Exxon Valdez* and continued through 1993. It was the largest and most extensive damage assessment program in U.S. history, with more than $100 million devoted to 164 separate and related studies.[15] The damage assessment efforts were challenged from the start by two major scientific problems, one man-made, and one natural.

Scientists working in Prince William Sound in 1989 were initially challenged by the fact that relatively little was known about the region's ecosystem as a whole. The availability of baseline data for biological communities was determined largely by the forces of commercial interest and the creativity of certain researchers. Biologists knew a lot about commercial fish species (especially pink salmon and herring) relative to other kinds of animals because commercial fisheries management requires constant analysis of fish stocks, migration and spawning patterns, predation, climate, etc. Some other kinds of scientists had information about prevailing ocean currents because they were able to piggy-back research on other, unrelated projects in the past.[16] Some others had pieces of the puzzle, especially regarding intertidal biology, but generally speaking, there had been no comprehensive research effort in Prince William Sound before the spill.

This issue would crop up not just in 1989, but long after the spill, in 1992 and 1993, when scientists proposed various new studies (or extensions of studies) that had more to do with baseline information than active restoration. Researchers have argued that it is impossible to develop an effective restoration program without a better understanding of was injured in the first place. Nearly all of the damage assessment studies weΣre scheduled for "close-out" in the 1992 work plan. However, while scientists know more about Prince William Sound now than in 1988, they still do not have the comprehensive picture of the ecosystem that they would have liked to have before the spill hit.

"The extent of injury to certain species, including loons, cormorants and gulls, will never be known; pre-spill population estimates for these species in the spill area are not available," the restoration team reports.[17]

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A second challenge facing the damage assessment was biological timing. Speaking in seasonal terms, the spill hit on the eve of the most biologically active season in the region. The spring migrations and spawning activities were set to begin as daylight hours increased, nutrients flooded the Sound from snowmelt, and temperatures warmed. Researchers had to put together a detailed program of study overnight.

A third challenge to researchers was legal. Scientists complained throughout the program that lawyers were dictating the direction of some research programs, since the state and federal litigation efforts depended on accurate and compelling damage assessment information. In addition, the scientists were taken out of the mainstream of scientific inquiry and debate; the studies were secret, and therefore were not available for publication or discussion in the usual scientific circles. Researchers depend on the formal and informal open network of peer review and discussion that is the heart of the scientific process.

## Summary of injury

The obvious damage to animals that occurred in the first few months of the spill was a result of oiling on the animals themselves. Birds and marine mammals were injured because oil covered their fur or feathers and they could no longer keep warm or dry; some were poisoned or died by ingesting oil as the animals preened or tried to lick the oil off themselves; others died or were poisoned by ingesting oil during feeding.

A second cluster of injuries occurred as a result of residual oiling at feeding sites. Damage assessment scientists believe that several different species — river otters and harlequin ducks, for example — continue to suffer the effects of oiling because of

contaminated food sources. Mussel beds, in particular, were intentionally left alone by cleanup crews on the theory that cleanup would harm the mussels more than it would help them. Researchers in 1991 and 1992 discovered that mussel beds heavily oiled in 1989 still contained significant concentrations of oil, and that animals were foraging and eating in these areas.

Direct oiling of animals injured or killed them through poisoning or ingesting oil or because with oil covering their fur or feathers they could no longer remain warm or dry. This oiled duck was found on Green Island, March 30, 1989.

Photo by John Lough

A third class of injury due to displacement by oiling or cleanup activity also enters into the analysis. Scientists have noticed a troubling patterns of mortality among sea otter populations in the Sound since the spill; mature "middle-aged" animals — usually the healthiest and least likely to die — are dying during what should be the prime of their lives. Researchers think the unusual mortality could be tied directly to contaminated food sources (such as the mussel beds), or indirectly due to displacement: The otters may be avoiding usual feeding areas because of oil (or because of activity from cleanup in those areas), which may force them to feed at less desirable sites (less availability of food, or father away), which in turn may lead to lower body weights, thinner fat layers, and less resistance to disease and weather.

Various bird species — marbled murrelets and, again, the harlequin ducks — suffered wholesale reproductive failure during the spill years, which may be directly attributable to oil, or to a combination of oiling and cleanup activity. The spill did not "measurably" affect the Sound's bald eagle populations[18], but researchers noted that nests near heavily and moderately oiled beaches in 1989 suffered a "failure rate" of 85 percent, as opposed to 55 percent at lightly oiled or non-oiled sites. Again, while the injury to bald eagles can be tied to direct and indirect oiling effects, eagles may also have been affected by the heavy and intrusive presence of cleanup crews at the heavily oiled sites in 1989.

Larger marine mammals, such as harbor seals, showed some fairly obvious effects. Crews retrieved the carcasses of 19 dead, oiled harbor seals in 1989, but death counts are open to speculation since seals sink when they die. Other seals in the spill area showed abnormal activity (sluggishness, wariness), and some showed abnormal lesions on their brains. But underlying these obvious problems was the fact that seal populations in the spill area were probably already at a low point, and therefore less able to withstand additional environmental assault or stress.[19] Other marine mammals, such as killer whales, also have some post-spill population fluctuations that researchers suspect are attributable to the oil spill.

Salmon stocks suffered two kinds of damage. The first was at oiled streams, where eggs and fry showed striking patterns of abnormal development or mortality in the spawning cycles immediately following the spill. The problem is not that fish were oiled; fish swim under the surface and it is highly unlikely any suffered significant effects of direct oiling. The problem for Prince William Sound's most abundant salmon

species — pink or humpback salmon — were the conditions at oiled streams. Roughly 75 percent of the wild pinks spawn in the intertidal areas, laying their eggs in the gravel beds of streams that are completely covered by salt water at high tide, but subject to regular fresh stream flows when the tide is out. Oil came in on the waxing tide and settled in the mid-and lower intertidal areas on the ebb. In the oiled streams sampled during damage assessment, egg mortality was as much as 50 percent, compared to the 18 percent of unoiled streams.[20]

A number of oiled sea otters were taken to otter recovery centers in Valdez and Seward to be cleaned. The ones which recovered were released. Otters also suffered through oiling of feeding sites or the necessity of finding other sites. Photo by Rob Schaeffer

Exxon frequently cited record pink harvests, especially in 1990 and 1991, as an indication that salmon stocks were not damaged by the spill. What is not well understood is that those harvests were of fish spawned in hatcheries, which were protected from the oil by booms and skimmers. Moreover, the catch was so far above levels of previous years simply because the hatcheries had just started producing fish; comparing wild harvests from 1988 with hatchery-dominated harvests is useful only from the standpoint of fisheries economics. As a matter of biology, the hatchery fish have nothing to do with the ability of wild fish to spawn — and eggs to survive — in the streambeds.

Other fish species suffered indirectly from the spill. In Prince William Sound, fishermen shut off from commercial salmon harvest due to oil on the water turned to unoiled areas of the Sound, and to different kinds of fish for harvest. Certain bottom fish, such as rockfish, were overfished that year as a formerly incidental commercial fishery turned into a significant one. But by far, the biggest indirect effect of the oil spill on fish occurred in Cook Inlet.

In Cook Inlet, red, or sockeye, salmon plugged the river systems because commercial fisheries in the inlet had been shut down due to oil on the water. The surfeit of salmon was a nightmare, in spawning terms. Reds spawn in lakes, and in 1989, so many reds made it to the lake to spawn that when eggs hatched to fry, there was a population explosion. There simply wasn't enough food to go around, and a massive die-off of fry resulted. Complicating the situation was the fact that over-escapement had been a problem in several of the previous years. So while the 1989 over-escapement might have been an isolated phenomenon of the oil spill, the results of the over-escapement exacerbated a developing problem in the Cook Inlet system.

The biological systems of Prince William Sound and the rest of the spill area were significantly upset by the initial oiling, continuing sublethal effects, and the disruption and displacement caused by cleanup.

And even natural weathering — billed as a passive alternative to cleanup — has its own negative effects. The mussel beds, once again, are the dominant example.

"In 1991 relatively high concentrations of oil were found in mussels and in the dense underlying mat (abyssal substrate) of certain oiled mussel beds. These beds were not cleaned or removed after the spill and are potential sources of fresh oil for harlequin ducks, black oystercatchers, river otters and juvenile sea otters — all of which feed

on mussels and show signs of continuing biological injury," the state and federal scientists reported in 1992.[21]

Researchers collecting soil samples from shallow subtidal areas in the spill area found that even in 1991, hydrocarbons were being mobilized off the beaches and winding up in the sediments. While the sediment samples do not suggest any specific damage to a certain species, the results of the study suggest that hydrocarbons can be moved to, and persist at, places that were not originally oiled. And as a federal study suggested in the spring of 1991, cleanup — especially high-pressure and hot water hoses used in 1989 — caused significant damage to intertidal plants and animals at various sites.[22]

## Damage to other resources and services

While the focus of settlement agreements was damage to natural resources, services or activities directly tied to a damaged resource are eligible for restoration projects.

The problem for Prince William Sounds' naturally spawning salmon stocks lay with conditions at oiled streams. Eggs are laid in the gravel of intertidal areas. Damage assessment studies showed egg mortality was very high in oiled streams. Hatchery fish were not affected in the same way.

Photo by John Hyde

The most important activity to the residents of Prince William Sound and the Gulf of Alaska is the subsistence harvest of wild fish, game, and plants and animals that live along the shorelines. While virtually all of Alaska's residents are part of the cash economy, different people and villages participate to varying degrees. Subsistence patterns and habits are not static. They vary from village to village, and even season to season, depending on the availability of wild resources, the weather, commercial fishing success, the cultural cohesiveness of a community, and other factors. However, subsistence harvest and distribution of food remains, throughout the spill area, one of the dominant features of the local economy. From Tatitlek and Chenega Bay within the Sound, Port Graham and English Bay and Seldovia along the Kenai coast, and down to the handful of villages spread widely along the Kodiak Island and Alaska Peninsula coasts, subsistence harvest is an integral part of the diet, economy, and culture of the local residents.

The Alaska Department of Fish and Game's Division of Subsistence documented a substantial decline in both the overall subsistence harvest and the variety of plants and animals harvested in subsistence communities after the oil spill. The oil spill year, 1989, showed the most significant alterations or interruptions of subsistence harvests. However, subsequent surveys showed variances from normal subsistence patterns in 1990 and 1991 as well in some villages; residents continue to avoid certain kinds of foods, such as shellfish and other marine invertebrates.[23]

There has been displacement, as cleanup activities shouldered subsistence activities out of the way. And, of course, damage to intertidal communities, shellfish, and species higher on the trophic scale — harbor seals, for example — have disrupted certain aspects of subsistence harvest as well. However, the lingering damage, in many cases, is based on a perception of risk rather than an actual risk. The disruption in traditional subsistence patterns is a difficult problem to address, in terms of restoration, since a solution does not necessarily depend solely on wildlife or habitat management.

Archeological sites were another non-wildlife resource that suffered both damage and disruption from the spill and the cleanup. The entire spill region has been continu-

ally inhabited by Alaska Native peoples for at least hundreds of years, and probably considerably longer, depending on the specific area. Homesites, burial sites, and traditional camps are located throughout the area, and artifacts such as stone lamps and tools are common on state, federal, and private lands. The damage assessment teams have documented 35 historically significant sites that were damaged by oil,[24] but the greatest collateral damage to archeological resources might have occurred during the cleanup itself.

The disruption in traditional subsistence patterns is a difficult problem to address, in terms of restoration, since a solution does not necessarily depend solely on wildlife or habitat management.

State and federal agencies are extremely protective of archeological sites. In fact, in a departure from Alaska's general statutory policy of open government and availability of records, the commissioner of the Department of Natural Resources is allowed by law to keep archeological information confidential. The goal is to maintain the historical integrity of sites; by keeping site information confidential, looters or casual artifact "hunters" cannot target key sites.

Yet the presence of thousands of "visitors" in the region during the cleanup revealed, unintentionally, the location of many archeological sites. Exxon and the governments took active and preemptive measures to protect archeological sites, but in many cases, workers literally stumbled on archeological sites that had been previously undiscovered. In fact, the vast majority of documented archeological sites on Kodiak Island and the Alaska Peninsula were discovered and recorded due to shoreline cleanup surveys or work details. Like subsistence, some of the damage caused to archeological resources is measured in less tangible ways than damage to fish or birds; at many archeological sites, the damage is actually an increased threat of disruption due to wider public knowledge of the sites. The National Park Service has addressed this problem by adding rangers to oversee activity along the Katmai National Monument and Kenai Fjords National Park shores, but it is unclear if other steps can be taken through the Trustee Council.[25]

The Trustee Council has also identified damage to recreational sites or activities, either due to actual oiling or displacement. A final category of damage assessment involves damage to "intrinsic" values of state and federal lands with special designations, primarily wilderness. Both state and federal law set higher standards for habitat conservation and preservation within wilderness areas, such as Kachemak Bay State Wilderness Park, portions of which adjoin the Kenai Fjords National Park along the outer Kenai Peninsula coast. In addition to obvious sources of damage — residual oiling — the governments argue that the simple presence of cleanup crews within wilderness areas diminished, in some way, the special values society places on wild lands.

## 5.4 Criteria and restoration options

The Trustee Council has identified six general categories of restoration options:

a) No action;
b) Management of human uses;
c) Manipulation of resources;
d) Habitat protection and acquisition;
e) Acquisition of equivalent resources;
f) Various combinations of all five.

The "no action" option is self-explanatory. The Trustees would allow recovery to take place on its own, and a scientific monitoring program would track the progress over time.

Management of human uses would include actions such as better monitoring of archeological sites, changing harvest regulations for an injured species, keeping tour ships away from key nesting or rearing habitat at critical times of the year, and so on. The goal would be to minimize the usual range of human disruption so the injured resource has a better chance to recover, or so that the resource doesn't suffer further injury.

Manipulation of resources might include site-specific projects such as improving spawning habitat for sea-run trout or salmon, or making a damaged site more amenable to colonization by the kinds of plants removed or damaged by cleanup.

Habitat protection and acquisition could range from purchases of private lands to land management agreements with private parties or other government agencies. The goal, as in the management of human uses option, would be to optimize the chances for target species to recover by leaving their most important habitats undisturbed. Under this option, the purchase or acquisition of the land would be directly related to the recovery of an injured species. This differs from the acquisition of equivalent resources, which would be the simple replacement of a lost of damaged resource with land that provided "substantially similar services as the injured resource."[26]

From "no action" to land or habitat acquisition, the decisions facing the trustees fall partly within the realm of science and partly within the realm of public policy.

The first-year state-federal restoration budget of approximately $19 million was met with frustration from a spill-area public eager for some kind of action.

In some cases, no action may be the preferred option. The decision may be based largely on a scientific projection that shows recovery occurring naturally at a relatively acceptable rate. Or, no action may be the option because the incremental increase in recovery promised by a particular project is out of proportion to the amount of money and effort required to carry it off.[27]

The other four principal options will also be subject to a similar suite of somewhat subjective considerations. Does a project help more than one injured resource? Will a project that helps one resource hurt another? Does the public feel specific targets of restoration are more important than others? Is the remedy for a given injury within the realm of technical feasibility?

In short, the decisions before the trustees are very similar to the kinds of decisions cleanup officials had before them. Science provides the basis for analysis by identifying the injury and its extent, but public policy provides much of the basis for deciding how, when, and if money is spent on restoration. Public policy will also dictate how money is allocated among possible candidates for restoration.

The Trustees have thus far taken a conservative approach to approving expenditures from the trust fund. Much of staff and trustee time in the first few months after the October 1991 settlement was spent in discussion about the fate of continuing studies, and the need to do more or less. The Trustees generally came down on the side of spending less, directing the restoration staff to weed out studies that were not likely to produce strong proposals for action, reduce previously approved or expected budgets, and close out existing damage assessment projects.

Still, the first-year state-federal restoration budget of approximately $19 million was met with frustration from a spill-area public eager for some kind of action. The Trustees received criticism from local governments, Alaska Native residents, conservation groups and others who said the restoration money was being bled into the bureaucracy, or wasted on studies instead of action. Scientists outside the state-federal system complained that government researchers were stacking the program with their own studies, and not allowing fair access to restoration funds.

These criticisms are attributable, at least in part, to the fact the sudden settlement on October 8, 1991, thrust a little-known and somewhat speculative government planning operation into the public eye, and launched the program unexpectedly on the fast track. The schedule for completing damage assessment, to that time, was determined by the sequential progress of the science and the litigation plans of the attorneys. There was no deadline, other than the fact that the work had to be done in time for a court date somewhere in the future.

With the settlement, there was an immediate and intense expectation from the public that restoration was ready to begin. The damage assessment program deadline was now dictated by the expectations of the public and the policy decisions of the six trustees. Regardless of whether the science was progressing too slowly or too quickly, regardless of whether science managed by legal demands was better or worse than science driven by public policy, and regardless of whether the cost of the studies was too high, too low, or just about right — regardless of all this, the program had sud-

denly been presented with new management with new goals, and a new finish deadline set somewhat arbitrarily.

Faced with this new situation, the restoration staff and the Trustees set out a schedule for closing out the $100 million damage assessment program by spending $16.5 million on science in 1991-92, nearly all of it to pay for final reports from principal researchers. The Trustees set aside $1.7 million to pay for administration and planning, and another $700,000 for a public symposium in February, 1993, at which all the damage assessment information would be presented.

The approach of the first anniversary of the settlement in 1992 prompted a small protest outside the restoration offices in Anchorage and a media blast from a national conservation group, which charged the restoration was "mired in a tar pit of bureaucracy."[28] The stated reason for the negative publicity was the perceived unwillingness or reluctance of the Trustees to act on a general restoration strategy dominated by the purchase or acquisition of management rights on private lands within the spill area.

Habitat acquisition of some kind is, by far, the most popular proposal that has come before the Trustees. The Trustees set up a special working group to determine draft criteria for habitat acquisition, target areas for possible action, and so on.

The logic behind such a strategy was that by purchasing the land or the management rights to the land, critical habitats could be best protected. Most of the private land in the spill area had been selected by Alaska Native corporations for potential timber harvest; proponents of the land acquisition program argued that logging the region would slow recovery from the spill.

The proponents of timber rights or land acquisition have made their arguments both to the Trustees and to the state and federal governments directly. The first major set of acquisition proposals was included in House Bill 411, passed by the Alaska Legislature in May 1992. The Legislature proposed to spend the state's $50 million in criminal restitution money on a variety of spill-area projects, including timber buybacks in Prince William Sound, Kachemak Bay, and Afognak Island, the second largest island in the Kodiak archipelago. Governor Hickel vetoed the bill when it reached his desk on July 15, arguing that some of the projects were not directly related to damage caused by the spill. A similar measure worked its way through the Legislature in 1993, this time including funding for research on oil spill cleanup, habitat acquisition, and other restoration functions. The Governor signed this bill into law.

At the federal level, the proponents of timber buy-backs inserted into federal energy legislation a provision that would have required as much as 80 percent of the $900 million state-federal trust fund to be used for habitat acquisition. That provision was stripped from the bill in conference committee.

Habitat acquisition of some kind is, by far, the most popular proposal that has come before the Trustees. The Trustees set up a special working group to determine draft criteria for habitat acquisition, target areas for possible action, and so on. The team's efforts have resulted by 1993 in two major land purchases, one in Katchemak Bay, the other on Afognak Island in the Kodiak archipelago.

The first purchase was a 20,000-acre private inholding in Kachemak Bay State Park, a wilderness park at the tip of the Kenai Peninsula, and adjacent to Kenai Fjords National Park. The purchase used some settlement trust money and some from the state itself. The bulk of the more than $20 million came from the state's share of the Exxon criminal restitution, and money recovered by the state from Alyeska Pipeline Service Company, which settled its liability case with the state out of court. The Kachemak Bay buy-out had been on the table for more than 15 years, and involved a complex mix of surface rights, subsurface rights, and timber rights spread among two Alaska Native corporations, and a timber company comprised of several Alaska Native village corporations. The purchase ended speculation that large tracts of shoreside timber would be harvested in clear cuts directly across Kachemak Bay from Homer, a major tourism center.

The second major purchase involves nearly $40 million in settlement trust funds and 42,000 acres at Seal Bay and Tonki Cape on Afognak Island. The land, owned by a consortium of Alaska Native corporations, had been scheduled to be logged, as much of the commercial timber had already been at other locations on the island. The sites in question hold considerable intrinsic value, in terms of natural beauty, but the area also

contained high value nesting and rearing habitat for birds and other species that were injured by the oil spill. Purchasing the land is intended to preserve that habitat and allow injured species to recover more quickly, or at least without further major disruptions.

Habitat acquisition may also include conservation easements and other alternative land management agreements that do not necessarily result in fee-simply purchase of private land by the government.

## Notes, Chapter 5

[1] *Governor Steve Cowper, personal communication, May-August 1989, June 1990.*

[2] *At least while they're in state waters, but that's another jurisdictional issue entirely.*

[3] *The governments made this approach formal on Aug. 28, 1991, in the Memorandum of Agreement and Consent Decree, filed in the US. District Court. The MOA settled claims the governments had against each other, and they agreed to act as "co-trustees in the collection and joint use of all natural resource damage recoveries resulting from the Exxon Valdez oil spill."*

[4] *Interestingly he announced publicly his intention not to seek a second term just minutes before he learned of the Exxon Valdez oil spill. Cowper was in Fairbanks on the morning of March 24, 1989, and shortly after 7 a.m. he told a reporter of his plans. It was then that the reporter asked him his thoughts about the oil spill. Cowper left almost immediately for Valdez.*

[5] *Deposition of Lawrence Rawl, June, 1992.*

[6] *The state has been involved in litigation with oil companies for more than a decade on a number of oil tax and transportation tariff disputes. These settle from time to time, such as the $72 million Trans-Alaska Pipeline tariff settlement of 1985 and a $243 million tax settlement with Arco Alaska in 1986. Because of the amount of money involved, these cases usually attract a good deal of public attention.*

[7] *Quoted in The Anchorage Times, April 17, 1991.*

[8] *Exxon press release, April 17, 1991.*

[9] *Exxon Valdez Oil Spill Trustees, "Restoration Framework," April 1992, p. 5.*

[10] *Regardless of the changes in funding for the cleanup dictated by the settlement, the "old "(i.e., pre-Oil Spill Pollution Act) system of response management still obtained: Exxon was the responsible party, working under federal and state oversight. Technically, the only way the federal government could release Exxon was if the federal on-scene coordinator determined Exxon was unwilling or unable to respond any further. This would have resulted in federalizing the spill, a move for which the federal on-scene coordinator saw little need or justification. The state was less concerned with this legal consideration, but saw no reason to make an issue of it at that point in the response.*

[11] *Piper, E., DEC, memorandum to Tillery, C., Alaska Dept. of Law, November 21, 1991. For a more complete discussion of the development and execution of this arrangement with Exxon, see Piper, and others, "Third Year Report," DEC, February 15, 1992.*

[12] *Precise figures for either year will not be available until Exxon actually submits its December 1992 payment, with full supporting documentation. The 1992 field estimate comes from the U.S. Coast Guard deputy on-scene coordinator in September 1992.*

[13] *The federal trustees have designated representatives, based in Alaska, who preside in their stead. The Alaska Regional Forester for the U.S. Forest Service represents Agriculture, a special assistant to the secretary represents Interior, and the Regional Director of the*

*National Marine Fisheries Service represents the Department of Commerce.*

[14] *The state attorney general sits on the Trustee Council, but staff work on the restoration team has been delegated to the Alaska Department of Natural Resources.*

[15] *Exxon Valdez Oil Spill Trustees, 1992 Draft Work Plan, April 1992 p.4.*

[16] *Some of what turned out to be the most beneficial and accurate predictions of oil movement after the spill were provided by a University of Alaska Fairbanks scientist who had been studying ocean currents in the Sound off and on over the years. He obtained much of his data through weather and perseverance: Whenever the university's research vessel was driven by weather into the Sound while on unrelated research, this scientists would turn the trip into an added research opportunity and collect data while waiting out the storm.*

[17] *Exxon Valdez Oil Spill Trustees, Restoration Framework, April 1992, p. 30.*

[18] *Ibid, p. 27.*

[19] *And underlying any of these points is the fact that seals are one of the species for which baseline population data was thin before the spill. The first full count of harbor seals in the area was done in 1991, two years after the spill.*

[20] *Trustees, Framework, p. 31.*

[21] *Ibid., p. 35.*

[22] *See Chapter 2, p. 63, Hot Water and High Pressure*

[23] *Fall, J. "The Exxon Valdez Oil Spill: Impacts on Subsistence Uses of Fish and Wildlife," Arctic Issues Digest, University of Alaska Fairbanks, October 1991. Fall and the subsistence division have updated some of this data in a draft paper of March 27, 1992.*

[24] *Trustees, Framework, p. 37.*

[25] *The extra rangers were funded through the federal Archeological Preservation Act, not through the Exxon Valdez restoration trust fund.*

[26] *Federal Register, March 1, 1991.*

[27] *The Framework document cautions that this is not intended to be "a straight cost-benefit analysis," but cost clearly can be a consideration.*

[28] *Sierra Club, press release, October 8, 1992, Washington, D.C.*

## AS 46.08.030

Says:

It is the intent of the legislature and declared to be the public policy of the state that funds for the abatement of a release of oil or a hazardous substance will always be available. (§ 1 ch 59 SLA 1986)

# AS 46.08.030

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It is the intent of the legislature and declared to be the public policy of the state that funds for the abatement of a release of oil or a hazardous substance will always be available. (§ 1 ch 59 SLA 1986)

Sec. 46.08.040. Purposes of the fund. (a) The commissioner may use money from the fund to

(1) investigate and evaluate the release or threatened release of oil or a hazardous substance, and contain, clean up, and take other necessary action, such as monitoring and assessing, to address a release or threatened release of oil or a hazardous substance that poses an imminent and substantial threat to the public health or welfare, or to the environment;

(2) pay all costs incurred to

(A) establish and maintain the oil and hazardous substance response office;

(B) review oil discharge prevention and contingency plans submitted under AS 46.04.030;

(C) conduct training, response exercises, inspections, and tests, in order to verify equipment inventories and ability to prevent and respond to oil and hazardous substance release emergencies, and to undertake other activities intended to verify or establish the preparedness of the state, a municipality, or a party required by AS 46.04.030 to have an approved contingency plan to act in accordance with that plan; and

(D) verify or establish proof of financial responsibility required by AS 46.04.040;

(3) pay the expenses incurred by the Alaska division of emergency services for the oil and hazardous substance response corps and the oil and hazardous substance response depots when presented with appropriate documentation by the division;

(4) provide matching funds for participation in federal oil discharge cleanup activities and under 42 U.S.C. 9601 — 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980);

(5) recover the cost to the state or to a municipality of a containment and cleanup resulting from the release or the threatened release of oil or a hazardous substance;

(6) prepare, review, and revise

(A) the state's master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.200; and

(B) a regional master oil and hazardous substance discharge prevention and contingency plan required by AS 46.04.210; and

(7) restore the environment by addressing the effects of an oil or hazardous substance release.

(b) When the governor declares a disaster related to an oil or hazardous substance discharge emergency under AS 26.23.020(c), the governor may, during the effective period of the disaster emergency, use money from the fund to respond to the disaster emergency.

(c) Notwithstanding other provisions of this section, money from the fund may not be used for a purpose specified in (a)(2)-(7) of this section unless funds are available from an appropriation made specifically for that purpose.

(d) Upon a request from the Alaska Legislative Council, the commissioner shall use money from the fund to reimburse the Alaska Legislative Council for expenditures that it makes for the operation of the Citizens' Oversight Council on Oil and Other Hazardous Substances; established under AS 24.20.600. (§ 1 ch 59 SLA 1986; am § 3 ch 90 SLA 1989; am § 2 ch 113 SLA 1989; am §§ 14, 15 ch 190 SLA 1990; am § 28 ch 191 SLA 1990; am § 3 ch 199 SLA 1990)

## Funding History - Division of Spill Prevention and Response

Prior to Fiscal Year 91 no permanent staff of DEC were charged directly to the Oil andd Hazardous Substance Release Response Fund (Response Fund). In FY90 and 91 DEC experienced large staff growth bringing existing programs to core level and adding additional staff associated with new legislation. Beginning in FY 91 and continuing to present, general funding of the Spill Prevention and Response functions has been gradually elliminated. In addition, regional staff have been shifted from other projects to the Spill Prevention and Response projects commensurate with the work load in the respective regions.

## STAFFING - FISCAL YEAR 89

| FY 89 (est) | FTEs | Gen Fund | Resp Fund | Other Funds |
|---|---|---|---|---|
| SPPM | 19.5 | 758.5 | 0.0 | 226.2 |
| Csites | 24.8 | 1,213.8 | 0.0 | 1,457.1 |
| Total | 44.3 | 1,972.3 | 0.0 | 1,683.3 |

## LEGISLATION ENACTED 89 SESSION

### SLA89 Chapter 29 SB256

Required Department of Law to seek cost recovery at the request of DEC.
Clarified Municipal reimbursements from Response Fund.

### SLA 89 Chapter 39 HB68

Authorized DEC to use liens against property as security for State expenditures.

### SLA 89 Chapter 112 SB260

Established nickel a barrel surcharge on regulated industry production.

### SLA 89 Chapter 90 SB261

Required DEC to prepare and annually revise State Master Plan and Regional Plans.
Authorized DEC to use Response Fund to pay costs of State Master Plan and Regional Plans.
Expanded the uses of the Response Fund to include restoration of the environment by addressing the effects of a release or threatened release.

### SLA 89 Chapter 113 SB264

Established Response Office in DEC for catastrophic or declared emergency spills.
Established emergency response equipment depots in DEC's response office.
Established emergency response volunteer corps in DEC's response office.
Expanded uses of Response Fund to pay for Response Office and Depot and Corps.

## SLA 89 Chapter 41 SB271

Clarified civil penalty for the unpermitted discharge of oil and the failure to implement an oil discharge contingency plan.

## STAFFING - FISCAL YEAR 90

| FY 90 (est) | FTEs | Gen Fund | Resp Fund | Other Funds |
|---|---|---|---|---|
| SPPM | 25.0 | 1,013.3 | 0.0 | 235.6 |
| Csites | 36.3 | 876.4 | 0.0 | 1,863.5 |
| Total | 61.3 | 1,889.7 | 0.0 | 2,099.1 |

Analysis of Staffing Change from FY 89 to FY 90

The FY90 operating budget request included a structural change from multiple components for individual programs such as Air, Oil, Water to the large single component Environmental Quality ( EQ) Projects. The SPPM and Csites projects were included in the EQ Projects component.

Staff increased in the SPPM project in FY 90 due to DEC implementation of a multi year plan to increase staffing to core level necessary to meet statutory, regulatory and legislative intent requirements. Prior to these increases, DEC was not meeting those requirements. The FY 90 increment established a small capacity for spill response and seasonal positions to inspect tankers and facilities for compliance with contingency plan requirements.

Contaminated Sites staff increased in FY 90 due to inclusion of Kenai cleanup project staff previously funded as non permanent or in the CIP budget in the operating budget request. These staff identify and cleanup existing contaminated sites on the Kenai Peninsula which pose a threat to public health.

## LEGISLATION ENACTED 90 SESSION

### SLA90 Chapter 141 HB315

Categorized environmental crimes and determined appropriate level of criminal behavior for each.

### SLA90 Chapter 142 HB316

Established the level of criminal damages to be assessed in fines against organizations for damages caused by environmental crimes.

### SLA90 Chapter 190 HB566

Added incident command system requirement to State and Regional Plans.
Required DEC to use the State plan to designate depot and response corps locations .
Required DEC to submit the State master and Regional plans and revisions to the State Emergency Response Commission for review and approval.

Transferred responsibility to establish depots and corps to Division of Emergency Services.
Expanded uses of Response Fund to include DES reimbursement for depots and corps.
Established State Emergency Response Commission (SERC).
Established Local Emergrency Planning Committees(LEPCs).
Established Hazardous Substance Spill Technology Review Council (HSSTRC).

### SLA90 Chapter 191 HB567

Required industry contingency plans to include prevention measures.
Added certification requirement for approved contingency plans.
Clarified proof of financial responsibility and limits liability for tank vessel or oil barge operations.
Clarified DEC inspections of regulated industries.
Established DEC participation in structural integrity of vessels, barges, pipelines and facilities.
Expanded uses of Response Fund to include:

Review of oil discharge prevention and contingency plans
Conduct training, response exercises, inspections and tests to verifiy inventories and ability of state, municipality or parties required to have an approved contingency plan
Verification of financial responsibility

### SLA90 Chapter 199 HB578

Established Citizen's Oversight Council
Expanded uses of Response Fund to include Oversight Council costs.

## STAFFING - FISCAL YEAR 91

| FY 91 (est) | FTEs | Gen Fund | Resp Fund. | Other Funds |
|---|---|---|---|---|
| SPPM | 72.0 | 1,860.1 | 3,203.6 | 0.0 |
| SRO | 14.0 | 0.0 | 2,703.5 | 0.0 |
| Csites | 41.0 | 457.8 | 715.1 | 1,804.3 |
| Stg Tank Program | 11.0 | 6,009.2 | 0.0 | 0.0 |
| Total | 138.0 | 8,327.1 | 6,622.2 | 1,804.3 |

Analysis of Staffing Change from FY 90 to FY 91

FY 91 was the final year of increments to bring the Spill Prevention and Response projects to core level funding. An increment was requested and approved for both the SPPM and Contaminated Sites projects.

The Spill Response Office and Storage Tank Assistance Program were identified as separate projects.

Funding was requested and approved for the Environmental Investigation and Enforcement unit. This unit is responsible for the specialized investigatory and legal resources associated with determination of responsible parties for a release or a contaminated site.

Fiscal notes were attached to HB 566 and HB 567 increasing staffing an additional 22 FTEs to provide resources to perform the additional work necessary to meet the statutory obligations enacted in HB 566 and HB 567.

Additiional staff were approved for the Prince William Sound District Office.

## LEGISLATION ENACTED 91 SESSION

### SLA91 Chapter 48 SB165

Expanded uses of Response Fund to include refurbishment or construction of marine response vessels.

### SLA91 Chapter 83 SB25

Expanded uses of Response Fund to municipal grants.

### SLA91 Chapter 31 HB194

Required the Board of Marine Pilots to cooperate with DEC in the review and approval of training programs for pilots of tanker vessels.

### SLA91 Chapter 92 HB196

Required the Citizen's Oversight Council to submit a report on whether State laws for response action contractor civil liability and vessel contingency plan requirements should be amended.

### SLA91 Chapter 09 SB263

Provided a one-year delay to June 1, 1992 for compliance of non crude oil operations with the financial responsibilities in AS 46.04.040.

Authorized DEC to issue interim approval for contingency plan amendments that substantially comply with the requirements of Chapter 191, SLA90.

## STAFFING - FISCAL YEAR 92

| FY 92 (est) | FTEs | Gen Fund | Resp Fund | Other Funds |
|---|---|---|---|---|
| Director | 6.0 | 248.7 | 182.1 | 0.0 |
| SPPM | 69.0 | 981.8 | 4,661.5 | 77.0 |
| SRO | 14.0 | 0.0 | 1,107.5 | 0.0 |
| Csites | 40.0 | 414.8 | 1,182.4 | 1,949.4 |
| Stg Tank Program | 9.0 | 0.0 | 0.0 | 6,700.0 |
| Total | 138.0 | 1,645.3 | 7,133.5 | 8,726.4 |

Analysis of Staffing Change from FY 91 to FY 92

FY 92 budget structure recognized the creation of the Division of Spill Prevention and Response. The Director's Office and Storage Tank Program were separate components in the FY 92 budget request, but, the projects (SPPM, SRO and Csites) continued as a part of the EQ projects budget request.

Overall staffing levels did not increase, but, were re-aligned commensurate with the needed level of effort in the two components and three projects. The process of shifting funding for Spill Prevention and Response work from General Funds to Response Funds began in FY 92 with central office staff.

## LEGISLATION ENACTED 92 SESSION

### SLA92 Chapter 83 SB540

Required DEC to develop regulations governing the registration and approval of oil spill primary action contractors.

Required DEC to collect fees in the amount necessary to cover the costs of this program.

## STAFFING - FISCAL YEAR 93

| FY 93 (actual) | FTEs | Gen Fund | Resp Fund | Other Funds |
|---|---|---|---|---|
| Director | 12.0 | 115.6 | 1,459.2 | 0.0 |
| SPPM | 72.5 | 90.8 | 9,027.5 | 0.0 |
| Csites | 53.5 | 351.8 | 4,717.1 | 2,582.7 |
| Stg Tank Program | 7.0 | 0.0 | 0.0 | 3,822.7 |
| Total | 145.0 | 558.2 | 15,203.8 | 6,405.4 |

Analysis of Staffing Change from FY 92 to FY 93

The FY 93 budget structure established the Division of Spill Prevention and Response as a separate BRU with the projects above as separate components. The Spill Response Office was decentralized with expert spill responders in each region. Administrative Support, Safety and Data Management were transferred from the programs to the Director's Office.

Staff were added for Response Fund Management (1), the Department of Defense cooperative agreement (2), Geographic Information Systems (1 - non perm) and the Leaking Underground Storage Tank program (1 - non perm).

Conversion of the Spill Prevention and Response effort from General Funds to Response Funds continued focusing on regional efforts leaving the Division with 393.0 in General Funds and 165.2 in General Fund Match.

## STAFFING - FISCAL YEAR 94

| FY 94 (request) | FTEs | Gen Fund | Resp Fund | Other Funds |
|---|---|---|---|---|
| Director | 13.0 | 0.0 | 1,296.7 | 36.4 |
| SPPM | 75.2 | 0.0 | 8,105.2 | 225.0 |
| CSites | 57.2 | 165.2 | 3,727.5 | 2,225.0 |
| Stg Tank Program | 10.0 | 0.0 | 0.0 | 6,621.9 |
| Total | 155.4 | 165.2 | 13,129.4 | 9,108.3 |

Analysis of Staffing Change from FY 93 to FY 94

Non permanent staff previously off budget were included in the FY 94 budget request. Historically the department had not included those positions in budget requests and requested revised programs to move monies from contractual to personal services to pay for non perms.

Non permanent staff are included in the FY 94 operating budget request as follows:

Director's Office - 1 Non Perm Student Intern
Spill Prevention Planning and Management - 1 Non Perm Environmental Specialist
Contaminated Sites - 3 Non Permanent Environmental Specialists
Storage Tank Program - 2 Environmental Specialists (seasonal) and 1 Clerk Typist (seasonal)

A permanent position was added in the Contaminated Sites Program (Site Discovery) and a long term non permanent position in the Underground Storage Tank Program was brought on budget as a permanent part time position.

Regional budgets included an additional .4 FTEs not previously assigned to Spill Prevention and Response projects.

All general funds were eliminated leaving 165.2 in general fund match in the budget request.

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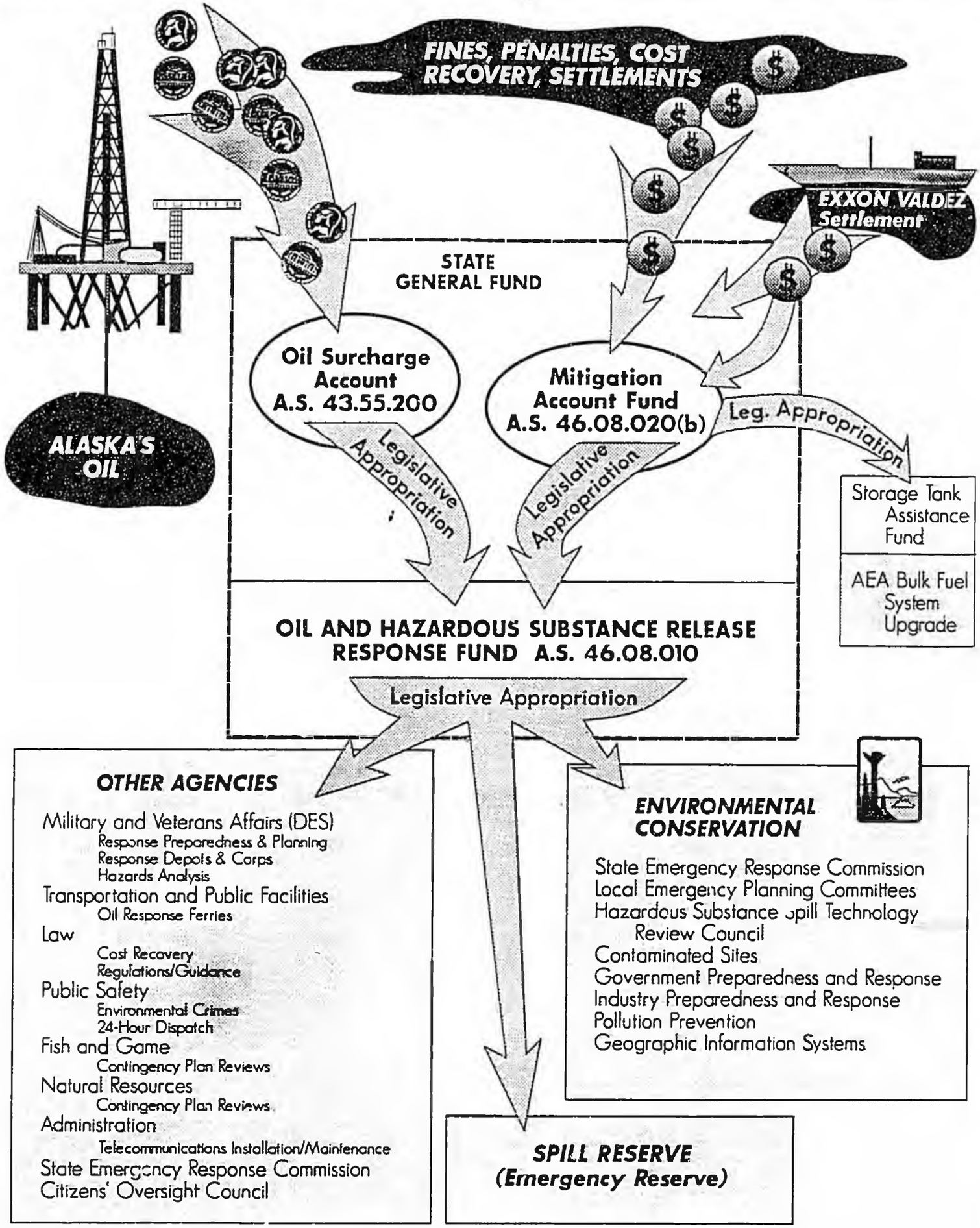


Alaska's Oil and Hazardous Substance Release Response Fund

Prepared by ADEC 4/93

# SPILL RESERVE EXPENDITURES BY FISCAL YEAR

(in thousands)

| | | |
|---|---|---|
| | FY 90 | 245.5 |
| | FY 91 | 256.8 |
| | FY 92 | 71.4 |
| | FY 93 | 299.3 |
| (to date 11/22) | FY 94 | 272.5 |
| | TOTAL | 1,145.5 |

*note: Expenditures for FY 94 include 156.7 for Project Chariot which will be reimbursed by a federal grant.

SPILL RESERVE AS A PERCENTAGE OF TOTAL RESPONSE FUND EXPENDITURES

0.9 %

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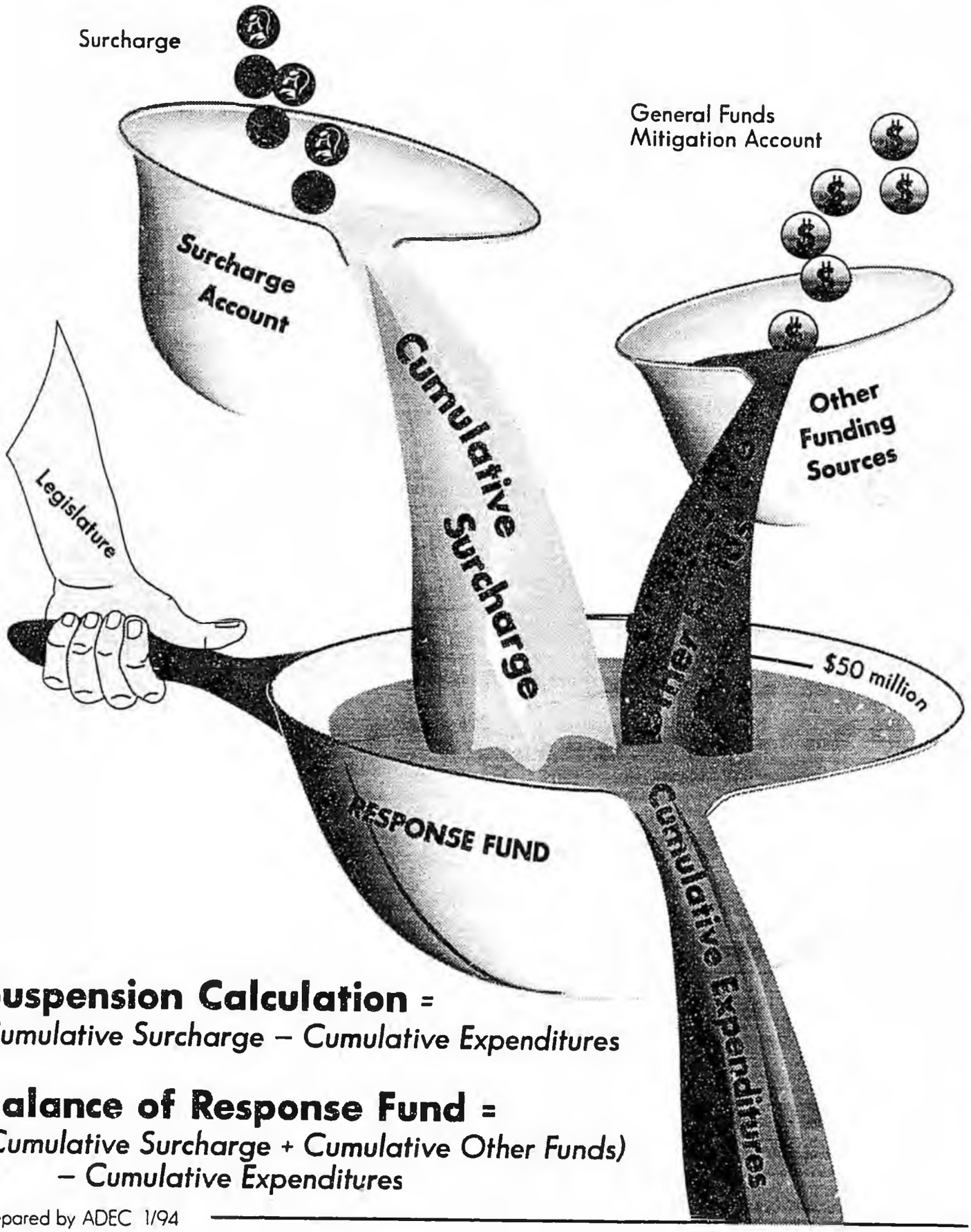
# SURCHARGE SUSPENSION vs. RESPONSE FUND BALANCE




**Suspension Calculation** =
*Cumulative Surcharge – Cumulative Expenditures*

**Balance of Response Fund** =
*(Cumulative Surcharge + Cumulative Other Funds)*
*– Cumulative Expenditures*

Prepared by ADEC 1/94

## Response Fund Summary as of November 5, 1883

| | AS 43.55.230(b) Calculation | Response Fund |
|---|---|---|
| Cummulative Surcharge Collected | 112,085,145 | 109,200,000 |
| Cummulative Expenditures | -127,190,873 | -127,190,873 |
| Difference | -15,105,728 | -17,990,873 |
| Cummulative Other Deposits | | |
| General Fund | 0 | 44,447,000 |
| Program Receipts | 0 | 30,000,000 |
| Mitigation Account | 0 | 5,007,800 |
| Miscellanous/Accounts Receivable | 0 | -3,049,952 |
| Reserve For Encumbrances | 0 | -8,690,862 |
| Reserve For Capital Appropriations | 0 | -3,181,125 |
| Reserve for FY 84 Operating Appropriations (Excluding Spill Reserve Appropriation) | 0 | -9,302,318 |
| Balance or Spill Reserve | -15,105,728 | 37,229,869 |

OIL AND HAZARDOUS SUBSTANCE RELEASE RESPONSE FUND

Calculation of Current Available Balance of Spill Reserve (in thousands)

| | | |
|---|---|---|
| June 30, 1993 Balance Forward of the Unreserved/Unobligated Spill Reserve<br>(This number reflects the amount of spill reserve available that is not encumbered or reserved for prior year authorizations. This amount lapsed at the end of FY93 to the Response Fund and was available for appropriation in FY94.) | 27,084.1 | |
| FY94 Appropriation of 5 Cent Surcharge to the Response Fund | + 26,700.0 | |
| FY94 Appropriation of Mitigation Account to the Response Fund | + 661.2 | |
| TOTAL AVAILABLE FOR FY94 APPROPRIATION | | 54,445.3 |
| FY94 Appropriation DEC Budget | + 11,513.6 | |
| FY94 Appropriation DEC - Other Agencies | + 2,569.4 | |
| FY94 Capital Budget Appropriations | + 2,774.0 | |
| TOTAL FY94 APPROPRIATIONS | | 16,857.0 |
| SPILL RESERVE AVAILABLE DURING FY94<br>(This number reflects the balance of the Response Fund after FY94 Appropriations are made by the Legislature.) | | 37,588.3 |
| FY94 EXPENDITURES FROM SPILL RESERVE<br>(This represents year-to-date (11/17/93) expenditures for emergency response to sites which pose an imminent and substantial threat to human health or the environment. A detailed listing of these sites is available. Please note that these are the only DEC expenditures made without legislative approval. Authority to expend funds from the spill reserve for emergency responses is found under AS 46.08.040(a)(1).) | - | 155.2 |
| SPILL RESERVE BALANCE AS OF 11/17/93 | | 37,433.1 |

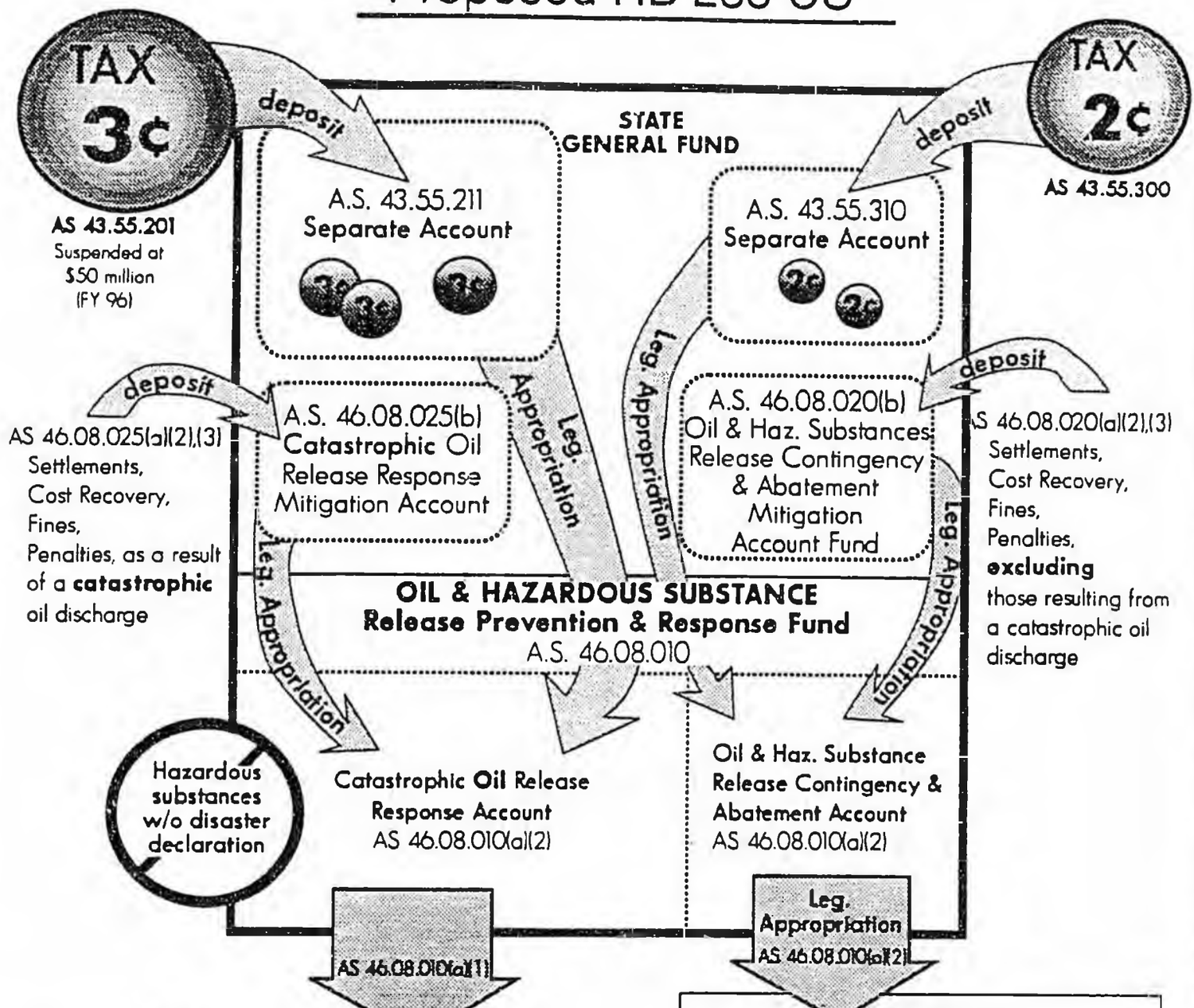
## Response Fund Summary as of November 5, 1993

| | |
|---|---|
| Surcharge Calculation Per AS 43.55.230(b) | -15,105,729 |
| Excess Collected over Appropriated | -2,885,145 |
| General Fund | 44,447,000 1 |
| Program Receipts | 30,000,000 2 |
| Mitigation Account | 5,007,800 |
| Miscellenous/Accounts Receivable | -3,049,952 |
| Encumbrances | -6,690,882 |
| Unobligated Capital Appropriations | -3,191,125 |
| FY 94 Unobligated Operating Appropriations (Excluding Spill Reserve Appropriation) | -9,302,318 |
| Spill Reserve | 37,229,663 |

1 General Fund Deposit 1989 $42,600,000
General Fund Deposit 1988 $600,000
General Fund Deposit 1987 $825,000
General Fund Deposit 1986 $300,000
Beginning Fund Balance 1989 $222,000

2 Exxon Reimbursements 1989 and 1990

# Proposed HB 238 CS




4,200,000 gallons!

30 day max. w/o concurrent resolution; may require special session

Accessed ONLY in the event of a catastrophic oil spill - over 100,000 barrels AS 46.04.900(2)(a)

OR

Declaration of a disaster emergency by the Governor - oil and hazardous substances AS 46.04.900(2)(b)

RESTORATION ???

~~RESEARCH & DEVELOPMENT~~

- Investigate and evaluate release or threatened release of oil or a hazardous substance (non-catastrophic)
- Cost recovery
- State master plan
- Oil and Hazardous Substance Response Office
- Contingency plan review
- Response preparedness and training
- Depots & corps DMVA/DES

RESTORATION ???

~~RESEARCH & DEVELOPMENT~~

Prepdred by ADEC 4/93

| FY95 Response Fund Reauests | | | | revised 12/14/93 | | |
|---|---|---|---|---|---|---|
| | | | | h:\home\chrisu\all95rf.xls | | |
| Calculation of Estimated FY95 Balance for Appropriation | | | | | | |
| FY93 Unreserved Spill Reserve Balance (per balance sheet) | | | | | 27,084.1 | |
| FY94 $.05/barrel surcharge appropriation | | | | | 26,700.0 | |
| FY94 Mitigation Fund transfer to Response Fund | | | | | 661.2 | |
| AVAILABLE FOR FY94 APPROPRIATION | | | | | 54,445.3 | |
| | | | | | | |
| LESS FY94 APPROPRIATIONS: | | | | | | |
| FY94 CIP Authorized (Ch 79 SLA 93, sec. 19) (DOT/PF,DNR,UA,DMVA) | | | | | 2,774.0 | |
| FY94 Operating Budget (Ch65 SLA 93) | | | | | 13,936.9 | |
| ESTIMATED BALANCE FOR FY94 SPILL RESERVE | | | | | 37,734.4 | |
| LESS: | | | | | | |
| Estimated FY94 Spill Reserve Use | | | | | 325.0 | |
| EST. FY95 UNRESERVED SPILL RESERVE BALANCE | | | | | 37,409.4 | |
| Estimated FY95 $.05/barrel Surcharge Appropriation | | | | | 25,800.0 | |
| **EST. AVAILABLE FOR FY95 APPROPRIATION** | | | | | 63,209.4 | |
| | | | | | | |
| | | | FY95 | FY95 | FY94 | Difference |
| | | | DEC to | Original | Budget | DEC/OMB |
| FY95 RESPONSE FUND BUDGET REQUESTS: | | | OMB | Request | | vs. FY94 |
| | | | | | | |
| DEC - Spill Prevention and Response | | | | | | |
| Director | | | 980.7 | 976.3 | 976.3 | 4.4 |
| Government Preparedness | | | 4,067.4 | 4,082.3 | 4,082.3 | -14.9 |
| Industry Preparedness | | | 2,351.9 | 2,445.1 | 2,311.1 | 40.8 |
| Contaminated Sites | | | 2,747.3 | 2,737.7 | 2,839.7 | -92.4 |
| Underground Storage Tanks | | | 108.3 | 108.0 | 108.0 | 0.3 |
| Subtotal - SPAR | | | 10,255.6 | 10,349.4 | 10,317.4 | -61.8 |
| | | | | | | |
| DEC - Administrative Services | | | | | | |
| Fund Administration & Support | | | 746.5 | 740.6 | 740.6 | 5.9 |
| Subtotal - Admin Services | | | 746.5 | 740.6 | 740.6 | 5.9 |
| | | | | | | |
| DEC - Environmental Quality | | | | | | |
| Director's Office | | | 123.0 | 0.0 | 0.0 | 123.0 |
| Laboratory Operations & Maintenance | | | 186.5 | 239.9 | 186.5 | 0.0 |
| Program Development - Pollution Prevention | | | 0.0 | 123.0 | 123.0 | -123.0 |
| Air Quality - Insitu Burning Support | | | 0.0 | 74.0 | | 0.0 |
| Air Quality - Government Hill | | | 0.0 | 312.6 | | 0.0 |
| Air Quality Emergency Response Monitoring | | | 0.0 | 380.0 | | 0.0 |
| Subtotal - Environmental Quality | | | 309.5 | 1,129.5 | 309.5 | 0.0 |
| SUBTOTAL DEC | | | 11,311.6 | 12,219.5 | 11,367.5 | -55.9 |

| | To OMB | FY95 Or. | FY94 Bu. | Diff. |
|---|---|---|---|---|
| DCRA - SERC | 13.5 | 13.5 | 13.5 | 0.0 |
| | | | | |
| DMVA/DES - SERC | 11.0 | 11.0 | 11.0 | 0.0 |
| DMVA/DES - Response Preparedness & Planning | 210.0 | 624.4 | 600.0 | -390.0 |
| DMVA - FY94 Capital Budget | | | 1,078.0 | -1,078.0 |
| SUBTOTAL - DMVA | 221.0 | 635.4 | 1,689.0 | -1,468.0 |
| | | | | |
| DOA - PWS Communication System Maintenance | 40.0 | 40.0 | | 40.0 |
| DOA - Two-way Radio Equipment Maintenance | 20.0 | 20.0 | | 20.0 |
| SUBTOTAL - DOA | 60.0 | 60.0 | | 60.0 |
| | | | | |
| DOT/PF - SERC | 6.5 | 6.5 | 6.5 | 0.0 |
| DOT/PF - Anch. International North Airpark - Ball Brothers | 0.0 | 309.8 | | 0.0 |
| DOT/PF - Bettles Airport "Old Shop" | 0.0 | 36.5 | | 0.0 |
| DOT/PF - Northway Maintenance Station Site Assessmen | 0.0 | 28.0 | | 0.0 |
| DOT/PF - FY94 Capital Budget | | | 742.0 | -742.0 |
| SUBTOTAL - DOT/PF | 6.5 | 380.8 | 748.5 | -742.0 |
| | | | | |
| DF&G - SERC | 6.5 | 2.5 | 6.5 | 0.0 |
| DF&G - Industry Contingency Plan Reviews | 45.4 | 45.4 | 62.9 | -17.5 |
| DF&G - State and Regional Master Plan | 140.2 | 142.8 | 121.3 | 18.9 |
| SUBTOTAL - DF&G | 192.1 | 190.7 | 190.7 | 1.4 |
| | | | | |
| DH&SS - SERC | 12.0 | 8.0 | 12.0 | 0.0 |
| DH&SS - Response Training | 50.0 | 105.0 | | 50.0 |
| SUBTOTAL - DH&SS | 62.0 | 113.0 | 12.0 | 50.0 |
| | | | | |
| LABOR - SERC | 9.5 | 9.5 | 9.5 | 0.0 |
| | | | | |
| LAW - Regional & Central Office | 330.0 | 330.0 | 330.0 | 0.0 |
| LAW - SERC Guidance | 25.0 | 25.0 | 25.0 | 0.0 |
| LAW - Exxon Valdez Project Litigation/Private Plaintiffs | 151.6 | 350.0 | 350.0 | -198.4 |
| LAW - RP Identification, Enforcement & Cost Recovery | 655.2 | 655.2 | 655.2 | 0.0 |
| SUBTOTAL - LAW | 1,161.8 | 1,360.2 | 1,360.2 | -198.4 |

| | To OMB | FY95 Or. | FY94 Bu. | Diff. |
|---|---|---|---|---|
| DNR - SERC | 9.5 | 9.5 | 8.0 | 1.5 |
| DNR - Industry Contingency Plan Reviews | 92.5 | 92.5 | 54.3 | 38.2 |
| DNR - State and Regional Master Plan | 124.6 | 124.6 | 45.7 | 78.9 |
| DNR - Isabel Pass Site | 0.0 | 240.0 | | 0.0 |
| DNR - McGrath Airport Ramp | 0.0 | 43.0 | | 0.0 |
| DNR - Goose Bay Site | 0.0 | 371.1 | | 0.0 |
| DNR - Contingency Sites | 0.0 | 233.0 | | 0.0 |
| DNR - FY94 Capital Budget | | | 654.0 | -654.0 |
| SUBTOTAL - DNR | 226.6 | 1,113.7 | 762.0 | -535.4 |
| | | | | |
| DPS - Environmental Crimes | 50.0 | | 50.0 | 0.0 |
| DPS - SERC | 8.0 | | 8.0 | 0.0 |
| SUBTOTAL - DPS | 58.0 | 0.0 | 58.0 | 0.0 |
| | | | | |
| U of A - Research | 200.0 | | 200.0 | 0.0 |
| U of A - CIP | | | 300.0 | -300.0 |
| SUBTOTAL - U of A | 200.0 | 0.0 | 500.0 | -300.0 |
| | | | | |
| | | | | |
| Total DEC Response Fund Requests | 11,311.6 | 12,219.5 | 11,367.5 | -55.9 |
| Total Other Agency Response Fund Requests | 2,211.0 | 3,876.8 | 5,343.4 | -3,132.4 |
| GRAND TOTAL REQUESTS | 13,522.6 | 16,096.3 | 16,710.9 | -3,188.3 |
| | | | | |
| PROJECTED FY95 SPILL RESERVE | 49,686.8 | 47,113.1 | | |

# Alaska's Oil and Hazardous Substance Release Response Fund

Legislative History, Operational Policies, Program Management and Use

*Prepared for*

Prince William Sound Regional Citizens' Advisory Council
Oil Spill Prevention and Response Committee

December, 1992

BCSB
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EXECUTIVE SUMMARY

# Alaska's Oil and Hazardous Substance Release Response Fund

*Legislative History, Operational Policies, Program Management and Use*

## History of the Response Fund

The Alaska Legislature established the Oil and Hazardous Substance Release Response Fund (OHSRRF) in 1986 with passage of House Bill 470 (commonly referred to as the "470 Fund" or the "Response Fund").

The fundamental purposes of the original HB 470 legislation was to provide funding for:

1) the clean up of contaminated hazardous waste sites; and

2) prompt response to oil and hazardous substance spills.

Since the *Exxon Valdez* oil spill, the purposes and scope of the Response Fund have been substantially broadened. The most significant change was due to the passage of SB 260 (1989), legislation that established a five-cent-per-barrel conservation surcharge for every barrel of oil that is produced in Alaska. This resulted in a large increase in funding for available oil and hazardous substance response and strengthening the state's oil spill prevention and response programs. Since 1989, tens of millions of dollars have been expended annually through the OHSRRF.

## Operational Policies

Policies governing use of the OHSRRF have evolved over the past several years in the form of policy memorandum and guidance documents. For an extended period following creation of the OHSRRF, there were very few written policies regarding access to, and use of, the OHSRRF. Over time the Response Fund balance grew, as did its proposed uses. This precipitated a need for formal written policies and procedures. There are presently five formal policy statements regarding the use of the OHSRRF:

- DEC Emergency Access
- Research
- Municipal and Village Reimbursement Advances and Grants
- Other State Agency Access; and
- State Emergency Response Commission Expenditures.

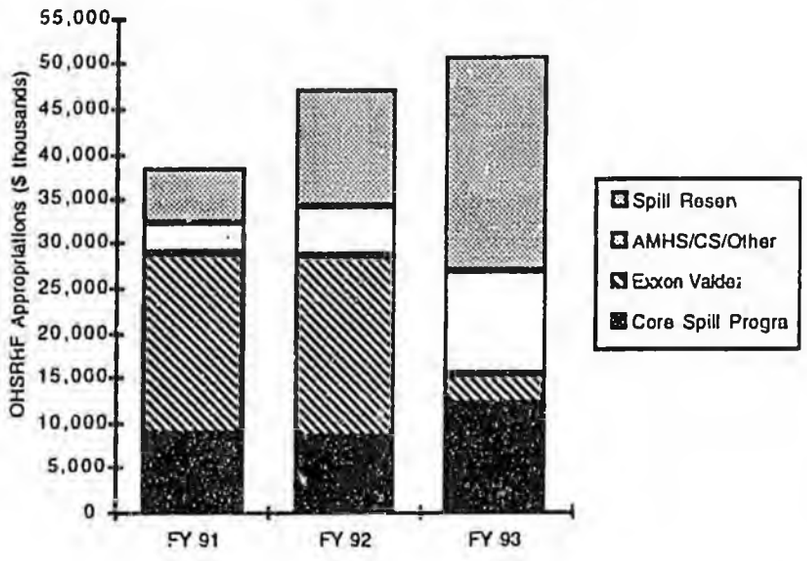
DEC has never developed containment and clean up guidelines as required by HB 470. In addition, guidelines involving cost recovery have not yet been developed.

## Oil Spill Program Funding

Over the past several fiscal years, the Oil and Hazardous Substance Release Response Fund (OHSRRF) has become the primary source of funding for the state's oil pollution prevention and response programs.

As illustrated below, OHSRRF funding for the state's oil spill prevention and response programs has increased from approximately $8 million to $12 million between FY 91 and FY 93. (It should be noted that the actual funding and staffing levels for DEC's oil spill programs have remained relatively constant FY 91 - 93. The increased funding from the OHSRRF reflects the replacement of general fund dollars with Response Fund dollars as well as increased oil spill program funding for agencies other than DEC.) The size of the spill reserve has also increased.

**Annual OHSRRF Appropriations FY 9**




In addition to DEC, twelve state agencies have been funded with monies from the OHSRRF. These agencies have taken on roles in spill prevention and response since the *Exxon Valdez* spill, particularly in the area of contingency plan review, State Master and Regional Contingency Planning, and involvement with the State Emergency Response Commission (SERC). These program costs are reflected in the bar chart above.

Although substantial sums of money have been authorized for the response depots and corps program, very little progress has actually been made in implementing the program.

Comparison of annual expenditures for the state's core oil and hazardous substance response program is extremely difficult as a result of two major organizational and budgetary reorganizations undertaken during the Hickel Administration. Quantitative program performance objectives (such as number of annual spill drills, contingency plan reviews, vessel inspections, etc.) provide an essential measure by which to assess program performance. These performance objectives are critical to ensure that the state's oil spill prevention and response programs are adequate.

## OHSRRF Funded Position Vacancies

A significant number of OHSRRF funded positions in the Spill Prevention and Response (SPAR) Division of DEC remain vacant. As of June 8, 1992, 213 DEC positions were eligible for funding, in part or whole, with OHSRRF monies. The vacancy factor has been especially high (14%) in the case of authorized full-time positions where 9 of 65 positions were not filled. As a budget matter, these vacancies are unnecessary because DEC's oil programs are funded through the OHSRRF dollars, rather than with general funds. (Because of statutory provisions governing use of the OHSRRF, reductions in expenditures from the OHSRRF will *not* result in increased general fund revenue for other state programs or projects.)

## Audits and Fund Management Issues

In the past 18 months, two major audits of the OHSRRF have been prepared, one by DEC (May 1991) and a second by the Division of Legislative Audit (March 1992). Both audits documented substantial concerns regarding financial administration and control of the OHSRRF.

Department of Environmental Conservation's internal management audit concluded that "DEC needs to better manage the Response Fund." Major concerns identified by DEC internal audit included:

- Divided management authority over use of the OHSRRF
- Lack of an adequate cost recovery effort
- Lack of policy regarding OHSRRF equipment purchase and inventory

Approximately 10 months after the release of DEC's internal audit, the Legislature's Division of Legislative Audit (Legislative Audit) published a special audit on the DMVA/ADES Response Depots and Corps Program (March 1992). While this audit focused primarily on the depots and corps program, its findings reinforced some of DEC's own conclusions. In general, Legislative Audit found that budgetary information and accounting for the OHSRRF was "at best obscure, not readily accessible and not reliable without detailed analysis and audit." Although RSAs were executed between DMVA and DEC for both FY 91 and FY 92, Legislative Audit documented substantial deficiencies in the administration of these RSAs.

**OHSRRF Use and Expenditure Issues**

The present administration has indicated support for reducing expenditures from the Response Fund and increasing the size of the spill reserve. Substantial budget and staffing cuts to the state's core oil spill prevention and response programs have been recommended by the Hickel Administration.

The FY 93 Policy Budget (September 1991) initially proposed by DEC to the Governor's Office of Management and Budget called for total reductions of $898,000 by FY 95 and elimination of 14 PFT positions. In the case of each proposed reduction, the budget and staff cuts would have reduced expenditures from the OHSRRF. The final FY 93 DEC oil spill prevention and response program budgets adopted by the legislature differed substantially from the DEC FY 93 Policy Budget. Although substantial program cuts to the DEC FY 93 oil program budget were not adopted by the legislature, these same issues are certain to be revisited by the legislature during the 1993 legislative session.

The oil industry (subject to the $.05/barrel surcharge) has also advocated limiting expenditures from the OHSRRF in order to build the balance to $50 million and thereby suspend the surcharge.

Three case studies in the report demonstrate inconsistencies on the part of the DEC as it relates to providing funds to other agencies or projects from the OHSRRF. DEC has resisted use of OHSRRF monies for the Government Hill hydrocarbon monitoring project and for the Department of Fish and Game's participation in the state's oil spill programs. In contrast, OHSRRF funding has been transferred to the Alaska Division of Emergency Services for the response depots and corps program with little regard to detail about how funds will be used. These case studies illustrate the need for more involved legislative oversight of OHSRRF appropriations and uses.

What expenditures are appropriate from the OHSRRF and how quickly the OHSRRF balance should grow to $50 million are issues of continuing legislative debate. In the face of declining state general fund revenues, it is important to recognize that reductions in expenditures from the OHSRRF will *not* result in increased general fund revenue available for other state programs or projects.

**Response Fund Revenue Projections**

Future revenues from the $.05/barrel surcharge are essentially a function of future petroleum production. OHSRRF revenues from the surcharge are projected to decline from the current level of approximately $27 million per year to about $3.3 million per year by FY 2015. In addition to this revenue source, DEC estimates that an enhance cost recovery effort could yield an additional $4.5 million per year by FY 96 that would potentially be available to support OHSRRF programs. These revenue projections indicate that the OHSRRF should be able to support the state's core oil spill prevention and response programs to at least the year 2000.

Table 2
FY 90 Appropriations from the OHSRRF
(thousands $)

| | | |
|---|---|---|
| Oil Spill Prevention/Response — Program Funding | | |
| SB 261/Master and Regional Contingency Plans | | $ 461.9 |
| SB 264/Response Depots and Corps | | 3,909.9 |
| Oil Spill Programs - Subtotal: | $ 4,371.8 | |
| Other OHSRRF Appropriations | | |
| SB 247/*Exxon Valdez* oil spill (general funds) | | 10,000.0 |
| SB 247/*Exxon Valdez* oil spill (program receipts) | | 10,000.0 |
| Other Appropriations – Subtotal: | $ 20,000.0 | |
| **TOTAL FY 90 APPRORIATIONS** | | **$ 24,371.8** |

Source: Chapter 116, SLA 89

Table 3
FY 91 Appropriations from the OHSRRF
(thousands $)

| | | |
|---|---|---|
| Oil Spill Prevention/Response — Program Funding | | |
| State and regional contingency planning | | $ 461.9 |
| Response office, depots and corps | | 3,169.9 |
| Spill response drills | | 740.0 |
| Spill response, containment, safety, clean up & cost recovery | | 1,920.0 |
| HB 566 fiscal note | | 550.0 |
| HB 567 fiscal note (ADF&G) | | 156.5 |
| HB 567 fiscal note (DEC) | | 1,371.0 |
| HB 578 fiscal note | | 236.7 |
| Oil Spill Programs - Subtotal: | $ 8,606.0 | |
| Other OHSRRF Appropriations | | |
| Site investigation safety, cleanup and cost rec v | | $ 2,632.9 |
| Kenai clean up project | | 940.0 |
| *Exxon Valdez* project | | 8,707.3 |
| Natural resource damage assessment | | 11,402.0 |
| Other Appropriations – Subtotal: | $ 23,682.2 | |
| Total FY 91 Program & Project Appropriations | | $ 32,288.2 |
| Spill Reserve Appropriation | | 6,026.0 |
| **TOTAL FY 91 APPROPRIATIONS** | | $ 38,314.2 |

Source: Chapter 209, SLA 90

Table 4
FY 92 Appropriations from the OHSRRF
(thousands $)

| | |
|---|---|
| Oil Spill Prevention/Response — Program Funding | |
| DEC state and regional contingency planning | $ 395.9 |
| DEC spill prevention, response, planning, safety cleanup and cost recovery | 3,934.3 |
| State Emergency Response Commission | 299.9 |
| Local emergency planning committees | 600.0 |
| DEC/DMVA response office depots and corps | 2,911.4 |
| Hazardous Substance Spill Technology Council | 296.0 |
| Oil Spill Programs - Subtotal: $ 8,437.5 | |
| Other OHSRRF Appropriations | |
| Site investigation safety, cleanup and cost recovery | $ 3,655.0 |
| Kenai clean up project | 807.0 |
| *Exxon Valdez* — spill clean up | 4,126.0 |
| *Exxon Valdez* — assessment and restoration | 12,474.4 |
| *Exxon Valdez* — litigation | 3,653.1 |
| Arctic Marine Resources Commission | 100.0 |
| AMHS oil response capable ferry (SB 165) | 500.0 |
| Citizens' Oversight Council | 237.3 |
| Alyeska ballast water treatment study | 175.0 |
| Other Appropriations - Subtotal: $ 25,727.8 | |
| Total FY 92 Program & Project Appropriations | $ 34,165.3 |
| Spill Reserve Appropriation | 12,881.0 |
| **TOTAL FY 92 APPRORIATIONS** | **$ 47,046.3** |

Source: Chapter 73, SLA 91

Table 5
FY 93 Appropriations from the OHSRRF
(thousands $)

| | | |
|---|---|---|
| Oil Spill Prevention/Response — Program Funding | | |
| DEC spill prevention planning and management | | $ 6,021.2 |
| State Emergency Response Commission | | 350.8 |
| Local emergency planning committees | | 1,200.0 |
| DEC spill response office | | 1,318.1 |
| Hazards analysis | | 177.3 |
| Geographic information system | | 689.3 |
| Nearshore strike team demonstration project | | 1,200.0 |
| Hazardous Substance Spill Technology Council | | 420.0 |
| DMVA/response depots and corps | | 800.0 |
| Oil Spill Programs - Subtotal: | $ 12,176.7 | |
| Other OHSRRF Appropriations | | |
| DEC contaminated sites program | | $ 3,528.6 |
| *Exxon Valdez* litigation | | 2,968.0 |
| *Exxon Valdez* clean up and cost recovery | | 350.0 |
| Arctic Marine Resources Commission | | 100.0 |
| AMHS oil response capable ferry | | 7,500.0 |
| Citizen's Oversight Council | | 237.3 |
| Other Appropriations – Subtotal: | $ 14,683.9 | |
| Total FY 93 Program & Project Appropriations | | $ 26,860.6 |
| Spill Reserve Appropriation | | $ 23,656.7 |
| **TOTAL FY 93 APPRORIATIONS** | | **$ 50,517.3** |

Source: Chapter 136, SLA 92

Table 6
DEC Oil Spill Prevention & Response Programs
Budget & Staffing Levels: FY 91 - 93

| Program/Budget Component | FY 91 Auth. | FY 92 Auth.(*) | FY 93 Policy Budget(*) | FY 93 Approved |
|---|---|---|---|---|
| SPAR Director | | | | |
| Funding ($000s) | n/a | 430.8 | 570.0 | 484.7 |
| Staffing (PFT) | n/a | 6 PFT | 6 PFT | 7 PFT |
| Spill Response Office | | | | |
| Funding ($000s) | 2,703.5 | 1,037.0 | 2,950.0 | 1,025.6 |
| Staffing (PFT) | 14 PFT | 13 PFT | 26 PFT | 11 PFT |
| Spill Prevention, Planning & Management | | | | |
| Funding ($000s) | 5,063.7 | 5,688.9 | 4,205.0 | 5,448.2 |
| Staffing (PFT) | 72 PFT | 69 PFT | 55 PFT | 70 PFT |
| TOTAL | 7,767.2 | 7,156.7 | 7,725.0 | 6,958.5 |
| | 86 PFT | 88 PFT | 87 PFT | 88 PFT |

(*) As documented in FY 93 Policy Budget (October 15, 1991) transmitted from J. Sandor to S. Stastny.
n/a SPAR Director's Office not established in FY 91.

Sources:
J. Sandor to S. Stastny, "FY 93 - 95 Policy Budget" (October 15, 1991).
FY 93 Conference Committee close out Short Form (computer run dated 5/15/92).
FY 92 P1 and P2 Project Detail Forms