EXXON SHALL PAY . . . $900 MILLION

. . . FOR PURPOSES OF . . .

. . .RESTORING, REPLACING,
ENHANCING, REHABILITATING
OR ACQUIRING THE EQUIVALENT OF . . .

. . . NATURAL RESOURCES INJURED AS A RESULT OF THE OIL SPILL AND THE REDUCED OR LOST SERVICES PROVIDED BY SUCH RESOURCES . . .

Mission Without a Map

The Politics and Policies of Restoration Following the Exxon Valdez Oil Spill

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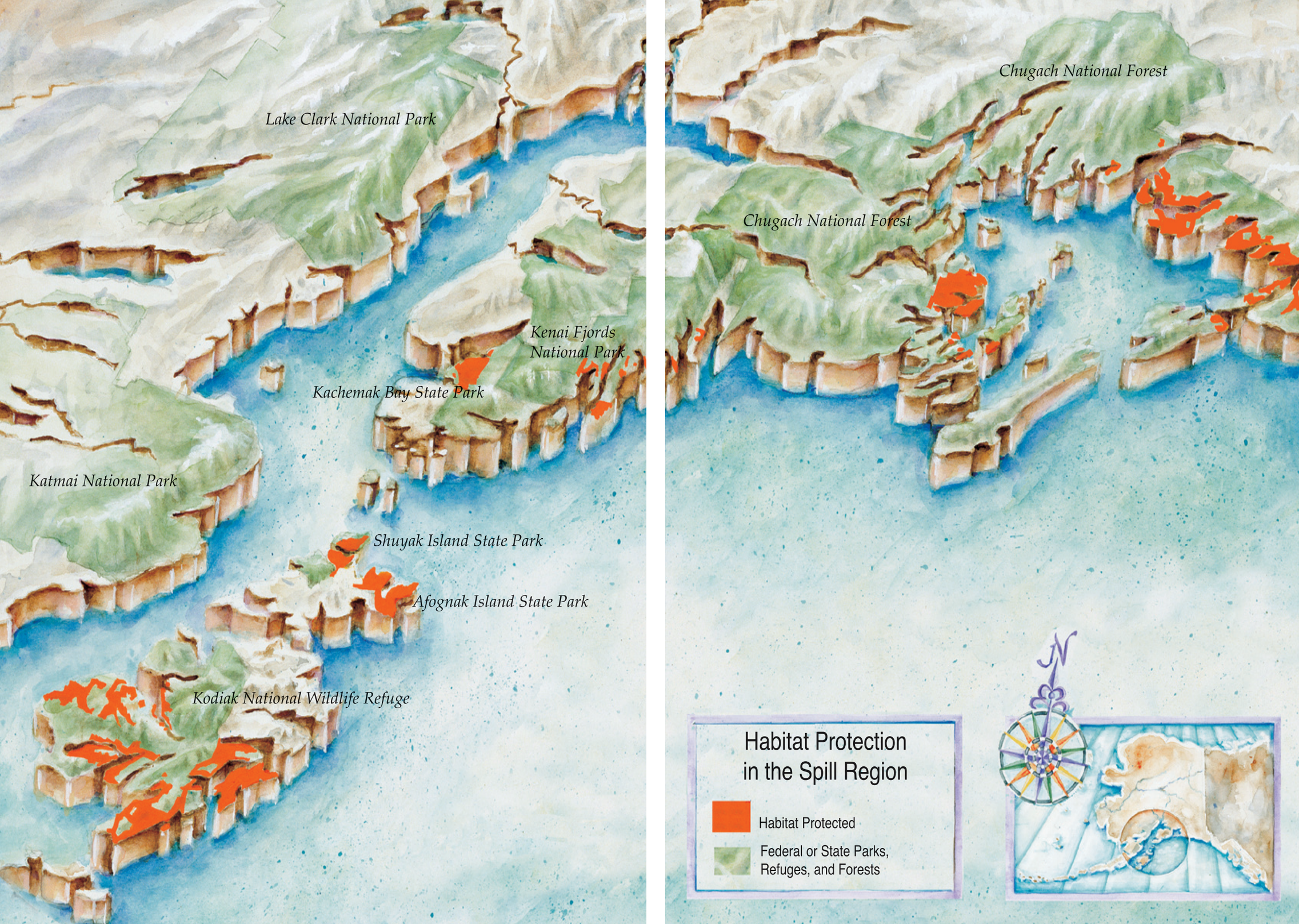
Lake Clark National Park
Kenai Fjords National Park
Kachemak Bay State Park
Katmai National Park
Shuyak Island State Park
Afognak Island State Park
Kodiak National Wildlife Refuge
Chugach National Forest
Chugach National Forest
Habitat Protection in the Spill Region
Habitat Protected
Federal or State Parks, Refuges, and Forests
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For information on how to obtain copies of this book, contact
the Alaska Resources Library and Information Services (ARLIS)
www.arlis.org

This history of the settlement, damage assessment, and restoration following the *Exxon Valdez* spill was researched, written, and designed by Joe Hunt. It does not necessarily reflect the views of the *Exxon Valdez* Oil Spill Trustee Council, the Restoration Office, or the associated state and federal agencies.

This publication was released by the *Exxon Valdez* Oil Spill Trustee Council, Alaska Department of Fish and Game. It was printed in Anchorage, Alaska, at a cost of $12.20 per copy.

Cover photo by Roy Corral.

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The Politics and Policies of Restoration Following the Exxon Valdez Oil Spill

Prepared by

Joe Hunt

Acknowledgments

Mission Without A Map is a documented history of the Trustee Council, derived mostly from the public record. It was first inspired as a means of digesting an enormous administrative record into a readable format, so that future administrators, scientists, and scholars hoping to learn from the *Exxon Valdez* restoration experience have a basis to begin their research. Lessons emerging from this experiment in restoration were often hard-learned and painful. But, it is clear they were not ignored. Over an 11-year-period, this council learned and evolved. In the end, it developed methodologies and programs worth copying. And it stumbled into many pits worth avoiding.

There is little question that mistakes were made in the formation and follow-through of the *Exxon Valdez* Oil Spill Trustee Council. There is also little dispute that the council's contributions to restoration management, research and monitoring, habitat protection, and public participation have been innovative and significant. The only real disagreement about the council's restoration legacy, usually depending on one's personal viewpoint, is to the degree of error and accomplishment.

Members of the Trustee Council and their executive director, Molly McCammon, have provided the freedom and cooperation necessary for this report to be honest, candid, and, therefore, useful. Early in the writing of this text, it became clear that to be truly useful, some conclusions had to be drawn. Not everyone agrees with the observations found here, including trustees and restoration office management.

Mission Without A Map does not necessarily reflect the views of the Trustee Council, individual members past and present, the council's staff, the chief scientist and the scientific review team, or the many federal and state agencies which help guide and carry out the restoration programs.

This report would not have been written without the encouragement and leadership of Molly McCammon. It was Molly who first articulated the need for a documented history that contained an analysis of what went wrong as well as what went right with restoration.

I am truly grateful to the reviewers of this text, each of whom provided valuable feedback, basic editing, and engaging debate about the significance of one event or another. Primary reviewers include Molly McCammon, Stan Senner, Craig Tillery, Bob Spies, Andy Gunther, Sandra Schubert, and Bud Rice. A special thanks goes to former DEC Commissioner Dennis Kelso, now a professor

of natural resources at the University of California at Santa Cruz, who provided an independent arms-length review of the manuscript.

There were many people who graciously agreed to sit down with me and discuss particular aspects of this restoration saga. At the top of that list is former Alaska Attorney General Charlie Cole, who gathered his former *Exxon Valdez* litigation team to detail how the *Exxon Valdez* settlement came about. Cole not only brought his memories, but backed them up with several legal pads of notes taken during closed door meetings with the U.S. Department of Justice and Exxon. Also providing their insights and notes were Barbara Herman, Joseph Donahue, and Craig Tillery. Doug Baily, Alaska Attorney General at the time of the spill, provided a great deal of background about the early formation of the litigation team and the first attempts to negotiate a settlement.

Richard Stewart, the chief federal architect behind the criminal indictment of Exxon and the resulting settlement, was very helpful, answering many questions and offering his observations. In addition, I am in his debt for his thorough review of the chapter on settlement negotiations.

As if the many hours going over legal strategies were not enough, Cole also subjected himself to a second day of interviews about the early formation of the Trustee Council and, often, returned phone calls to dig deeper into different topics. Steve Pennoyer, an 11-year trustee (including pre-settlement days) also provided key insights into trustee issues, as did former executive director Jim Ayers and former administrator and trustee Dave Gibbons.

There are many others to thank for their time discussing issues of science, habitat, law, commercial fishing, subsistence, and public advice. They include Phil Mundy, Pete Peterson, George Rose, Chris Beck, Pam Brodie, Torie Baker, Dan Hull, Marty Rutherford, Bob Loeffler, Henry Huntington, Hugh Short, Jim Bodkin, David Irons, Joe Sullivan, Gina Belt, Alex Swiderski, Gary Marty, and Walt Ebell.

The Council's staff has helped in numerous ways: locating documents, researching archives, and distributing draft copies, just to name a few. Brenda Hall, Cherri Womac, Paula Banks, Debbie Hennigh, and Sandra Schubert have each earned many thanks for their service. In particular, Carrie Holba, the oil spill specialist at the Alaska Resources Information Library System (ARLIS), proved once again the indespensible nature of librarians for her knowledge and her resourcefulness in locating documents.

This effort is not complete. In fact, it is barely a start. It will be up to scholars and Ph.D. candidates to some day dig into these topics more thoroughly. My final thanks goes to future scholars for taking up any aspect of the *Exxon Valdez* spill for your theses. There is so much to be learned from this experiment in restoration.

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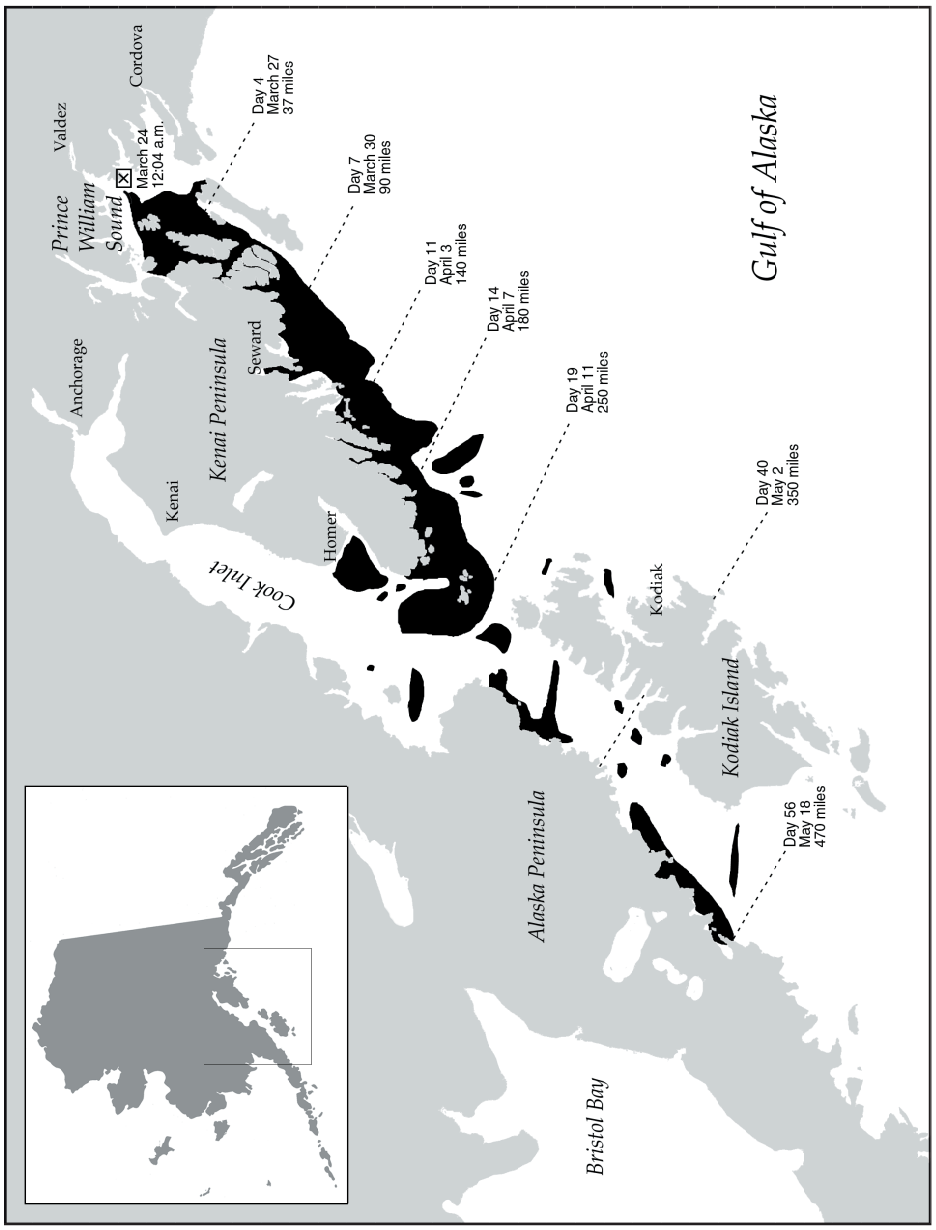
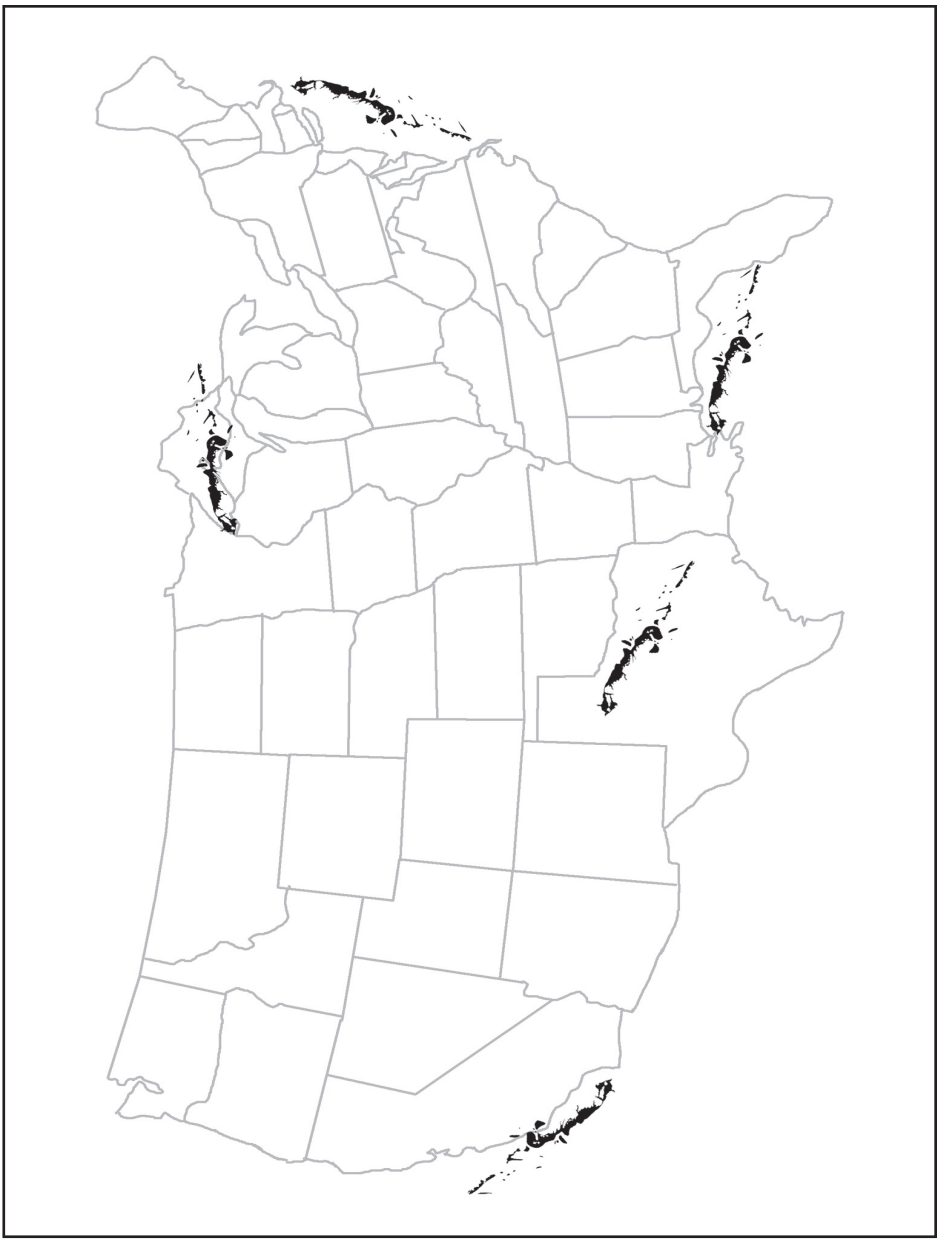


Far-reaching consequences

During an eight-week period, the prevailing currents swept the 10.1 million gallon spill from Bligh Reef in Prince William Sound into the Gulf of Alaska, around the corner to Cook Inlet, and through Shelikof Strait along Kodiak Island, eventually reaching the Alaska Peninsula village of Chignik, 470 miles from Ground Zero.



Perspectives

The scale of the Exxon Valdez spill can be difficult to comprehend. The same spill, starting at more familiar locations in the Lower 48, would have traveled from one end of Lake Superior to the other; from Cape Cod, Massachussets to Cape Hatteras, North Carolina; from Amarillo to Austin, Texas; from New Orleans to Tampa Bay; or from San Francisco nearly to San Diego.

Photo courtesy of State of Alaska

The Spill[1]

March 24, 1989, 12:04 a.m

The unforgivable mixing of North Slope crude oil with the cold blue waters of Prince William Sound was, above all things, an emotional nightmare for the people who live, work, and play in the region. To the residents and visitors who knew the sound best, it will first and always be a human tragedy. Seabirds died by the hundreds of thousands, with heavy losses of bald eagles and marine mammals, but it is the human residents of the spill region who cannot forget the fear and the anger or shake the sad images from their memories.

Debra McKinney, a reporter with the Anchorage Daily News and a frequent visitor to the sound, compared the experience to watching one's church burn to the ground.[2] Others talked as if they had suffered a death in the family or were victims of a crime that violated their souls. To all, a deep sadness pervaded and, for many, anger welled. McKinney and others like her were spiritually wrapped up in, and even defined by, the deep fjords, waterfront glaciers, steep cliffs, and unparalleled marine life of Prince William Sound. Its trashing, whether described as a crime or an accident, stunned everyone. But, McKinney wrote that she was not a believer that the oil spill meant the death of Prince William Sound. Instead, she absorbed the daily pictures of tar-covered birds and sea otters and concluded that a good friend was sick, very sick, and the hope was that she and others who loved the sound would see it one day nursed back to health. It may never be as it once was, but it can again be alive and a beauty in which to lose oneself. Like the burned down church, it can be resurrected and songs of love and praise can

again fill its fjordal halls.

This sense of loss and fear is something I began to understand the evening following the midnight spill. The disaster had barely begun to unfold, 25 miles south of Valdez on a submerged reef named after the famous Captain Bligh.[3] For reasons no one understood, one of the pride of the Exxon fleet sat impaled upon a well-marked reef far from the normal shipping channels. Its cargo of North Slope crude bubbled into the saltwater instantly upon grounding and was desperately seeking equilibrium with the water. A thick layer of oil spread out in all directions while at the same time sweeping westward and southward with the prevailing currents.

This, of course, was never supposed to happen. Residents of Prince William Sound had warned of such a disaster for years – in fact, well before the building of the Trans Alaska Pipeline when the debate was whether oil should be shipped by sea or by pipe to the Lower 48. This was the nightmare scenario that industry officials and many Alaska politicians said was nearly impossible. Resident fears of a major oil spill were brushed off like parents dismiss the monster under children's beds. It was considered worry wasted on fantasy. An insider industry memo would later show that contingency planners for Alyeska Pipeline Service Company, a consortium of seven oil companies operating the pipeline, thought that planning for such a spill was a waste of time, that their projections showed such an accident was likely to occur only once in 241 years.[4] Statistically, they could still be right, but 12 years after the first barrel of oil flowed from the pipeline, the first 10 million gallon spill in our nation's history flowed from the *Exxon Valdez*. The monster under the bed was now visible for all to see. And to smell. And to fear.

In Tatitlek, a Native community at the mouth of Valdez Narrows, residents awoke to a generous waft of petroleum vapors carried on the morning sea breeze. In Cordova, a fishing community to the east, residents woke each other with early morning phone calls, spreading the word of the spill from neighbor to neighbor and from friend to friend. In Valdez, a few residents gathered at the water's edge. Although the *Exxon Valdez* was far from view, they stared in the general direction of Bligh Reef, not expecting to see the grounded tanker but more in wonder of what the next weeks and months would bring to their community and their waters. In Chenega Bay, which lost one-third of its 75 residents during the Good Friday tsunami of 1964, survivors of that disaster woke up on this Good Friday knowing that the prevailing currents would eventually carry the oil to their front doors.

I was awakened that morning by my assistant city editor at the Anchorage Times. Although the spring equinox had just passed, putting Alaska over the winter brink with 12 full hours of daylight, there was no hint of dawn at 6 a.m.

Cathy got right to the point. "The Associated Press is reporting a big spill outside of Valdez Narrows – about 240,000 barrels."

"I doubt it's that big," I responded. "Maybe 240,000 gallons." Like almost

Photo courtesy State of Alaska

The *Exxon Valdez* sits atop Bligh Reef as another tanker offloads the oil remaining in unruptured tanks.

everyone else, at first I did not believe what I heard and had little comprehension what it meant. A few hours later, I circled again and again above the *Exxon Valdez* in a chartered twin-engine Piper. It wasn't the spreading oil that I found astounding, but the complete lack of any attempt to pick it up, even 10 hours after the accident.

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Word spread through Valdez and other Prince William Sound communities that a press conference would be held that night at the Valdez civic center. The room was filled with salmon fishermen, processors, tour boat operators, and Valdez business owners – each with a worry about his or her future. The spill was worldwide news, yet only a handful of reporters, most of them from Alaska, had made their way to Valdez.

The Good Friday oil spill was barely 18 hours old when Frank Iarossi, president of Exxon Shipping Company, stepped up to the microphone at the civic center, flanked by his science advisor and the director of Exxon's Alaska operations. He was fresh off his corporate jet, dressed neatly in a three-piece suit, and appeared as corporate as any Alaskan would expect from Exxon. It was the first time any Exxon executive stood before the public and accepted blame for the accident and promised to set things right.

Reporters started the questioning, but it was not long before the people of Valdez took over. "It's obvious they (Exxon) weren't prepared for a town meeting type of press conference," said Dave Hammock, who at the time was manager of KCHU public radio in Valdez, which broadcast Exxon's daily press briefings live to the entire state.[5] Hammock spoke about that press conference as his most

vivid memory of the spill. It set the stage for years of battles between Exxon and the media and the people of the spill region. Television cameras swung toward the audience and the reporters fell silent, letting residents dominate the meeting. Their questions, laced with emotion and uncertainty, went directly to the heart of their concern.

What would happen with upcoming salmon and herring seasons? How would they feed their families if they could not fish? Would the tiny salmon fry, then emerging from streams throughout the sound, survive the oil? What would be left of Prince William Sound to pass on to their children? How could Exxon possibly compensate them for taking away their way of life?

When Iarossi tried to assure the audience that dispersants could be used to break up the oil, he touched off a storm of protest.

Led by Dr. Riki Ott, a Cordova activist, commercial fisher, and toxicology expert, the audience rebelled. Iarossi quickly learned that this small community at the end of the road was already well-versed in the use of dispersants. They were quick to voice their dislike for the idea of dropping more chemicals into their fishing waters. The press conference deteriorated into a series of speeches and scoldings from the audience, providing Iarossi no recourse but to sweat under the lights and endure the beratement.

As the press conference began slowing down, the tide of emotion rose again. Governor Steve Cowper and Dennis Kelso, commissioner of the Alaska Department of Environmental Conservation, marched into the room and took the microphone from Iarossi. Dressed in blue jeans and flannel shirts, they stood before the crowd in obvious contrast to the well-dressed oilmen from Houston. Cowper announced they had just returned from the deck of the *Exxon Valdez*.

"The evidence is that the response was slow and inadequate," Cowper said to applause. "I think that if the boom and skimmers, if they got there in time, could have saved a lot of grief. They didn't get there on time. We don't know why, but we intend to find out."[6]

Iarossi, probably grateful to the governor for the opportunity, backed off the stage and out of the auditorium.

One year after the event, Hammock looked back at the governor's dramatic entry, usurping Iarossi at the microphone, as a forerunner of things to come. It set the tone the state would follow for much of the contentious years to come. "The reason the fishermen had so much clout and the way the state got the upper hand so fast was because of that first press conference," Hammock told me. "I think it really forged a public relations war."

Iarossi told me later that year that Exxon was doomed to lose that war the moment oil touched the island shorelines. After nearly three days of dead-calm weather, hope of picking up or burning the oil, or limiting the disaster through use of dispersants was blown away by gale-force winds that swept the oil ashore.

The spill was out of hand. "At that point I knew we had an unbelievable problem," Iarossi said. When he returned to his motel room after a solemn helicopter tour of the beaches, the first thing he did was call Exxon president Bill Stevens. "I told him that when we got here we had three wars to fight – (to unload) the 42 million gallons (still) on the ship, the eventual salvage of the ship, and to pick up the 240,000 barrels on the water," Iarossi said.[7]

"I told him that we were going to win two, but that we had just lost the third and unfortunately two out of three wasn't going to be enough and we were going to get killed. Those were just about the words I used. He took it very well, but at that point I knew this event changed character."

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Jon Lyman, spokesman for the Alaska Department of Fish and Game, fed growing public outrage when he accompanied reporters to a mile-long section of oiled beach a few days later. He walked over one stretch of Green Island shoreline lightly spotted with oil, picking up 17 dead birds along the way. "Everything we saw in the oiled section was pretty well gone," he said.[8]

As they moved around a blind corner, Lyman and the reporters came across a little cove teeming with life. Sea otters. Seabirds. Ducks. Bald eagles. Harbor seals. They had found safe harbor in this one cove. The air was suddenly filled with the sound of life, he said. The protected little cove was beautiful and untainted, like Prince William Sound was supposed to be.

The scene was uplifting, but shortlived. The group walked to the other side of the cove, and all life disappeared. "It was like the L.A. Freeway paved with several miles of oil on the beach," Lyman remembered.

Lyman would tell reporters later that the experience reminded him of Rachel Carson's legendary book "Silent Spring." It was an analogy soon to be repeated in headlines around the nation. "To walk that beach, to move from lightly oiled beach to the vitality of the sound to a very heavily oiled beach, that was very, very devastating," Lymon told me one year after the accident. "It's the image I think I will carry the longest."

Crews over the next several months retrieved more dead seabirds, sea otters, and bald eagles than ever have been collected after an oil spill. Searchers returned with the carcasses of 1,016 sea otters, 144 bald eagles, and 36,309 seabirds covering 91 species. Government scientists estimated that the seabird carcasses represented only 10-30 percent of the true death toll.

Volunteers from throughout the state funneled into Valdez to do whatever they could to help. Some quit their jobs, others took vacation, still others drove hundreds of miles to volunteer for a weekend. They said only that it was too hard to stay at home and do nothing.

Some worked 20-hour days capturing, cleaning and caring for sick sea otters and birds brought into a makeshift animal hospital. Eventually more than 200

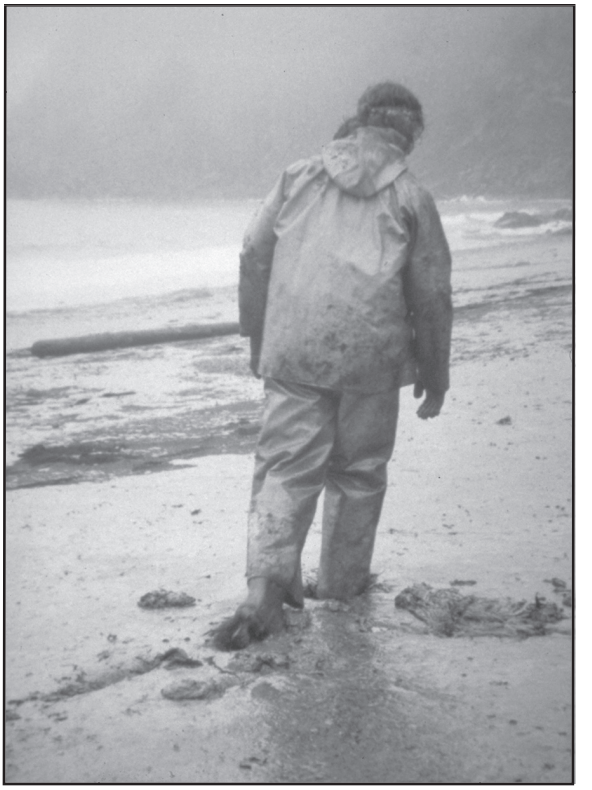

Photo by John Lough

A lonely walk through six inches of oil covering a Prince William Sound beach.

sea otters and scores of seabirds were treated and returned to the wild or, when that wasn't possible, sent to zoos and aquariums. Likewise, about a dozen bald eagles were rehabilitated and released near their nesting sites. Later audits would show that the cost of rehabilitating a single sea otter topped $81,000.

Three weeks after the spill, the floating oil was moving north and west. It had washed from the sound into the currents of the Gulf of Alaska. There it blackened about 20 miles of Kenai Fjords National Park land. It moved into Cook Inlet, through Shelikof Strait, circled Kodiak Island and settled upon the shores of Katmai National Park. Exxon figures show by summer's end, 1,089 miles of shoreline were tainted, some with scattered tar balls, some several inches thick in weathering oil.

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Commercial fishermen, many of whom had already rallied to rescue sea otters and birds, turned their focus on the Armin F. Koernig Hatchery in what would become known as the Battle of Sawmill Bay. The series of hatcheries in Prince William Sound was a multi-million dollar cooperative among commercial fishers and the State of Alaska. During 20-plus years of experimentation and growth, the five hatcheries had managed to develop a stable supply of returning salmon each summer, mostly pinks to be harvested by the seiner fleet out of Cordova.

Oil from the *Exxon Valdez* was flowing toward the Koernig hatchery at Sawmill Bay at about the same time that tens of millions of 3-inch salmon fry were to be released, timed so that the tiny fry can feed on the spring plankton bloom. Commercial fishers were frustrated at the slow pace of cleanup and response from Exxon and Alyeska. They had asked to be included in any way possible in

the cleanup effort, but to that point had been shut out of participation. Given that there were hundreds of miles of shoreline being inundated with oil – and nothing anyone could do about it – fishing families grabbed onto the protection of Sawmill Bay as something they could do for themselves.

The idea, hatched out of frustration during a midnight meeting between local residents and state Department of Environmental Conservation officials, quickly took flight. The Cordova small boat harbor was nearly emptied of vessels the next day as everyone headed for Sawmill Bay, just ahead of the projected arrival of floating oil. Governor Cowper, charging that Exxon was too slow putting equipment and work crews on the shores, enjoined the state in the effort by ordering the state ferries M/V Bartlett and M/V Aurora into use as floating command posts. The state hired a contractor to oversee operations and brought in the national air guard to deliver supplies by plane or chopper.

One early lesson from the spill, painfully obvious to everyone, was that not nearly enough spill response equipment and supplies were housed in Alaska, much less ready to go in Prince William Sound. Another was that the available oil boom, a floating barrier with a weighted curtain to keep the oil away from sensitive areas, could not handle the fast-moving current and enormously fluctuating tides of the sound. Oil would be swept under the boom by the currents or over the booms by storm-driven waves. At Sawmill Bay, fishermen laid at least three layers of boom, trapping the oil between them. The state brought in the first "supersucker" vacuum truck, hauled in from Prudhoe Bay and mounted on a barge, to begin sucking oil from the water. Yet, despite this technology, most of the oil was picked up by fishers who took their boats into the oil and scooped up what they could using 5-gallon buckets and other low-tech tools. State records show that more than 1,000 gallons of oil-water mix were scooped daily using these labor-intensive methods.[9]

Cooperation between state officials and local residents would have long-lasting impacts as the oil spill aged. While residents felt shut out by Exxon, the state provided office space for commercial fishing representatives and included them in daily planning meetings. "As a result, the state's spill response operations were transparent and accountable to the communities most affected," said former DEC commissioner Kelso. "In addition, the state agencies valued local knowledge and relied upon it in making their decisions." [10] This relationship provided the state with badly needed political and popular support in its upcoming battles with Exxon and, at times, the U.S. Coast Guard, over cleanup of the spill.

The battle of Sawmill Bay was won by the so-called "mosquito fleet" of Cordova fishermen, but it was not the only place such low-tech heroics took place. In Homer, residents who had no boom available to them built their own by floating logs of Sitka spruce, chained together with weighted tarpaulin attached. At Mars Cove in Kachemak Bay, another group of residents organized to build a "rock

washer," and then painstakingly removed rocks from the beach, put them through the washing machine, and returned them to the shores. All of these volunteers, like those who first arrived in Valdez to rescue and clean animals, were there because they just couldn't sit home and do nothing.

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Exxon, meanwhile, with the power of a corporate giant, eventually mounted a cleanup effort the likes the world has never seen. But, it will forever be considered too little too late. During the early weeks, when the public's fear of oil's destruction was matched and exceeded by daily reality, Exxon seemed to be doing little to get things cleaned up. The public and the media were screaming for the corporation to do something. In what appeared to be a public relations move, Exxon sent television journalists to a heavily-oiled beach where a cleanup crew, in oil-covered raingear and hardhats, staged a cleanup. They used oil-absorbent materials and paper towels and began cleaning one rock at a time. What the cameras caught was an utterly futile gesture under hopeless circumstances. Exxon was stung by this botched public relations effort, but I think the event also illustrated the difficult position Exxon faced.

Given the enormity of the spill and the remoteness of the region, there was nothing anyone – not the state government or the U.S. military or one of the world's largest corporations – could do to remove that oil and remove it safely. The public wanted immediate action, but given the poor state of preparation for such a spill, any hands-on cleanup was bound to appear ludicrous, like bailing a swamped boat with a teaspoon. Behind the scenes, Exxon was doing what it could. Engineers were designing massive systems for flushing the beaches with hot water. Parts and equipment had to be found, purchased, and flown in. Staging barges and floating hotels were being developed and had to be towed to the sound. A makeshift animal hospital was built. Hundreds of contracts were let for use of vessels and aircraft. Thousands of people were hired. These logistics were going to take time.

Oil landed on more than 1,000 miles of beach, some reaching more than 450 miles from Bligh Reef. Not one mile[11] of those oil-soaked beaches was accessible by road. In most cases, it required a 40-minute flight from the nearest community just to reach an oiled site. By the end of summer, Exxon mounted an effort that was routinely reported in military terms. It had an army of 10,000, a navy of 1,000 ships, and an air force of about 100 planes and helicopters during that first summer. A substantially reduced effort continued for three more summers, until the U.S. Coast Guard declared the job done on June 12, 1992. The corporation claims that it spent about $2.1 billion on cleanup, yet most observers will tell you that it did little good compared to the power unleashed by nature. The winter storms are credited for cleaning more oil out of the beaches than all the ingenuity and muscle humanity could muster.

Letting nature do the job, however, was never an option. Just as our humanity made it impossible to watch oil-coated sea otters die without at least trying to help them, no one could let an oil-stained beach wallow for seven or eight months in wait of cleansing winter storms – the stagnant oil, meanwhile, killing even more animals that come in contact with it. Exxon, therefore, paid $81,000 to successfully rescue and rehabilitate a single sea otter and a total of $2.1 billion to remove what mess it could. There is very little economic sense to it. But there was never a question that something had to be done.

Photo courtesy State of Alaska

Not one mile of the oiled beach was accessible

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Today, the amount of cleanup equipment stored throughout Prince William Sound dwarfs that available in 1989, but no reasonable person believes it is enough when considering that modern tankers carry up to 55 million gallons of North Slope crude from the Alyeska terminal. As much as the *Exxon Valdez* spill hurt everyone and everything involved, the tanker unleashed only 20 percent of its potential. The watchword in Prince William Sound today is "prevention" before "response." If prevention fails, step two is to pick up the oil, burn it (if possible), or disperse it before it reaches the shoreline. It is a generally accepted axiom that once oil hits the beach, the battle is lost. The *Exxon Valdez* experience did not provide us with a miracle technology or mobilization plan that will save the wildlife should another spill hit their nearshore habitat.

With this in mind, prevention has been beefed up in three significant ways, any one of which probably would have prevented the 1989 accident. First, the U.S. Coast Guard now monitors fully laden tankers via satellite until they exit Prince William Sound at Hinchinbrook Entrance. Second, two escort vessels accompany each tanker while passing through the sound. The powerful escorts not only watch over the tankers, but are capable of assisting them in the event of an emergency, such as a loss of power or loss of rudder control. Third, a specially trained marine pilot, with considerable experience in Prince William Sound, is now aboard each ship during its entire voyage through the sound.

Should all these systems fail – due to a tsunami or tanker explosion, for instance – government and industry are better prepared than ever before to respond.

Contingency planning now includes a scenario for a spill of 12.6 million gallons and drills are conducted each year. The combined ability of skimming systems to remove oil from the water is now 10 times greater than it was in 1989, with equipment in place capable of recovering over 300,000 barrels of oil in 72 hours. Even if the oil could have been skimmed up in 1989, there was no place to put the oil-water mix. Today, seven barges are available with a capacity to hold 818,000 barrels of recovered oil. Containment boom –34 miles worth, seven times the amount available after the *Exxon Valdez* spill – is now stored at strategic points throughout Prince William Sound, allowing immediate deployment. Likewise, dispersants are stockpiled for use and systems are in place to apply them from helicopters, planes, and boats.[12]

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If a television game show planned to stake a million dollars on a single *Exxon Valdez* question, it should be this: What caused the *Exxon Valdez* to ground upon Bligh Reef? The majority answer – guaranteed – is that the captain of the vessel had been drinking. While you could make a lawyer's argument that drinking contributed either directly or indirectly to the accident, such an answer would be technically wrong. In fact, lawyers did make that argument and a jury of 12 Alaskans didn't buy it. Captain Joe Hazelwood, at one time thought to be the brightest prospect in the Exxon fleet, was found "not guilty" on charges of operating a vessel while under the influence of alcohol.[13]

Hazelwood was the man in charge of a ship brought down by a long chain of errors in a system seemingly doomed to fail. There was a multitude of variables involved, only some of which Hazelwood controlled or at least partially controlled. Much of the media spotlight focused on the role of alcohol and one man's judgment at sea. Questions about the ineffective government oversight, callous management in the shipping industry, political meddling, lame oil spill preparedness, and the culpability of an indifferent public were rarely asked and under-reported.

The Alaska Oil Spill Commission pointed its collective finger at a system-wide problem in February 1990 when it issued its findings and recommendations after a six-month investigation. Walt Parker, who chaired the commission, said at the time that he was concerned about all the attention being paid to Hazelwood. "The (Oil Spill Commission) report treats Hazelwood as just another player in this drama and not as the main character," Parker said. "The problem is that the individual will be blamed instead of the system. We decided from the start that the *Exxon Valdez* was part of a larger malaise."[14]

An abbreviated sketch of the commission's detailed account of the accident is as follows:[15]

> The *Exxon Valdez* departed from the Alyeska terminal at 9:12 p.m., March 23, 1989. William Murphy, an expert ship's pilot hired to maneuver the 986-

foot vessel through the Valdez Narrows, was in control of the wheelhouse. At his side was the captain of the vessel, Joe Hazelwood. Helmsman Harry Claar was steering. After passing through Valdez Narrows, pilot Murphy left the vessel and Captain Hazelwood took over the wheelhouse. The *Exxon Valdez* encountered icebergs in the shipping lanes and Captain Hazelwood ordered Claar to take the *Exxon Valdez* out of the shipping lanes to go around the icebergs. He then handed control of the wheelhouse to Third Mate Gregory Cousins with precise instructions to turn back into the shipping lanes when the tanker reached a certain point. Just before midnight, Claar was replaced by Helmsman Robert Kagan. For reasons that remain unclear, Cousins and Kagan failed to make the turn back into the shipping lanes and the ship ran aground on Bligh Reef at 12:04 am March 24, 1989. Captain Hazelwood was in his quarters at the time.

According to Cousins' testimony before the National Transportation Safety Board, he followed his captain's orders and began a slight turn away from the reefs after he took a fix and determined the tanker was abeam of Busby Island, about 2.6 miles from the point of impact. For some unexplained reason, the ship did not respond to the 10-degree right rudder command, he said, allowing the ship to lose up to two minutes of precious time.

Cousins issued an order for 20-degree right rudder and this time the ship responded routinely, swinging slowly to the right within seconds. Two minutes into the turn, Cousins testified "I really didn't like what I was seeing" and ordered a hard right. "Upon ordering the hard right, I called the captain and said to him at that time 'I think we are in serious trouble.' " The vessel shuddered, striking the reef before Cousins could hang up the phone.[16, 17]

Shortly after his trial in Anchorage District Court, Hazelwood sat in his hotel room and finished the story. He was below deck in his captain's quarters when he felt the impact of his ship plowing into the submerged rocks. "It was like a big punch in the gut," he said, like the wind is knocked out of you, but there's no recovery."[18]

The rest is history. Once the oil bubbled free, it became an environmental catastrophe incalculable in its scope and a human drama with no clear end. Even if residents manage to wash the oil-stained images from their minds, they cannot forgive Exxon, which merged with Mobil in 2000 to become the largest corporation in the world. When Exxon's Iarossi stepped before local residents that Good Friday evening, accepted responsibility for the accident and promised to make commercial fishers and all other residents harmed by the spill financially whole again, he didn't at the time understand the depth of his promise. A jury in 1994 decided that the cost of making residents whole again should include $5 billion in punitive damages. Exxon, saying the amount is excessive, refuses to pay or to negotiate with plaintiffs. An appeals court, in 2001, agreed with Exxon, saying

that reasonable punitive damages should be no more than $1.65 billion.[19] As of this writing, however, no settlement has been reached.[20]

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The spill region, once "very, very sick," is for the most part healthy again, though scarred. Oil can still be found, trapped by boulders or just under the surface, in many locations, but you have to know where to look. Eight of 28 species and other natural resources are still considered "not recovering," meaning there has been little improvement in their populations during the 13 years following the spill. Only seven species or resources – bald eagles, river otters, archaeological resources, pink salmon, sockeye salmon, common murres, and black oystercatchers – are officially declared "recovered." The rest, however, appear to be progressing in their march toward better health.

Commercial fishing in Prince William Sound completely collapsed in the early-to-mid 1990s, due to market conditions, wildly fluctuating pink salmon returns, and a disease-decimated Pacific herring population. As long as the commercial fishing economy remains depressed and some species remain depleted, and as long as Exxon litigation is not resolved, this human tragedy will not end.

Footnotes
The Spill

1. This introduction, offering barely a sketch of the multi-year trauma which was the *Exxon Valdez* spill, borrows extensively from newspaper articles written by the author of this report and published in the Anchorage Times during the first year following the spill.

2. Anchorage Daily News, April 13, 1989, *A friend is sick: Admirers of Prince William Sound recall life before the oil spilled*, by Debra McKinney.

3. Captain William Bligh, immortalized in the classic *Mutiny on the Bounty*, was among the first westerners to sail in Prince William Sound as an officer with Captain James Cook.

4. Anchorage Times, May 3, 1989, *Alyeska foresaw big spill in 241 years*, by Joe Hunt.

5. Anchorage Times, March 24, 1990, *Stormy year on Prince William Sound: From the start – anger, fear, devastation were aftermath of Exxon Valdez oil spill*, by Joe Hunt.

6. Alyeska was responsible for maintaining a barge filled with emergency response equipment with the capability of being at any oil spill within five hours. The barge was in drydock with much of the response equipment unloaded at the time of the spill. Anchorage Times, March 24, 1990, *Stormy year on Prince William Sound: From the start – anger, fear, devastation were aftermath of Exxon Valdez oil spill*, by Joe Hunt.

7. Anchorage Times, *Bearing a nation's outrage: Exxon shipping chief recounts spill crisis*, by Joe Hunt.

8. Anchorage Times, March 24, 1990, *Stormy year on Prince William Sound: From the start – anger, fear, devastation were aftermath of Exxon Valdez oil spill*, by Joe Hunt.

9. Exxon Valdez Oil Spill Final Report, State of Alaska, June 1993.

10. Personal communication, Dennis Kelso, March 24, 2002.

11. A 1989-90 survey of nearly 5,000 miles of shoreline documented oil on more than 1,000 miles of beach. The oiling was considered heavy or medium on 200 miles of shoreline. The remaining miles of oiled shoreline were considered to have light or very light oiling. Tarballs found along the road system near Homer, Anchor Point, and Seward amounted to less than one mile of the overall amount. The remaining beaches had to be reached by boats and aircraft.

12. Legacy of an Oil Spill: 10 Years After Exxon Valdez, also known as *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

13. The jury found Hazelwood guilty of negligent discharge of oil, a misdemeanor. He was fined $50,000 and sentenced to 1,000 hours of community service in Alaska.

14. Anchorage Times, January 28, 1990, *Focus of trial may miss the mark: Spotlight erroneously falls on Hazelwood*, by Joe Hunt.

15. Alaska Oil Spill Commission Final Report, February 1990.

16. But, data from the ship's recorders suggest that Cousins did not know where he was when he began his turn. From the moment he initiated the turn to the moment of impact totalled a maximum of nine minutes, according to Cousins' recollection of the accident. But, comparing the minutes to the miles traveled doesn't add up. A ship traveling at the known speed of 12.3 knots per hour would take about 13 minutes to go from Cousins' point of fix off Busby Island to its resting point on Bligh Reef. The only conclusion, according to investigators, is that the *Exxon Valdez* was well beyond Busby Island when the turn began. Anchorage Times, May 21, 1989, *Cousins can't account for missing minutes*, by Joe Hunt.

17. The National Transportation Safety Board investigated the accident and determined that the probable causes of the grounding were:

- The failure of the third mate to properly maneuver the vessel, possibly due to fatigue and excessive workload;
- The failure of the master to provide a proper navigation watch, possibly due to impairment from alcohol;

- The failure of Exxon Shipping Company to supervise the master and provide a rested and sufficient crew for the *Exxon Valdez*;
- The failure of the U.S. Coast Guard to provide an effective vessel traffic system; and
- The lack of effective pilot and escort services.

18. Hazelwood talked that day of hoping to someday return to the sea, "going somewhere and coming from somewhere." But employment for a notorious captain would not be easy to find and in the following 13 years, Hazelwood would not get his wish. Anchorage Times, March 25, 1990, *"It'll affect me like it will affect everyone else, for a long time,"* by Joe Hunt.

19. The appeals court relied on rulings from the U.S. Supreme Court, which said that reasonable punitive damages should generally be no more than four times the actual damages. Actual damages in this case have been estimated at between $288.7 million and $418.7 million. New York Times, November 8, 2001, *Court overturns jury award in '89 Exxon Valdez spill*, by Evelyn Nieves.

20. Exxon appears to have little financial interest in ending the appeals. Although, Exxon continues to pay interest on the $5 billion while awaiting final resolution, the corporation was earning considerably more in interest than it was paying. The Anchorage Daily News reported that Exxon was setting aside interest earnings of about $296 million a year, but the corporation, at that time, was earning nearly $800 million a year on that money. Anchorage Daily News, August 4, 1998, *As appeals drag, Exxon banks the interest*, by Natalie Phillips.

Photo by John Lough

The Settlement

On October 9, 1991, more than 30 months after the Exxon Valdez gashed its hull on Bligh Reef, the United States government and the State of Alaska settled their claims against Exxon Shipping Company and Exxon Corporation. The settlement was divided into three parts: the criminal plea agreement, criminal restitution, and the civil settlement.

Criminal Plea Agreement. Exxon Shipping Company pleaded guilty to three misdemeanor counts, including violations of the Clean Water Act, the Migratory Bird Treaty Act, and the Refuse Act. In an unprecedented action in environmental law, Exxon Corporation, as the spiller's parent company, also pleaded guilty to a single misdemeanor, violation of the Migratory Bird Treaty Act.

The plea agreement resulted in a criminal fine of $150 million, with $125 million of that forgiven in recognition of Exxon's cooperation in cleaning up the spill and voluntarily paying some private claims. Of the remaining $25 million, the court ordered that $12 million go to the North American Wetlands Conservation Fund and $13 million go to the national Victims of Crime Fund.

Criminal Restitution. In addition to the fine, the settlement called for Exxon to pay $100 million in restitution for injuries caused to fish, wildlife, and lands of the spill region. That money was divided evenly between the federal and state governments. The federal government dedicated its share to habitat protection efforts within the spill region. The Alaska Legislature spent its $50 million entirely within the spill region, but divided it up for several purposes, including habitat protection, parks improvements, community development, and capital improvement projects.

Civil Settlement. Exxon agreed to pay $900 million with annual payments spread out over a 10-year period. Due to the limited knowledge about the long-term damage caused by the spill, the settlement includes a "reopener clause." The reopener allows the governments to make a claim for up to an additional $100 million if it can substantiate that significant injuries to the resources occurred that were not known at the time of the settlement.

Memorandum of Agreement. The key to the use of the $900 million civil settlement is detailed in a Memorandum of Agreement between the federal and state governments, filed in U.S. District Court in Anchorage on August 28, 1991. The MOA establishes the federal and state governments as co-trustees for the injured resources and names the Exxon Valdez Oil Spill Trustee Council as the authority responsible for restoration of the spill region. The Trustee Council and its early organizing efforts will be described in detail in Chapter Three: The Early Years.

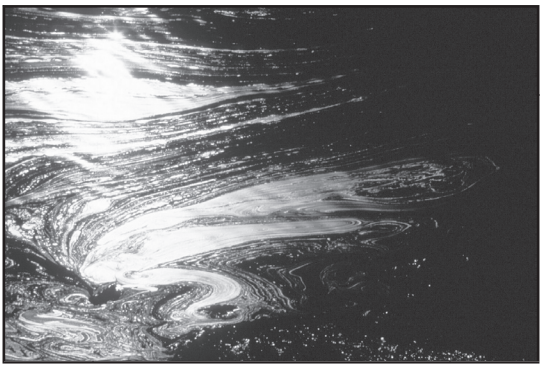


Photo by John Hyde

Chapter One

The Making of a $1 Billion Settlement

Introduction

It was no surprise that the largest oil spill in U.S. history and, arguably, the most destructive spill in the history of the industrial world resulted in court action of proportionate magnitude. The real surprise, to many, was that federal criminal charges against the spiller and state-sponsored civil action on behalf of the damaged resources were each resolved quickly, in one conjoined swoop, and after a fairly short but intense period of negotiation. The result was a precedent-setting settlement in which the parent company of the spiller was held liable for the environmental negligence of its subsidiary, record shattering fines were levied for an environmental crime, and an equally expansive civil forfeiture provided $900 million for restoration of damaged resources.

In all, Exxon Corporation and Exxon Shipping Company were on the hook for more than $1 billion, with the potential for another $100 million should the injury to the environment be more severe than was known at the time of the settlement. Despite the unprecedented price tag, Exxon appeared willing and even anxious to get this settlement signed and behind them. Despite the record fines, the majority of people with a personal or political connection to the spill were clearly upset, complaining that the settlement was barely a slap on the hands of one of the world's largest corporations.[1] Meanwhile, federal and state negotiators argued publicly that this was the best settlement possible and that a protracted court fight could take more than a decade to clear up, possibly result in a smaller settlement, and cost many tens of millions of dollars in attorneys fees.

Witnessing the injury

Litigation of an oil spill is an oddity in the context of personal injury claims. Most personal injury cases are the result of accidents or intentional incidents that occur in a matter of moments. Litigation occurs after the fact. But the oil spill was a slow-moving injury. Attorneys litigating the case had the unusual opportunity to watch the damage occur and gather evidence as it was occurring. For some of the attorneys representing the State of Alaska, this opportunity to watch the onset of damage had the effect of burning in a sense of resolve to make the spiller pay for the injury to the environment.

Assistant Attorney General Craig Tillery and Joseph Donahue, a private attorney under contract to the state, walked the beaches of Prince William Sound while the oil was still fresh and the chemical stench of hydrocarbons filled the normally salt-fresh air. Black crude covered the rocks and seeped down around the boulders and mussels and into the sediments. The incoming tide brought with it a brownish, coagulated mix of oil and water known as mousse, depositing it in clumps along the shore. Outgoing tides would soon carry much of that mousse back into the sound, weighed heavy with sand and sediments, to eventually sink and settle on the subtidal floor.

During the first several days, the oil-soaked beaches of Smith, Green, Disk, Eleanor, and Knight Islands were eerily silent. In places where oil had soaked into normally green and active wetlands, the scene looked like a moonscape, the usually plentiful wildlife nonexistent. The dissonant and varied cries of a marine wilderness had vanished, replaced by an emptiness that even newcomers found strikingly eerie. Headlines in newspapers and magazines frequently referred to this emptiness as "The Sound of Silence" or "Silent Spring" or "Paradise Lost."

Nature's silence was soon offset by human activity, motor boats, water pumps, boilers, miles of boom and water hose, hot water spray guns, and airplanes and helicopters ferrying emergency response crews in and out. When Craig Tillery stepped carefully over the slickened rocks of Green Island, he felt a change come over him, evolving from a detached and curious observer to a sad and angry litigator. Tillery had known Prince William Sound under better circumstances. He had kayaked along the western shore of the sound when sea otters, harbor seals, and sea lions were commonly encountered and the occasional sighting of killer whales breaching in the surf highlighted a day's journey. Memories of these excursions were overcome by the lifeless, tarry shores and the stench of petroleum.

"What I saw, and heard, and smelled, I will never forget," he said at a public symposium 10 years later. "The juxtaposition of the idyllic beauty of the sound in which I had spent many weeks kayaking in previous years and the noisy, smelly industrial scene in front of me was overwhelming."[2]

The state's attorneys also traveled to San Diego, California, where the *Exxon Valdez* was in dry-dock preparing to undergo repairs. Tillery and Donahue stood

on the deck of the tanker and in the gaping hole in the hull where 10.8 million gallons of crude oil once bubbled into the open salt water. The idea was to get a feel for the immensity of the ship, to understand where the crew stood at the moment of impact, what actions they took leading up to the accident, what damage was done to the hull, and which tanks were ripped open by the reef.

In discussing the state's litigation efforts nearly 12 years after the oil spill, Tillery referenced the importance of visiting the oiled shore and walking the deck of the ship. The visits had the effect of personalizing the oil spill for each of them and firing a passion for the litigation to come. "It made you angry," Tillery said. "It helped me understand what a senseless tragedy it was and instilled a sense that somebody needed to pay for it."[3]

The State of Alaska v. Exxon Corporation

Alaska Attorney General Douglas Baily had been in office barely over a month when the *Exxon Valdez* made its unscheduled stop on Bligh Reef. The timing for the state couldn't have been better. The new attorney general brought with him a 20-year history as one of the top private litigators in the state, replacing Grace Shaible whose background centered mostly on commercial law. This tradeoff in experience at the state's highest law office would prove fortuitous as Alaska geared up for what was expected to be a costly protracted battle with one of the world's largest and most litigious corporations.

About two weeks after the *Exxon Valdez* spill, Baily set up a six-person litigation team to identify and take the appropriate legal steps against Exxon. The litigation team, led by Assistant Attorney General Barbara Herman, had recently finished litigating an oil tax dispute against Arco Alaska, a task that involved sifting through millions of documents and resulted in a settlement worth $178 million to the state. In a sense, the state had a litigation team in waiting. They were the natural choice to pursue litigation against Exxon because they were the only attorneys in the Alaska Department of Law who were "familiar with that many zeroes," according to Tillery.[4]

The first step in the process was to hire a private law firm large enough to handle the massive undertaking ahead and with experience in oil-related litigation. Before reaching a courtroom, the state anticipated it would have to review a warehouse of documents and paperwork related to the case. (More than 20 million documents were eventually reviewed and numbered.) A private law firm had the administrative advantage of being able to expand and reduce in size without the usual government barriers to doing either. Rather than waste months of valuable time going through the normal procurement procedures, the Department of Law moved quickly under emergency orders and hired Preston Thorgrimson Shidler Gates & Ellis, the same Seattle-based law firm that worked with the state on the recent oil tax settlement. At its peak, the private law firm had about 150 paralegals

and 30 lawyers working on the *Exxon Valdez* litigation. The original contract capped the cost for the outside legal help at $10 million, but that amount was quickly exceeded as legal costs topped $1 million a month.[5]

Another break for Alaska's litigation effort was that the Alaska Legislature was in session at the time of the spill. Recognizing the financial emergency the spill had caused for several state agencies, the Legislature quickly appropriated $35 million to offset costs. But the Legislature, which usually specifies the purpose of every dime, didn't know exactly how to distribute the money. It solved this problem by leaving distribution of the oil spill emergency funds to the discretion of Attorney General Baily. Baily reserved the first $20 million for litigation and then oversaw distribution of the remaining money for Natural Resource Damage Assessment studies and the state's spill response efforts.

The State of Alaska filed suit in U.S. District Court in Anchorage on August 15, 1989. Baily moved quickly in filing the suit because he did not want Exxon to be the first to file any action through the courts. He anticipated Exxon filing a limitation of liability claim in federal court in Houston, asking that any civil liability be limited to the cost of the vessel and its contents. The limitation of liability would not likely succeed, but it could have resulted in jurisdiction of the case being held in Houston and Baily recalled that he was not about to risk losing an Alaska jury and Alaska judge.[6]

The state's massive investment into litigation would eventually provide Alaska with a huge tactical advantage, not only in its proceedings against Exxon, but also in establishing itself as an equal player with the federal government. To a great extent, the state's legal resources were deeper and better financed than the federal side. In addition to hiring the courtroom and backroom power of the Preston Thorgrimson law office, the state also locked in many nationally recognized experts to help document injury, conduct economic studies, testify in court, and serve as peer reviewers of damage assessment science. Federal attorneys also hired experts to guide them, and the two governments found themselves racing each other and Exxon when it came to hiring Nobel prize winning economists and other world-renowned scientists.[7]

Indictment or settlement?

Despite the lawsuit, Alaska's relationship with Exxon's corporate front office remained cordial and professional at all times. This was not always true when it came to the state's interplay with the U.S. Department of Justice and other federal agencies.

The roles of the state and federal governments appeared to be clearly delineated. The state pursued civil litigation against Exxon while at the same time the federal government prosecuted the corporation and its shipping subsidiary for criminal wrongdoing in connection to the spill. The state had no real role in

prosecuting Exxon because state laws were only minor when compared to the federal Clean Water Act, Migratory Bird Treaty Act, and other pollution and navigation laws. The federal government had an equal stake and a substantial role in the lawsuit against Exxon, but the state was clearly at the helm when it came to driving the civil litigation.

The United States, under Attorney General Richard Thornburgh, moved swiftly in bringing criminal action against Exxon. By February, 1990, barely 10 months after the oil spill, the Department of Justice's Environmental Crimes Section had already initiated talks with Exxon in an effort to settle potential criminal claims, even though Exxon had not yet been indicted. While a federal grand jury was meeting in Anchorage to consider indictments, Exxon and Justice were nearing a pre-emptive settlement of the matter.

Attorney General Baily, along with deputies Herman and Tillery, learned of the pending agreement during a dinner in Seattle with Richard Stewart, the new federal chief of the Environmental Crimes Section. Early during their dinner meeting, Stewart pulled Baily aside to tell him privately of secret negotiations with Exxon and a pending plea agreement.

Stewart outlined the proposed settlement under the promise that Baily and his deputies not reveal the details to anyone except Alaska Governor Steve Cowper. The deal, he explained, called for Exxon to provide $500 million for assessment studies and restoration with an additional $50 million going to the state. The federal government would also agree to not pursue any civil suits against Exxon for a period of four years.[8]

In addition to the money for restoration, Exxon would agree to pay a criminal fine, but that amount was never disclosed or reported. Stewart, however, confirmed that it would have been in the range of $150 million to $200 million.[9]

Baily expressed his concern about the four-year moratorium because of the effect it might have on the state's case. He knew that without the federal government as a partner in the suit, the state's case would be considerably weakened. Nevertheless, the state and federal governments had essentially the same incentive to settle. An early settlement, even if it is smaller than what might be obtained through court, would allow restoration to go forward quickly. A larger settlement 10 or more years down the line would make the prospect of restoration nearly moot. The state's attorneys insist they left the dinner meeting without endorsing the idea, but generally optimistic about its potential.[10]

Six days later, when Baily received a review draft of the agreement, any support the state had for the settlement quickly began to erode. The more they read, the more the state attorneys disliked the settlement package and the more they began to distrust the federal attorneys pushing it.

Baily said he felt like the victim of a "bait and switch" scheme. Instead of the $550 million promised, the agreement called for Exxon to pay $150 million up

front and then up to another $400 million over a period of three to seven years – but only as restoration projects were approved. What's more, if Exxon disagreed with how the money was to be used, it could object and appeal to a federal district court to resolve the issue. Stewart noted that in order to be successful in court, Exxon would have to show "arbitrary and capricious" behavior on the part of fund managers. But, Baily countered that it opened an avenue for the litigious-minded Exxon to "obstruct, obstruct, obstruct."[11]

Rather than $50 million going to the state, as Baily was led to believe, Exxon would receive credit for $50 million it already promised to the state to offset costs of the government response to the spill. This provided the state nothing it didn't already have. Exxon would also get a $25 million credit for costs it incurred spraying many miles of oiled beach with a fertilizer to promote growth of oil-eating bacteria. To the state, this "bioremediation" and other spill response expenses were part of the cleanup and should be completely separate from the restoration fund.

Finally, the agreement called for Exxon to receive credits of the entire $550 million on any future civil liabilities to be paid to the state or federal governments.

Justice's secret negotiations with Exxon became public knowledge when the Wall Street Journal published an article February 14, 1990, announcing a possible settlement. The following day, Stewart gave Baily a one week deadline to sign onto the agreement. Yet, Baily didn't even know exactly what he was being asked to sign. The relevant sections of the agreement, under the headings "Relationship to Alaska" and "provisions (to which) Alaska is bound" stated only: "to be inserted." Rather than being courted as a partner in the settlement, Baily felt Stewart was presenting the state an ultimatum.[12]

Stewart does not remember it that way. "I thought we had patched together the concerns of the state," he said. Alaska was being treated as an equal partner in the settlement, he added, because Exxon insisted on a three-way agreement. "Exxon didn't want to pay a settlement with the federal government and then have the state come along and say we're not bound by this. I thought we made that clear."[13]

Governor Cowper, acting on the advice of Baily, refused to approve the agreement. Baily wrote Stewart saying "we reject the ultimatum that we must accept (the plea agreement) in its current state." He also said that the decision was based both on "the manner on which it was presented and on its unacceptable content."[14]

Eleven years later, Stewart referred to Baily's decision and the day that followed as "my worst day in government." He awoke to a National Public Radio news report saying that Alaska had pulled out of the settlement with Exxon. Up to that moment, Stewart thought he had a deal with all parties. "That was a rude shot,"

Stewart recalled. "I thought we had patched together the concerns of the state."[15]

Baily said then and now that he had no idea that the state's participation was a deal-breaker for Exxon. Somehow, that word never got through even though Stewart now says "I told him that."

In an effort to kill a deal he considered bad for Alaska, Baily set out on a publicity campaign, talking to every reporter who wanted an interview. He contacted the National Association of Attorneys General and asked his peers to write or call Attorney General Thornburgh. Attorneys general from at least six states complied with the request. Editorials appeared in several major newspapers.[16]

After turning the media spotlight on Thornburgh and Stewart, Baily flew to Washington, D.C. to meet with Cowper and arrange a meeting with the U.S. Attorney General. Baily knew that Thornburgh had scheduled a press conference the following day to make an announcement concerning the criminal charges against Exxon, but he had no idea what was to be announced. As if to emphasize the icy relations between the state and the Department of Justice, Cowper and Baily were not allowed to meet the U.S. Attorney General in his office. Instead, just one hour before the scheduled press conference, they were led to a small basement meeting room being used for storage. There they had a brief and tense meeting with Thornburgh and Stewart in which the state expressed its concerns about the pending plea agreement. Thornburgh and Stewart were polite, but noncommittal, and still did not offer a clue as to what would happen next.

Just a half hour later, Thornburgh announced at the news conference that the federal grand jury had indicted Exxon Corporation and its offspring, Exxon Shipping Company, on five counts each, including two felony charges. The resulting fines could reach as high as $600 million to $700 million. This indictment, Thornburgh said, "throws the environmental book at Exxon."[17]

The state's civil case

The state's case against Exxon would depend on proving that spilled oil caused serious injury to natural resources, archaeological resources, tourism, and recreational use of the region. Everyone knew that the spill killed thousands of birds and mammals and that oil covered the beaches, smothering untold millions of herring and salmon eggs. Film clips of oiled sea otters, bird rescue attempts, and beach cleaning crews led the national evening news for months on end. But, beyond the graphic film footage attorneys struggled with practical questions. What is the dollar value of a sea otter? Bald eagle? Killer whale? Harlequin duck? Or any of the 91 bird species known to have died as a result of the spill? How do you quantify the loss of priceless artifacts looted from dozens of archaeological sites in the spill region, when, in most cases, no one knew what was taken? How does one place a monetary value on the loss of wilderness and wild lands, a designation that is more conceptual than tangible? In short, attorneys had to somehow

document the price of pricelessness.

To answer these questions, state and federal attorneys contracted with economists and experts in natural resource damage assessment to guide and review the scientific efforts. Several dozen studies immediately got underway to ascertain how serious the injuries were to the environment. It was known, for example, that 1,016 sea otter carcasses were removed from the water during the first spring and summer following the spill. But, how many carcasses were missed because they either sank to the bottom, got swept out into the Gulf of Alaska, or were eaten by scavengers?[18] How much did the total loss of sea otters impact the populations on a local, regional, or worldwide scale? How does one place a monetary value on sea otters, considering a pelt was worth about $200, an otter captured for a zoo was worth up to $20,000, and Exxon paid more than $81,000 per otter to capture, clean, and care for them after getting oiled. What would it take to restore the populations to pre-spill conditions? In all, 164 damage assessment studies were conducted from 1989-1991, all under a veil of secrecy due to litigation with Exxon. *(See Chapter Two)*

In addition, the Alaska Department of Law contracted with economists, demographers, and pollsters to place a dollar value on the loss. These damage assessment studies and economic studies provided the backbone of the state's case. In the end, attorneys knew that the argument for economic damage would be only as strong as the state's documentation of injury. And that documentation made the state very nervous.

Straight forward assessments on the value of animals lost in the spill did not add up to much. Researchers used known market values for animals captured for studies or for zoos.[19] The estimated value of a sea otter, as stated, was between $200 and $20,000. A harbor seal was worth about $700. And a common murre was worth $274. Altogether, the loss of an estimated quarter-million seabirds and thousands of mammals, and the commercial losses from tourism, recreation, and fishing ranged from a low of $13 million to a high of $209 million.[20] This assessment method would not add up to the billions the state hoped to pursue in court.

A second, but more controversial, method of calculating loss was employed. Known as "contingent valuation," this method was developed in the late 1980s in response to federal regulations requiring the consideration of both "direct and indirect" losses in the damage assessment process. Contingent valuation employs comprehensive survey methods to determine "passive use" losses to the American public. Passive use means that the spill region had a value even to those people who viewed the region only on their television screens. Experts under contract to Alaska used a public poll to determine what the lost wildlife and injured environment in the spill region were worth to their owners – the citizens of the United States.[21] Several respected economists from different universities

around the country developed the study and analyzed the results. Pollsters visited 1,423 randomly selected homes, representing all 50 states and Washington, D.C., and interviewed residents at length. Individuals were asked how much they would be willing to pay to have the power to erase the *Exxon Valdez* spill as if it never occurred. The result was an average of $31 per household. Multiply that number by the number of households in the U.S. and the contingent valuation provided a damage estimate of $2.8 billion. (See page 64 for more on this study.)

Attorneys had what they wanted with the contingent valuation study – a damage figure high enough to get a significant jury award in court. But, how would such a controversial method be viewed by jurors? Would they buy into the theory that damages were equal to what U.S. residents were willing to pay to have never had the spill in the first place? Or would they see it as experimental economics with no real relationship to the spill? After all, none of the respondents were asked to write out a check at the time of the interview. State and federal attorneys were very wary of the study and the jury's potential reaction to it.

One of the biggest skeptics was Baily's successor as attorney general, Charlie Cole. Cole, despite his 30-year track record as a litigator in Fairbanks, had never heard of contingent valuation and quickly read every journal article he could find on the subject. He remembered thinking at the time: "This is the big weapon in the quiver?"

"I just didn't think much of it. I thought it was wild and I didn't put much stock in it. And Exxon would have the smartest people in the world to throw cold water on it."[22]

Stewart, leader of the Justice Department's Environmental Crimes Section, called contingent valuation "a crap shoot" and a "wild card."

The study provided an important tool, but Cole and Stewart agreed it would be more valuable in negotiating a settlement than it would be in a court of law. "We didn't know whether a judge would allow it," Stewart said.[23]

The United States v. Exxon Corporation

The federal grand jury in Anchorage brought its indictments against Exxon Corporation and its subsidiary Exxon Shipping Company on February 27, 1990, and in the process, stretched the legal boundaries for prosecution of an oil spill. The indictments included three misdemeanors under the Clean Water Act, the Refuse Act, and the Migratory Bird Treaty Act. Two felony counts were filed charging violation of the Ports and Waterways Safety Act and the Dangerous Cargoes Act.

It was no surprise that Count One in the indictment against Exxon was for violation of the Clean Water Act (also known as the Federal Water Pollution Control Act) for the discharge of pollutants into Prince William Sound. Yet, the use of this act for an oil spill required a legal leap in interpretation in order to

make the charges stick. Prosecutors charged Exxon under sections 301 and 309, which imposed criminal penalties for the discharge of pollutants, rather than under section 311, which dealt with oil spills. At the time, the Clean Water Act did not specifically criminalize an oil spill unless the spiller failed to report the accident. Sections 301 and 309, however, made it illegal to negligently discharge pollutants from a point source into navigable waters. These sections did not specifically mention oil spills or reference section 311 as criminal acts. Exxon argued strongly for dismissal of this count, noting that since the criminal section of the Clean Water Act did not reference oil spills, one can infer that Congress intended to treat accidental oil spills differently than other forms of pollution. Federal prosecutors argued successfully (and case law supported) that since accidental oil spills occur by definition without a permit, then by extension they will always violate the criminal sections of the Clean Water Act.[24, 25]

The government would have an easier time prosecuting "public welfare offenses" under the Refuse Act and the Migratory Bird Treaty Act, even though neither law references oil spills. Stewart felt prosecution under both acts would be "a slam dunk." These "strict liability" statutes have a significantly reduced burden of proof for successful prosecution because intent by the polluter is not required. Exxon's oil, spilled on the water and on the beaches, would be enough evidence to win criminal sanctions under the Refuse Act and dead migratory waterfowl as a result of that spilled oil was all that needed to be shown under the Migratory Bird Treaty Act.

The Refuse Act criminalizes the discharge of "any refuse matter of any kind."[26] The U.S. Supreme Court had already ruled that oil qualifies as refuse under the act so its applicability was not under question. Exxon fought Count Two under the indictment by arguing that the comprehensiveness of the Clean Water Act made the Refuse Act redundant. U.S. District Judge H. Russell Holland, however, ruled that Count Two was appropriate under the law.

Count Three under the indictment, violation of the Migratory Bird Treaty Act, had never before been applied to oil spills, although it had frequently been used against other polluters. Over time, this act has become a powerful tool in environmental enforcement. The law is primarily concerned with illegal hunting practices, but opens the door widely for environmental crimes by prohibiting the killing "in any manner" of migratory birds.[27]

The two felony counts against Exxon were related to marine safety rather than oil pollution. Although there was no case history to back up either felony count, Stewart felt there was a good chance prosecutors would prevail. "We wanted a felony conviction," Stewart said. "We thought it very important that there be a felony conviction because of the seriousness of the infraction."[28]

Under the Ports and Waterways Act (Count Four), the government charged that Exxon was negligent for allowing incompetent personnel to have control of

the wheelhouse at the time of the accident. This was in reference to Exxon Shipping assigning Joseph Hazelwood as captain of the *Exxon Valdez* and his leaving allowing Third Mate Gregory Cousins and Helmsman Robert Kagan in control of the wheelhouse while the ship was still in protected waters. Prosecutors charged that the shipping company failed to ensure competent control of the wheelhouse by employing a captain with previous alcohol-abuse problems, who gave up control of the wheelhouse to a Third Mate who wasn't properly licensed to operate the vessel in Prince William Sound. Under the act, the vessel owner, as well as the master of the vessel, are criminally liable if the ship is improperly manned.[29]

Count Five under the Dangerous Cargo Act is similar to the Ports and Waterways Act in that it requires that "[no] person shall be engaged as a member of the crew on a tank vessel if he is known by the employer to be physically or mentally incapable of performing the duties assigned to him."[30] Prosecutors charged that Exxon Shipping knowingly promoted long-time deckhand Robert Kagan to able-bodied seaman, thereby allowing him to steer the ship as helmsman. The government argued that Kagan's 15-year employment history with Exxon suggested that he should not be allowed to man the helm, yet he was promoted to that position in January 1989, just two months before steering the ship onto Bligh Reef.[31]

The *Exxon Valdez* ran aground with Cousins in charge of the wheelhouse, Kagan at the helm, and Captain Hazelwood in his quarters.

Federal prosecutors developed two additional and vital avenues to put pressure on Exxon. Perhaps most important was the extension of "agency theory." In indicting Exxon Corporation as well as its agent, Exxon Shipping Company, the government was claiming that the parent company was criminally liable for the actions of its subsidiary. This was an unproven legal theory that could have long-term consequences throughout the industry.[32]

"I thought it was appropriate," Stewart said. "They were in charge. They were running this. They were responsible. They shouldn't be able to hide behind the corporate veil here." [33]

Although there was ample precedence in civil law, never before had a corporation been held criminally liable for the illegal polluting activities of its agent.[34] The law allows the parent and the agent to be charged separately for the same offense. Therefore, if successful, the government not only extends prosecution to the parent company, but also opens up a second "deep pocket" to extract fines and penalties.

To prosecute the five counts under agency theory, the government would have had the burden of proving that Exxon had substantial control over the actions of Exxon Shipping. The government presented a strong case in its Bill of Particulars,[35] arguing first, that Exxon Shipping was wholly owned by Exxon Corporation; second, that Exxon Corporation chose the officers and directors of Exxon Shipping; and third, that Exxon Shipping exists only to serve the parent

corporation.

A second and equally important tactic used by federal prosecutors was to employ the Criminal Fine Improvement Act, which allows substantial increases in penalties. Under normal circumstances, the five criminal counts would have added up to maximum fines of $128,000 per defendant. Under the Criminal Fine Improvement Act, organizations can be fined up to $200,000 for each misdemeanor and up to $500,000 for each felony. This would have resulted in a maximum fine of $1.6 million for each defendant, still a pittance considering the wealth of Exxon.

Prosecutors, however, were looking at another section of the act that allows the defendant to be fined up to twice the value of losses suffered by injured parties. The clients of the Justice Department, including the U.S. Coast Guard, the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, Department of the Interior, and other federal agencies, had spent an estimated $150 million responding to the spill, meaning that the government could collect more than $300 million from each defendant.[36]

In his scholarly analysis of the criminal prosecution of Exxon, Stephen Raucher believes the extension of agency theory in combination with the Criminal Fine Improvement Act will have a substantial impact on environmental law and provide a scary scenario for corporate polluters. "The district court's willingness to embrace the government's agency theory in this case marks the first time that criminal liability for the acts of a wholly owned subsidiary has been successfully employed in any reported environmental case. The notoriety of the *Exxon Valdez* case, even though it was settled, should alert corporate polluters to their potential liability for the environmental crimes of their subsidiaries and may give parent corporations the incentive to insure that their subsidiaries observe all environmental laws. Furthermore, expansion of agency concepts into realms once walled off by the corporate form would leave parent corporations much more vulnerable to criminal prosecution."[37]

Raucher credited the government with putting together an aggressive, creative prosecution, utilizing legal tools in new ways to pressure Exxon to the bargaining table. He wrote: "From agency theory to strict liability, and from extension of the Clean Water Act to the Criminal Fine Improvements Act, the government built a house of cards which, for the most part, worked."[38]

The phrase "house of cards," says Richard Stewart, implies that there was no substance holding it up. Stewart agrees that parts of the federal case against Exxon were innovative and untested in court, but he also felt all of it was on solid legal ground.[39]

Settlement diplomacy

Wally Hickel, a former Secretary of the Interior under Richard Nixon and a

former Alaska governor in the 1960s, returned to the state capitol as chief executive of Alaska in December 1990. He believed strongly that a quick settlement with Exxon would be good for Alaska and help the state get over the lingering anger and resentment from the oil spill. He recognized the pressure that the state and federal governments could jointly bring to bear and, with the help of several members of President George Bush's cabinet, brought the three parties together.

Hickel's success, however, was built on groundwork laid by former Governor Steve Cowper. In the aftermath of the state's showdown with the Department of Justice, Cowper wanted to get negotiations with Exxon moving forward again. On the advice of former U.S. Attorney General Griffin Bell, who had earlier been to Juneau investigating the spill on behalf of Exxon's Board of Directors, Cowper picked up the phone and arranged a secret meeting with Exxon Chairman Lawrence Rawl. It was Rawl's suggestion that they meet halfway between Exxon's New York office and Juneau, a symbolic gesture Baily considered significant.[40]

Cowper and his attorney general flew quietly out of Juneau on a Saturday morning without announcing their schedule to the press. They met socially with Rawl, Exxon President Lee Raymond, and company Executive Vice President Jack Clarke that evening in a Salt Lake City hotel suite and did not discuss the *Exxon Valdez*, the oil spill, or litigation. The next morning they met again, this time very business like. They talked about the possibility of a joint federal-state settlement of criminal and civil litigation and learned that they had at least one thing in common – neither party trusted the Department of Justice. Possible settlement terms were not discussed.[41]

That meeting led to a second secret meeting in Seattle in August, this time without Cowper or Rawl. Baily and Chief of Staff Garey Peska spent two days meeting with Raymond and Clarke discussing parameters of a potential settlement and avenues to get there. Iraq invaded Kuwait that same morning, which would turn out to have monumental financial consequences for both Alaska and Exxon, yet neither side tolerated interruptions.

It was clear during the second meeting that the federal government had to get involved in negotiations, but fallout from the aborted federal settlement made it unlikely that talks would progress soon.[42] According to Baily, both the Department of Justice and Exxon refused to take the first step and initiate meetings with the other. Instead, the state played this role, inviting both parties to a settlement meeting that never took place. Before the meeting came together, the parties decided that it was too late for the Cowper Administration to be negotiating on behalf of the state. It was better, they reasoned, to wait for Wally Hickel and his new attorney general, Charlie Cole.

When Hickel took his oath of office on December 3, 1990, he vowed that a settlement with Exxon would be a top priority for his administration.[43]

Based on nothing other than his "personal knowledge" of Prince William

Sound and an inner voice he referred to as "the little man," Hickel unilaterally announced his desire for a "global settlement" resolving the governments' criminal and civil litigation, for a total of $1.2 billion.[44] At least that is the popular version of the story. But another possibility is that Hickel took his cue from a report prepared by the state's *Exxon Valdez* litigation team. This report provided a thorough history of Cowper's and Baily's discussions with Exxon and estimated a potential settlement figure of "at least $1 billion."[45] Nevertheless, Hickel certainly brought his own style to the settlement effort. Any settlement, he said, should be used to acquire timber rights throughout Prince William Sound and establish the area as a "world class marine park."[46, 47]

To bring all parties to the bargaining table, Hickel acted first on a diplomatic level. Cole had met with federal attorneys twice during his first month on the job and found that any strains between the Department of Justice and the State of Alaska had evaporated along with Cowper's administration. Federal attorneys, led by Stewart, were very interested in working with the state and Exxon in formulating a settlement.

At Hickel's request, Exxon Chairman Lawrence Rawl flew quietly into Juneau on the Exxon corporate jet on January 15, 1990. The low-profile meeting was not announced and did not appear on the governor's official schedule, which is released to reporters. Also attending the meeting were Alaska Attorney General Charlie Cole, Chief of Staff Max Hodel, and Exxon executives Raymond and Clarke.[48] The meeting was friendly and short – about 45 minutes – during which Hickel casually floated his pricetag for settling the Exxon litigation.

"While I was talking, I said I thought this could be settled for about $1.2 billion, and I kept right on talking," Hickel said two months later while presenting the newly reached settlement to a joint session of the Alaska Legislature. "He (Rawl) finally got a word in edgewise and said, 'Governor, that's a lot of money.' But, he didn't say 'no.' I knew he was thinking and I thought deep down inside, I know this can work."[49]

Before adjourning that meeting, Hickel and Rawl agreed that one would not make a move without involving the other. Hickel wanted to keep negotiations at the highest possible level.

Two days later, Clarke called Cole with news of what seemed to be a major setback. Exxon, he said, would not participate in negotiations or discussions about the civil case or seek a joint settlement. It's not that Exxon wasn't interested in the idea, he told Cole, but it was not ready at that time to make such a move.

Unswayed by Exxon's rebuff, Hickel asked the Department of the Interior to arrange a second meeting. It was Cole's idea, hoping to take advantage of the necessary working relationship between Interior, which offered exploration permits on millions of acres of lands, and Exxon, the oil giant. If Interior Secretary Manuel Lujan asked for a meeting, Rawl could hardly say no. Two weeks later,

on January 28, Hickel and Rawl met again, this time in Washington, D.C. along with a virtual mini-cabinet of the Bush Administration. Secretary of Transportation Samuel Skinner, Secretary of the Interior Lujan, Environmental Protection Agency Administrator William Reilly, and Richard Stewart, sitting in for Attorney General Thornburgh, each attended the meeting to evaluate the potential for a wide-ranging settlement involving all the governments' claims against Exxon.

Cole recalled the meeting as friendly and frank. Exxon Chairman Rawl maintained that he felt Exxon was in a good position to go to court and Stewart and Cole both responded that they were ready and willing to go that route, if needed. The hope was to provide all parties with some security and Exxon some good will by negotiating a settlement. Rawl remained unconvinced through much of the meeting, complaining about the billion-dollar pricetag, according to Cole, until Skinner broke the stalemate by nudging Rawl into action. "Come on, Larry. Get off it," Skinner reportedly said.[50] That simple informality changed the demeanor in the room, Cole remembered, and it seemed to bring Rawl to the conclusion that negotiations were worth investigating.

Negotiations

Negotiations would not be conducted by staff attorneys and then marched up the corporate and political ladders for approval. All discussion started at the top and stayed at the highest levels until it was time to work out the legal wording of the documents. Cole led the effort for the state, Stewart for the Department of Justice, and Raymond and Clarke for Exxon.

They met on and off again for six weeks, with Exxon occasionally threatening to pull out. The corporation seemed more interested in settling the criminal portion of the litigation and leaving the civil portion for another time. That may have been a negotiating tactic to split the federal and state governments or it may have been that Exxon did not believe such a complicated joint settlement could be reached in such a short time. The criminal trial was coming up in less than three months making settlement of the five criminal counts more of an immediate concern. And the civil portion of the settlement required more attention than the rather straight-forward plea agreement.

Each side in the negotiations had a deal breaker that it could not live without. Federal attorneys were pushing for a reopener clause in the civil settlement that would allow the case to be revisited after restoration funds were spent. This was to be done as a precaution to allow recovery for damages that were unforeseeable at the time of the settlement but may become evident in the following 14 years. Exxon balked at such a clause, even though reopeners had become a routine part of restoration settlements. Exxon, in turn, wanted to be exempt from any future litigation involving Alyeska Pipeline Service Company, a consortium of seven oil companies which operated the Trans-Alaska Pipeline and terminal. Exxon owned

22 percent of the pipeline and did not want to be held accountable twice for the same oil spill. It wanted a guarantee that it would be reimbursed by 22 percent of any settlement negotiated with Alyeska.

For the state, the only deal breaker was the price. Hickel had been very public about his pursuit of $1.2 billion and it seemed that the magic number was anything over $1 billion. Exxon was not willing to pay that much, but recognized the political nature of the billion-dollar threshold. By stretching $900 million in payments over a 10-year period and including the $100 million criminal settlement and $100 million reopener, Hickel could lay claim to his billion-dollar settlement. The true cost to Exxon, however, would be considerably lower.

Simultaneous with the Exxon negotiations, the federal and state governments were also negotiating with each other over how the settlement fund would be used and, more to the point, who would control its use. If there was a chink in the state and federal wall of unity, it concerned the injured resources and which agencies, state or federal, were responsible for restoring which species. In other words, who owned the natural resources? This was a source of friction between the federal and state governments and a source of frustration to Exxon. Attorneys for Exxon filed a request with the court to clearly lay out who has a right to collect damages for oil spill injuries to the natural resources. If a harlequin duck was oiled, who should be compensated for its death? Was it a federal duck or a state duck? Did Alaska Natives who subsist partly on ducks have a right to collect for that duck, in addition to compensation paid to the government? And what about sport hunters and bird watchers and sightseers and tourism operators?

"My thoughts were that we had to share the civil settlement equally, because we could not get into a squabble over who was entitled to receive the damages for the various injured resources," Cole said. "If we got into litigation with the federal government, it would have played directly into Exxon's hands. It would have taken 10 years to litigate in court."[51] Stewart agreed, saying it would have been "a nightmare because Exxon could have divided and conquered."[52]

The governments eliminated the question over who has trusteeship over natural resources by agreeing to act as co-trustees. They hammered out a Memorandum of Agreement that established a Trustee Council to act on behalf of the injured ecosystem. This memorandum also provided a framework for how the Trustees would use the money to restore the environment and provide for public input into their decisions.[53]

Although they agreed to share the civil settlement, the state had no legal claim on any criminal fines resulting from the oil spill. Late in the negotiations, Cole told Attorney General Thornburgh that to maintain a sense of unity, the state and federal governments should likewise share the $100 million criminal fine equally. Cole argued that such a fund would be popular with Alaskans and help win the support of the Alaska Legislature. Thornburgh was quick to agree. Just by asking,

Alaska suddenly had its own $50 million restoration fund.[54]

Public pressure

Negotiations were held behind closed doors, but they could hardly be described as secret. The state's two largest daily newspapers, the Anchorage Daily News and the Anchorage Times, each had reporters in Washington, D.C. reporting every tidbit of information and inviting all interested parties to speculate on potential settlements. Most national media also followed the story. The constituencies keenly interested in the settlement talks were substantial, powerful and vocal. They included the Alaska Legislature, dominated by a Democrat-controlled House unfriendly to Hickel's conservative agenda; Alaska Natives, who claimed ongoing injury not only to their livelihoods, but to their subsistence way of life; Alaska Native corporations, whose land was contaminated by *Exxon Valdez* crude; state and national environmental groups, which had their own agenda beyond the monetary confines of a settlement; commercial fishermen, who not only sat out the 1989 fishing season, but also worried about how worldwide perception of the oil spill would affect long-term pricing and marketing; private plaintiffs, more than 18,000 individuals and businesses that were suing Exxon for damages; Congress, in particular George Miller, D-CA, serving as chair of the House Interior and Insular Affairs Committee; the "Oiled Mayors," a group of community leaders from throughout the spill region who organized to become a political force on *Exxon Valdez* issues; and, finally, the media, which wasn't about to give up on what was rated the number one news story of 1989 and the biggest environmental story of the century.

Each of these groups had its own reason for concern, whether it was financial, political, or personal. Despite closed-door negotiations, attorneys felt the pressure of all these constituencies looking over their shoulders. What started out collectively as cautious optimism on the part of these groups quickly transformed into anger and distrust. During a 48 hour period, Feb 13-15, 1991, the anger boiled over in Alaska and in Washington, D.C., as several groups took action to have their say in the settlement talks. Alaska Natives demanded to have a seat at the negotiating table to protect their interests.[55] Congressman Miller demanded that any settlement should be subject to public scrutiny and approval.[56] The Alaska Legislature threatened to pass laws giving it approval authority over any legal settlements over $10 million.[57] The "Oiled Mayors" sought and received a briefing from Hickel on the settlement talks and the state's goals.[58]

On February 14, the Boston Globe and the Wall Street Journal each reported details of the negotiations supplied by an unnamed official. For the first time, the public learned that Hickel's $1.2 billion settlement proposal would allow payments over a 10-year period, seriously deflating the real dollar value. The newspapers also reported that the civil portion of the settlement would be tax deductible, meaning

the federal taxpayer would ultimately pick up much of the tab.[59, 60]

The idea that east coast newspapers knew more about negotiations than Alaska legislators infuriated the majority party (Democrats) and together they staged an old-fashioned uprising. Several state senators and representatives stormed the governor's office and demanded a briefing from Gov. Hickel. They brushed aside the governor's staff, walked into Hickel's personal office without invitation, and got what they wanted.[61]

Central to the nervousness of all parties was that no one, other than a few government attorneys, had any idea how much environmental damage was actually done by the oil spill. The level of oil spill injury remained a secret to protect the litigation efforts. Therefore, no one could evaluate whether an expected $1.2 billion settlement over 10 years was adequate compensation. Speculation and rumor set the damage at somewhere between $3 billion and $10 billion,[62] and anyone willing to accept the higher range was quick to criticize a settlement in the ballpark of $1 billion. Cole, meanwhile, steadfastly refused to offer the public any hint about the overall damages.

National environmental groups had their own angle on the settlements. They argued in the media, to Congress, and to their members that the real motivation behind a quick settlement had less to do with oil spill restoration and more to do with future oil exploration. The Hickel and Bush administrations were united in the attempt to open the Arctic National Wildlife Refuge (ANWR) for drilling and oil production. Preventing drilling in the arctic refuge, which is thought to contain the largest onshore oil deposits remaining in the United States, has been ranked as the number one goal of several national environmental organizations. Several groups were eager to point out that a quick settlement with Exxon was being orchestrated in hopes of moving beyond the oil spill and, ultimately, opening the refuge to oil drilling. They worried that the government was selling the public short on this settlement as a public relations move to pave the way for oil development.[63] This was a legitimate point to make. Many in the oil industry and in the political arena considered the *Exxon Valdez* oil spill as an unfortunate stumble in the effort to allow drilling in ANWR. Several influential policy makers, including Hickel, believed that the refuge would never be opened until the nation could put the spill behind them. Hickel, in fact, was in Washington, D.C. promoting the opening of ANWR at the time the settlement was signed. Earlier on the day of the signing, Hickel testified before the Senate Energy and Natural Resources Committee in support of drilling in ANWR.[64] On the federal side, however, Stewart reports that consideration of ANWR did not influence his decisions nor did he ever hear it brought up at any level during discussions about negotiations.[65]

Private plaintiffs in the class action suit against Exxon were concerned that the settlement of the governments' claims would undermine their ability to eventually collect for oil spill damages. They argued that a true global settlement would

include all injured parties. The governments and Exxon, however, showed no interest in expanding the depth and breadth of negotiations to include the varied claims of 18,000 individuals.

Alaska Natives were the most vocal of the plaintiffs. The media readily wrote about their concerns and members of Congress were quick to come to their side to ensure that any settlement by the federal government did not adversely impact Alaska Natives. On March 5, as rumors of an imminent settlement spread from the nation's capital to Alaska's capital, three Alaska Native corporations[66] filed suit in district court in Washington D.C. to block any settlement. Two days later, lawyers on behalf of spill-area Natives followed suit.

On March 8, as Cole announced that a settlement was close, U.S. District Judge Stanley Sporkin issued an injunction that forbid the signing of any settlement until after a hearing could be held. After seeking and receiving assurances that nothing in the settlement would negatively impact the ability of private plaintiffs to pursue civil damages from Exxon, Sporkin lifted the injunction, but not until after delivering a threat from the bench, that "hell hath no fury like a judge scorned."[67] He retained jurisdiction of the Natives' lawsuit in the event that the issue was reopened.

Later that night, near midnight March 12, 1991, a settlement was reached and signed by all parties. Hickel and Rawl each attended the signing, keeping their promise that neither would make a move without the other.

Reaction and rejection

Reaction from around the nation was immediate, tempered with equal parts criticism, praise, and amazement that such a complicated and sizable settlement could be reached so swiftly. The $900 million civil settlement was, in fact, "80 times the size of the largest previous natural resources recovery by the United States or any government."[68] The criminal fine was 20 times the previous record for an environmental crime. It was considerably more than the sum total of all environmental fines collected by the U.S. government to that date.[69] Yet, the first and loudest criticism was that Exxon got off too cheap. Exxon announced first quarter profits of $2.4 billion while the settlement was still under review.[70] In the face of such wealth, critics charged that a $1 billion settlement paid out over 10 years was barely a slap on the wrist. Chairman Rawl added fuel to that fire during a March 13 press conference, saying Exxon wouldn't even notice the billion-dollar payout on its bottom line. "The agreement in my view and that of the board is that it's in the interest of shareholders," Rawl said. The settlement "will not have a noticeable effect on our financial results."[71]

The Associated Press, the Congressional Research Service (at the request of the House Merchant Marine committee), and the Alaska Permanent Fund Corporation (at the request of the Alaska Legislature) each did analyses of the settlement and came up with real-dollar (1991) values for the settlement. Each showed the cost

of the settlement to Exxon as being roughly half of the $1 billion figure being touted. Considering the effects of inflation and tax deductions allowed as part of the civil settlement, the real-dollar cost of the package to Exxon was estimated at $421 million to $524 million.[72] Even without such an analysis, it was clear that the first $170 million would go to reimburse the federal and state governments for expenses involved in litigating the case and conducting damage assessment studies. Exxon would also be reimbursed up to a maximum of $40 million for any costs involved in cleaning up the spill after January 1, 1991. That cut deeply into the $900 million restoration fund, eventually leaving only $686.9 for restoration over a 10-year period.[73]

Criticisms of the settlement were both broadly based, with critics arguing that the case should simply go to court to allow a jury to assign damages, and specific. In addition to the complaints already mentioned, critics also argued that:

- The establishment of a trustee council as the spending authority for the restoration funds was in violation of the Alaska Constitution, which clearly places the Alaska Legislature as the only body with spending authority over state funds.
- It damaged the chance for private plaintiffs to obtain a settlement with Exxon because it removed the threat of greater criminal sanctions and the pressure of the state lawsuit. The settlement removed any chance of a truly "global settlement."
- The amount available for restoration ($687 million after reimbursements) was not enough to buy timber rights in Prince William Sound.[74]

The criminal plea agreement and the civil agreement were technically tied together in the joint settlement. But, in theory, the civil agreement could continue to stand even if the plea agreement was rejected by the court. Exxon and the state each had the choice to continue with the civil settlement in the absence of a criminal settlement.

While the criminal plea agreement was subject only to the final decision of U.S. District Judge H. Russell Holland, it also called for public comment. The terms of the agreement called for Holland to accept written testimony until April 18. Exxon and the U.S. Attorney's Office each had 15 days after public testimony to withdraw the agreement. That set the deadline for final approval on May 3, 1991. Holland scheduled his decision on the matter for April 26.

Meanwhile, the civil agreement was subject to review by the Alaska Legislature. This step was not required in law, but it did fulfill a promise made by Hickel to give the Legislature a chance to endorse or reject the entire settlement.[75]

Upon announcement of the settlement, critics were easy to find, yet Alaska's major daily newspapers each endorsed the civil settlement and Alaska's legislators were predicting it would pass legislative scrutiny. Despite the many questions

surfacing about the settlement, there appeared to be more relief than heartburn that litigation had come to a quick conclusion.

Hickel told a joint legislative session that the state had negotiated the best deal it could get. He predicted that an extended lawsuit might end up with a payoff as little as $500 million, minus legal fees, which were accumulating at a rate of $1 million a month.[76]

The Alaska House and Senate each set up special committees to review the pact. Daily hearings were held and the same issues noted above arose at almost every hearing. Committee members argued strongly for Attorney General Cole to release the spill studies. Cole countered that releasing the studies would put the state at serious risk in court. He refused to release the data until private plaintiffs released the state from claims arising from the oil spill. The public and legislative criticism continued until Cole pointedly told the special committee that he would release the data if the Legislature would adopt a joint resolution taking full responsibility should the information "be used against the state and the state treasury."[77] Placing the responsibility of releasing data squarely on the shoulders of the Legislature had the effect of quelling the constant call (from legislators, at least) to make the information public.

Two days later, April 8, 1991, federal attorneys filed a "Summary of Injury" report in federal court that provided a sketch of the damage and ongoing injury from the oil spill. Preliminary findings in the report showed that "more fish, birds and animals died than previously suspected, death rates continue to be higher than normal, shellfish continue to absorb oil, and recovery for some species may take decades."[78] Legislators, who had received confidential briefings on the results of spill studies, were not as surprised by the gloomy report as environmentalists and other interested parties appeared to be.[79]

Public testimony before the legislative committees ran strongly against approval of the settlement.[80] Hickel, meanwhile, commissioned a poll showing that the majority of Alaskans approved the pact.[81] Legislators were publicly describing it as a no-win situation. If they approved the pact, they could be settling for cents on the dollar and letting Exxon off the hook. If they rejected the settlement, it could easily mean years of expensive litigation and possibly decades before Exxon money would be available for restoration. The House asked Judge Holland to delay his decision on the plea agreement in the criminal case until May 3, thus buying more time to wrangle over the matter. Holland refused.[82]

On April 26, 1991, Holland rejected the plea agreement, saying the fine was not sufficient to deter environmental crimes. "I'm afraid these fines send the wrong message which suggests spills are a cost of business which can be absorbed," Holland, said.[83] Stewart felt that Holland was reacting to Exxon's Rawl, who previously stated that the customer ultimately pays for everything and the costs will be covered at the pump.[84]

Holland's decision shocked everyone. He was considered an oil industry insider, representing several oil firms in Alaska before being named to the bench in 1984 by President Ronald Reagan. He was a former partner of Sen. Ted Stevens, R-Alaska, and considered a cautious, conservative jurist. Plea agreements are generally considered favorably when brought before a judge and the Exxon agreement was thought to be plenty strong enough for approval by Holland.[85]

Hickel was enroute to Seattle at the time of the decision and didn't learn about it until he encountered a throng of media and cameras at the airport gate as he stepped off the plane. Hickel was described as clearly upset, but managed to return to the main point for the State of Alaska. "That's the judge's decision," he said. "It has nothing to do with our civil settlement."[86]

Though that may have been technically true, the civil and criminal settlements proved to be inescapably tied. Cole asked the Legislature not to act on the civil settlement until after Exxon confirmed that it wanted to stay in the deal. That decision was due May 3.

But, the failure of the plea agreement appeared to give strength to the arguments against the civil settlement. The House special committee provided Cole with a set of demands they wanted presented to Exxon. In effect, legislators sought to renegotiate the package. The committee wanted to: 1) require that Exxon pay $700 million up front instead of $900 million over 10 years; 2) prohibit settlement payments from being deductible from Exxon's state taxes; 3) include two legislators as non-voting members on the Trustee Council; 4) require legislative approval before any of the state's share of the money could be spent; 5) release confidential scientific and economic studies unless the state could show that the information would hurt the state in pending litigation; and 6) require the state and Exxon to enter good faith negotiations with the private plaintiffs.[87]

Cole refused to deliver the new demands to Exxon's attorneys, saying it would be inappropriate. On May 2, the House twice rejected the negotiated settlement. The Senate never voted, saying such a vote was not necessary until after Exxon decided whether it wanted to keep the deal intact. Hickel briefly threatened to approve the deal anyway, but it was clear the battle was lost. The State of Alaska and Exxon each exercised their right to pull out of the agreement on May 3.

The rejection of the plea agreement and the lost battle over the civil settlement did not devastate the attorneys involved, several of them said years later. The lawyers considered the settlement – both criminal and civil – fundamentally solid for all parties.[88]

The second settlement

Compared to the heavily publicized negotiations and the drawn out review process endured during the doomed first settlement attempt, the second settlement was without any such hurdles, hoops, or hoopla.

Negotiators on all sides were not anxious to reopen discussions. Stewart said there would be no new negotiations unless Exxon agreed in advance to put more money on the table. At a July 16 meeting in Seattle, Raymond and Clarke said Exxon had no intention of paying more, but it would be willing to reconfigure the dollar amount to give it a different look. With this stalemate, it would take another six weeks before all sides were willing to return to the bargaining table.

Meanwhile, things were changing at the Department of Justice. In June, Richard Stewart resigned for personal reasons, after the disappointment of two failed settlement attempts. One month later, his former boss Richard Thornburgh, also resigned. According to Cole, neither resignation would have an impact on reaching a settlement with Exxon.

In anticipation of a second settlement attempt, state and federal negotiators noted several of the potholes that eventually caused the first settlement to break down. They filled them one by one to create a more bump-free surface before traveling down the settlement road again.

They first settled the question over who owns the natural resources. The Memorandum of Agreement between the federal and state governments, discussed and mostly written during the earlier negotiations, was finalized and filed in federal court on August 28, 1991.[89]

The concern by Alaska Natives that the settlement would harm its chances to collect damages from Exxon was alleviated on September 25, 1991. The governments and Alaska Native groups filed an agreement that day that called for sharing the detailed damage assessment studies and economic analyses in return for dismissal of any claims against the state for its role in the failed initial response to the spill.[90]

Similarly, the governments reached an agreement with many of the other private plaintiffs suing both the state and Exxon. That agreement called for private plaintiffs to release the state and federal governments from all claims arising from the oil spill in return for access to scientific information.[91]

In addition to the three agreements filed with the courts, the Hickel administration won the backing of the Alaska Legislature to make a second attempt. Within weeks after rejecting the first settlement, the Alaska House voted 39-0 to seek a second settlement.[92] The loosely worded resolution was crafted by House and Senate leaders after Hickel pressed the issue. He wanted the Legislature to send a message to the federal government and to Exxon showing their interest in renewing settlement talks.

With the three agreements in place (although not necessarily filed with the courts) and backed by the legislative resolution, government negotiators again met with Exxon. This time, negotiations were handled quietly, with very little media coverage and little public pressure. Although there was early speculation that talks would resume, it wasn't until September 21 that the Associated Press

reported that negotiations were underway. One week later, a second settlement was announced.

The headline in the Anchorage Daily News (September 30, 1991) was: "2nd spill settlement looks like the 1st." And, indeed, the bottom line had barely budged. Exxon had committed itself to pay out $1.025 billion, just $25 million more than the first settlement.

After Judge Holland rejected the $100 million plea agreement in April, saying it did not send a strong enough message to deter future oil spills, analysts and writers around the country were loudly asking the question: "How much is enough?" Based on the Criminal Fine Improvement Act, the fine could go beyond $600 million. But, what would Holland consider reasonable deterrence?

Rather than answer that question, the second settlement seemed to deepen the mystery. How could a mere $25 million dollars in additional fines send a stronger message to a corporation that counts its quarterly profits in the billions of dollars? After the second settlement was accepted and signed by Holland on October 8, 1991, analysts declared Holland's actions as contradictory and without explanation.[93] But, Holland himself attempted to provide the answer.

He told the packed courtroom that the structure of the plea agreement was important to him. Instead of the $100 million criminal fine, the second agreement fined Exxon $150 million with $125 million of that forgiven in recognition of its cooperation in responding to the spill and paying some private claims. Added to the fray was criminal restitution of $100 million, again to be split evenly between the federal and state governments. Whereas a criminal fine is based on statutes and goes into the federal treasury, restitution can be specifically dedicated to make amends for the crime committed.

On paper, then, the fine is more than double the first agreement. Yet, it recognizes the $2.1 billion already shelled out by Exxon and asks the judge to take this effort by Exxon into consideration in sentencing. "What is now very clear to me is that Exxon has been a good corporate citizen," Holland said. "The fact that immediately after the spill Exxon stepped forward, both its people and its pocketbook, and did what it had to do . . ."

"While some have characterized it as smoke and mirrors, the structure of this plea agreement is important," he said. "What it says to others in the industry is you can expect fines that are off the chart in response to oil spills off the chart. If you accept and live up to your legal responsibilities, you will get credit for it."[94]

Key, perhaps, to Judge Holland's acceptance of the settlement was the presence in the courtroom of Exxon's chairman, Lawrence Rawl. Many believed that Holland rejected the first settlement package, in part, because of Rawl's callous-sounding statements about passing on the cost of the settlement to consumers. To offset those remarks, Rawl flew to Anchorage to appear before Holland and apologize on behalf of the corporation for the spill and its repercussions. "That

was the most important factor (in Holland's approval)," said Stewart, " not the numbers, but Exxon's or Rawl's conduct." [95]

The bottom line of the civil settlement remained unchanged, except for one significant clause. The second settlement had no provision for submitting the matter to the Legislature for review. After his earlier experience, Hickel vowed he wouldn't make the mistake of seeking legislative approval again. He kept to his word.

The fact that the Alaska Legislature was not in session, also helped. Key to the legislative acquiescence, however, was that legislators from the spill region, who had earlier spearheaded the fight against the first settlement, had decided to accept it the second time around (although not enthusiastically).[96]

The U.S. Congress, however, was in session and a House Budget Committee task force held a one man hearing about the new settlement. Rep. Frank J. Guarini, D-NJ, was the only member of the task force to show up for the hearing, but took the opportunity to berate Cole and federal negotiators for their roles in letting Exxon off the hook. [97]

An analysis of the second settlement by a consultant to the Alaska House Judiciary subcommittee concluded that the second settlement saved Exxon $5 million over the first. This was due to federal tax deductions allowed. While the criminal fine was not tax deductible, the restitution could be deducted from federal taxes. [98]

In short, the second settlement was a better deal for the state and for Exxon when compared to the rejected first settlement. The state gained because the $50 million federal portion of the restitution was dedicated for restoration, to be spent in the spill region. The federal government, however, gave up about $5 million in future taxes from Exxon.

Now that a settlement was reached, the next step was for the governments to wrap up their damage assessment studies and begin the job of restoring the environment, even while injury to natural resources was ongoing and oil remained imbedded in miles of shoreline.

Negotiation epilogue

In February 2001, almost 12 years after the spill, Charlie Cole sat in his old Anchorage attorney general's office and recalled negotiations day-by-day. He had been back in private practice in Fairbanks since January 1994 and much of the detail of the 10-year old negotiations was lost to his memory. To combat this, Cole gathered his old team around him again – Herman, Tillery, and Donahue – and each brought detailed notes from nine months of meetings and negotiations. Other than the memories and personal notes of the main negotiators involved, there is no public record on how the negotiations came about.

Cole wrapped up the seven hour descent into his notes, by recalling a Febru-

ary 22, 1991 meeting in Richard Stewart's office. After six weeks of negotiating, each of the parties had just agreed to an outline for the settlement. According to Cole, Exxon's Raymond made a little speech to sum up the moment. "We've now reached agreement," Raymond supposedly said. "And I want to say that if any Exxon lawyer causes difficulty to writing up this agreement, I'm personally going to fire him."

There was no bluffing, no blustering, no posturing, and no fear that Exxon was going to storm out, Cole added. "We didn't have any problems with any Exxon lawyers," he said. "If you don't deal in these agreements for a living, you have no idea how petty and picky and difficult lawyers can get in putting an agreement together. But we did not have a problem putting this agreement together."

Comparison of Settlement Agreements

	Rejected *March 1991* Civil Settlement and Criminal Plea Agreement	**Approved** *October 1991* Civil Settlement and Criminal Plea Agreement
Criminal Fine *not deductible from corporate taxes*	$50 million *to federal government, unrestricted*	$150 million – $125 million* $25 million *$12 million to Victims of Crime Fund; $13 million to Wetlands Conservation Fund* ** Forgiven in recognition of Exxon's response to the oil spill*
Criminal Restitution *tax deductible*	$50 million *to state, restricted for use in restoration of the oil spill region*	$50 million to state $50 million to feds *restricted for use in restoration of the oil spill region*
Civil Settlement *tax deductible*	$900 million *paid over a period of 10 years to joint trust fund for restoration of spill region*	$900 million *paid over a period of 10 years to joint trust fund for restoration of spill region*
Reopener	$100 million *for injury that could not be foreseen at time of settlement, can be invoked from 2002-2006*	$100 million *for injury that could not be foreseen at time of settlement, can be invoked from 2002-2006*

Figure 1.1. Although the structure of the final settlement differed from the first failed attempt, the bottom line barely changed.

Footnotes - Chapter One
The Making of a $1 Billion Settlement

1. Exxon Corporation reported sales of $96.3 billion and profits of $3.51 billion in 1989, the year of the spill. The corporation merged with Mobil Corporation in 1999, making it, at the time, the world's largest corporation.
2. Remarks of Craig Tillery, Report to the Nation, Legacy of an Oil Spill: 10 Years After *Exxon Valdez*, March 23, 1999.
3. Personal communication, Craig Tillery, January 7, 2000.
4. Personal communication, Craig Tillery, January 7, 2000.
5. After outside litigation costs passed the $10 million mark, the Legislative Budget and Audit Committee investigated the use of emergency procurement for the hiring of Preston Thorgrimson Shidler Gates and Ellis and concluded that the Department of Law did not follow proper procedures. The audit supported the use of emergency procedures, but was critical of the Department of Law for ignoring some administrative requirements. The audit said that the department used the "grapevine" for advertising the Request for Proposals and prospective firms were given inconsistent information. Nevertheless, eight firms submitted proposals and were considered for the contract.
6. Personal communication, Doug Baily, February 21, 2001.
7. The government was, in fact, too late to hire some of its preferred experts. Exxon had already contracted with top economists, for example, either using them for oil spill work or simply tying them up so that they could not work with the government. At one point during litigation, the state and Exxon each found themselves wanting to use an expert that the other had hired. The consultants were eventually traded between the state and Exxon like players on a baseball team. Personal communication, Craig Tillery, January 7, 2000.
8. Personal communication, Doug Baily, February 20, 2001.
9. Personal communication, Richard Stewart, October 2001.
10. Personal communication, Doug Baily, February 20, 2001.
11. The American Lawyer, June 1990, *How the oil spill settlement exploded*, by William Horne.
12. The American Lawyer, June 1990, *How the oil spill settlement exploded*, by William Horne.
13. Personal communication, Richard Stewart, April 2001.
14. The American Lawyer, June 1990, *How the oil spill settlement exploded*, by William Horne.
15. Personal communication, Richard Stewart, April 2001.
16. Personal communication, Doug Baily, February 20, 2001.
17. Anchorage Daily News, February 28, 1990, *Federal grand jury indicts Exxon*, by Patti Epler.
18. The need to answer this question led to a public relations fiasco for the scientists conducting the damage assessment studies and for litigators from both the federal and state governments. To determine how many seabirds were actually lost (considering 36,000 carcasses were found), researchers set out to learn the proportion of dead and oiled seabirds that wound up on shorelines. To do this, researchers killed more than 200 seabirds, covered them in oil, and set the carcasses out to sea. The media reported this story worldwide. Individuals and environmental groups protested vehemently, although after the fact.
19. Gardner Brown, Jr., *Replacement costs of birds and mammals*, December 1992.
20. Personal communication, Barbara Herman, February 17, 2001.
21. Richard T. Carson, et al., *A contingent valuation study of lost passive use values resulting from the Exxon Valdez Oil Spill*, November 10, 1992.

22. Charlie Cole, personal communication.

23. Personal communication, Richard Stewart, April 2001.

24. In his analysis of this case, Stephen Raucher (*Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, Ecology Law Quarterly, Vol, 19:147, Pg 162, 1992), argues that criminal prosecution for unintended oil spills was never intended by Congress. Section 309, which deals with criminal penalties, does reference Section 311, which deals with oil spills, but only as it concerns civil penalties. Since the Clean Water Act does directly reference civil penalties for oil spills, but fails to directly reference criminal penalties, it "indicates that criminal prosecutions for unintentional spills were not intended." Raucher also wrote: "Interpreting section 301 to cover oil spills essentially creates strict criminal liability under the CWA for unintentional oil discharges, since virtually all oil spills will involve some degree of negligence. If Congress intended this fairly draconian result – and the legislative history suggests otherwise – it chose a particularly circuitous route to achieve its goal."

25. When Congress passed the Oil Pollution Act of 1990 (OPA90), it reinforced the prosecutors' interpretation of the Clean Water Act by overhauling section 311 and criminally sanctioning those responsible for oil discharges under section 309.

26. 33 U.S.C. ss 407, 411 (1988). Section 407: It shall not be lawful to throw, discharge, or deposit, or cause, suffer, or procure to be thrown, discharged, or deposited either from or out of any ship, barge, or other floating craft of any kind . . . any refuse matter of any kind or description whatever . . . into navigable water of the United States . . . .

27. 16 U.S.C. s 703 (1988). The statute makes it unlawful "to pursue, hunt, take, capture [or] kill" migratory birds.

28. Personal communication, Richard Stewart, October 2001.

29. Ports and Waterways Act: 33 U.S.C. ss 1221-1232 (1988).

30. Dangerous Cargo Act: 54 Stat 1023 (1940) codified as amended at 46 U.S.C.ss 170-1706, 391a, 402, 414, 463a (1988).

31. Exxon personnel records, made public as a part of the National Transportation Safety Board hearings, showed that different supervisors recommended that Kagan not be promoted to able-bodied seaman because he was incapable of steering the ship. Kagan, a 15-year Exxon Shipping Company employee, was considered a very good deckhand but he was better with a paintbrush in his hands than the steering wheel.

32. Raucher, Stephen, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, Ecology Law Quarterly, Vol, 19:147, Pg 157.

33. Personal communication, Richard Stewart, April 2001.

34. Only one other criminal case treated a wholly owned subsidiary as an agent of the parent corporation. In that case, the United States v. Johns-Manville Corp, several subsidiaries and an officer of Johns-Manville were charged with violating antitrust statutes.

35. Bill of Particulars, United States v. Exxon Corp, at 26-28: "Under controlling law, a principal is criminally liable for the criminal acts of its agents committed within the scope of the agency. Agency is established by proof that one person or corporation was acting under the control of and for the benefit of another . . .Exxon Shipping and its employees . . . are the agents and subagents, respectively, of Exxon . . . Exxon established its subsidiary as its agent and bears responsibility for its agent's criminal activities."

36. Personal communication, Richard Stewart, April 2001.

37. Raucher, Stephen, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, Ecology Law Quarterly, Vol, 19:147, Pg 157.

38. Raucher, Stephen, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, Ecology Law Quarterly, Vol, 19:147, Pg 184.

39. Personal communication, Richard Stewart, October 2001.

40. Personal communication, Doug Baily, February 20, 2001.

41. Personal communication, Doug Baily, February 20, 2001.

42. Anchorage Daily News, March 14, 1991, *Hickel's idea, secrecy mark spill dealing*, by David Postman.

43. Hickel wanted all major court cases involving the state to be settled quickly. Several oil royalty tax disputes worth hundreds of millions of dollars were lagging. Negotiations with Exxon as well as negotiations over the many tax disputes with other oil companies were all put on the fast track. The result was a total of $1.5 billion in oil royalty settlements within two years.

44. Hickel said his "personal knowledge" was based on 30 years of boating in Prince William Sound. Associated Press (in the Anchorage Times), February 2, 1991, by Matt Kohlman, *Cole: $1.2 billion Exxon settlement "in the ballpark*."

45. Personal communication, C. Cole, B. Herman, C. Tillery, J. Donahue, February 17, 2000.

46. State of the State speech, January 22, 1991, before a joint legislative session.

47. Hickel's announcement was met with an equal mix of praise and skepticism from all sides of the political spectrum. Environmentalists expressed hope in the idea of buying timber and preventing widespread logging in Prince William Sound, but feared Hickel's penchant for building roads and opening up the area to more human impact. Conservatives liked the idea of opening up the area for recreational purposes, including new roads, marinas, and lodges, but they shivered at the thought of suppressing the timber industry with buyouts and locking up even more land by placing it in government hands.

48. Anchorage Daily News, March 14, 1991, *Hickel's idea, secrecy mark spill dealing*, by David Postman.

49. Anchorage Times, March 15, 1991, *Hickel pitches Exxon deal to lawmakers*, by Dirk Miller and Dave Patrick.

50. Personal Communication, Charlie Cole, February 17, 2001; Confirmed by Richard Stewart, October 8, 2001.

51. Personal Communication, Charlie Cole, February 17, 2001.

52. Personal communication, Richard Stewart, April 2001.

53. *Governments' Memorandum in Support of Agreement and Consent Decree*, October 8, 1991, Pg 4.

54. Personal Communication, Charlie Cole, February 17, 2001.

55. Anchorage Times, February 15, 1991, *Native groups rebuff Hickel's Exxon settlement plan*, by John Tetpon.

56. Anchorage Daily News, February 14, 1991, *Settlement of lawsuits near in Exxon case, Hickel says*, by David Postman.

57. Anchorage Daily News, February 14, 1991, *Settlement of lawsuits near in Exxon case, Hickel says*, by David Postman.

58. Anchorage Times, February 15, 1991, *Exxon deal worries coastal communities*, by Dirk Miller; Anchorage Times, February 16, 1991, *Cole confers with village mayors on Exxon Valdez spill settlement*, by David Futch.

59. Boston Globe, February 14, 1991, *Exxon reportedly gets years to pay damages*, by William Coughlin; Wall Street Journal, February 14, 1991, *Exxon appears to be close to settling Valdez suits for less than $1 billion*, by Allana Sullivan.

60. This was more a matter of tax law than oil spill negotiations. By law, corporations were allowed to deduct losses incurred in civil suits and restitution paid in criminal proceedings. Fines levied as a result of criminal action, however, are not tax deductible. The Alaska Legislature passed a law after the spill that disallowed oil spill damages and cleanup expenses from being deducted from severance taxes. The law was made retroactive to March 1, 1989. [AS 43.55.200(c)]

61. Anchorage Times, February 16, 1991, *Irked legislators face off at Hickel's office over cancellation of spill talks.*

62. Nine state and national environmental groups, in a letter to Judge Holland, referenced the $3 billion to $10 billion figure in urging the judge to reject the settlement. Anchorage Times, April 19, 1991, *Spill deal put under wraps*, by Dirk Miller. Anchorage Daily News, April 8, 1991, *Cole nudges critics*, by Natalie Phillips.

63. Boston Globe,March 15, 1991, *Questions follow Exxon settlement,* Diane Dumanski.

64. In the Anchorage Times, reporter E. Michael Myers wrote: "Both the Exxon settlement and the opening of ANWR are politically and legally interlocked, and the prospects of both being settled soon or cleanly are doubtful." (March 10, 1991*, Hickel in D.C. to boost ANWR opening*).

65. Personal communication, Richard Stewart, October 8, 2001.

66. Lawsuits were filed on behalf of Chenega , Port Graham , and English Bay corporations. A discussion of Alaska Native Corporations can be found on Page 113. Anchorage Times, March 7, 1991, *Exxon talks assailed*, by Jay Croft.

67. Associated Press, by Laurie Asseo, as it appeared in the Juneau Empire, March 13, 1991, *Oil spill settlement to cost Exxon $1 billion*.

68. Governments' Memorandum in Support of Agreement and Consent Decree, September 30, 1991, Pg 4.

69. The earlier record fine was paid by Allied Chemical Corp. in 1976 for the direct discharge of chemicals into Virginia's James River. Associated Press, as printed in the Juneau Empire, March 13, 1991, *Oil spill settlement to cost Exxon $1 billion,* by Laurie Asseo.

70. Profits were up due to high oil prices during the Gulf War. Exxon reported profits of $5.01 billion in 1990 from $117.08 billion in revenues. Associated Press, as printed in the Juneau Empire, April 26, 1991, *Exxon's fine: If $100 million isn't enough, what is?,* by Julia Rubin. Also, Reuters, as printed in the Anchorage Times, January 25, 1991, *Spill, war push Exxon profits up*.

71. This statement by Rawl would later come back to haunt Exxon. In 1994, during the punitive damages phase of the class action trial, jurors heard how a $1 billion settlement would "not have a noticeable affect" on Exxon's bottom line and, therefore, to truly punish Exxon would require considerably more. The jury set the punitive damages at $5 billion, although an appeals court reduced the amount to about $1.65 billion. Anchorage Daily News, March 14, 1991, *Exxon shrugs off $1 billion bill; plan for Sound may face shortfall*, by George Frost and Charles Wohlforth.

72. Associated Press, printed in the Anchorage Times, March 22, 1991, *Billion-dollar deal may cost Exxon only half that much,* by Michael J. Sniffen.

73. Exxon Valdez Oil Spill Trustee Council, 1997 Status Report, Pg. 28.

74. Anchorage Daily News, March 14, 1991, *Exxon shrugs off $1 billion bill; plan for Sound may face shortfall*, by George Frost and Charles Wohlforth.

75. The agreement called for legislative scrutiny, but technically it did not require legislative approval. The agreement still left the decision to Hickel.

76. Anchorage Times, March 15, 1991, *Hickel pitches Exxon deal to lawmakers*, by Dirk Miller and Dave Patrick.

77. Anchorage Daily News, April 8, 1991, *Cole nudges critics*, by Natalie Phillips.

78. Summarized in the Anchorage Times, April 10, 1991, *Legislators argue study's effect on deal*, by Daniel R. Saddler.

79. Anchorage Daily News, April 10, 1991, *Oil-spill answers raising questions*, by Charles Wohlforth.

80. According to the legislative count, 230 people offered testimony on the civil settlement: 71 percent against, 7 percent in favor, and 23 percent neutral.

81. The poll, by Dittman Research Corporation of Anchorage, randomly surveyed 536 Alaskans. Of those, 58 percent said the legislature should approve the settlement, 29 percent thought it should not be approved, and 13 percent were undecided or had no opinion. The question in the poll asked: "The Hickel administration, the federal government and Exxon have negotiated a settlement that would have Exxon pay approximately $1 billion over the next 10 years as payment for state and federal natural resource damage claims related to the oil spill. Do you think the state Legislature should or should not approve this settlement?"

82. The House Special Committee had previously sought a delay from Judge Holland and received, instead, a sharp

rebuke from the judge for meddling. The judge considered the request inappropriate. Associated Press, as printed in the Anchorage Daily News, April 24, 1991, *House panel asks delay of Exxon sentencing*.

83. In his ruling, Holland also expressed his frustration about the laws covering oil spills. He asked why a company faces criminal charges for accidents that kill animals while other companies are not charged for accidents such as plane crashes that kill people. "We're affording better protection to birds and sea otters," he said. Anchorage Times, April 25, 1991, *Exxon deal on the rocks*, by Desiree Humphrey.

84. Personal communication, Richard Stewart, October 8, 2001.

85. Anchorage Daily News, April 25, 1991, *Holland breaks with past*, by Charles Wohlforth.

86. Anchorage Times, April 25, 1991, *Seattle media nabs Hickel off guard*, by Jay Croft.

87. Anchorage Daily News, May 2, 1991, *House seems set against spill deal*, by David Postman. It's interesting to note that most of these demands were eventually met, with the exception of No. 1. The demand to include legislators on the Trustee Council was satisfied by placing two legislators as non-voting members of the Public Advisory Group.

88. "We thought it was a tweak, not an upheaval," Assistant Alaska Attorney General Tillery said. "The deal was fundamentally solid. It was a deal that was in the best interest of all the parties. It was pretty clear that it was going to go through eventually." Personal communication, January 7, 2000.

89. *Governments' memorandum in support of agreement and consent decree*, September 30, 1991.

90. *Governments' memorandum in support of agreement and consent decree*, September 30, 1991.

91. *Governments' memorandum in support of agreement and consent decree*, September 30, 1991.

92. Anchorage Times, May 21, 1991, *House asks Hickel to renew spill talks*, by Jay Croft.

93. Raucher, Stephen, *Raising the Stakes for Environmental Polluters: The Exxon Valdez Criminal Prosecution*, Ecology Law Quarterly, Vol, 19:147, Pg 181-182.

94. Anchorage Times, October 9, 1991, *Judge accepts Exxon settlement*, by Desiree Humphrey and Jay Croft. In an Associated Press report dated the same day, Exxon attorney James Neal said that attorneys did a poor job of educating Judge Holland the first time around about Exxon's environmental record.

95. Personal communication, Richard Stewart, October 8, 2001.

96. Anchorage Daily News, October 12, 1991, *Ex-critics support second Exxon deal*, by George Frost.

97. Associated Press, by Brian Akre, as printed in the Anchorage Times and Anchorage Daily News, October 12, 1991.

98. Anchorage Daily News, November 1, 1991, *Architects of spill deal endure Jersey lawmaker's one-man attack*, by David Whitney.

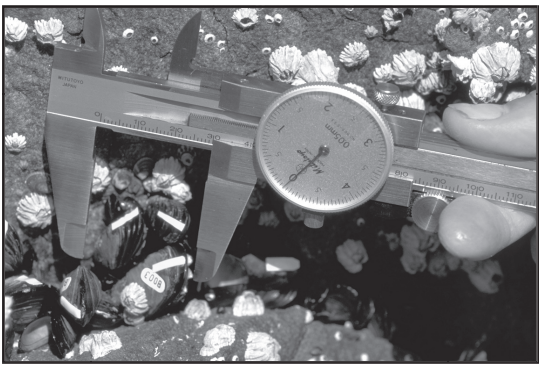


Photo by Roy Corral

Chapter Two

Assessing the Damage

Introduction

The myth — to the general public, at least — about the Natural Resources Damage Assessment (NRDA)[1] process is that tens of millions of dollars in scientific research was undertaken to ascertain the health of the spill-damaged environment and therefore provide guidance to subsequent restoration efforts. Although the research certainly benefited the scientific knowledge about individual species and helped in planning restoration, the truth is that NRDA, as spelled out in law, is for litigation. Its primary purpose is to document damage to resources so that the polluter can be forced in court to provide funding to restore the injured environment to its baseline condition.[2]

Litigation pervades the NRDA process throughout while, at the same time, an eye is kept on the restoration horizon. But without litigation, history has shown that restoration of an injured ecosystem does not occur fairly, fully, or even partially. State and federal governments do not normally dig deep into their own pockets to pay for expensive restoration activities in the absence of a court-sanctioned responsible party.[3]

Government scientists and lawyers embark down the NRDA trail together, each applying their skills to the process with different intents. The former are looking for the long-term and short-term consequences of man's misstep with nature. The latter are looking for someone to pay for that misstep so that the environmental damage can be fixed or mitigated. The scientist is interested in

pure research, focusing on the big and the small, and trained to work in an open forum where facts and hypotheses are on display and open for discussion. The lawyer wants to be more selective, focusing on that which will provide the best possible settlement with the spiller, while maintaining a cloak of secrecy over research results so as not to expose legal strategies.

Conflict within this process is inevitable. Those scientists conducting *Exxon Valdez* oil spill research for the federal or state government each had to sign a non-disclosure agreement, preventing them from discussing the results, except with other government scientists. This ran contrary to accepted practices of research in which peer review and debate play an essential role in scientific analysis of the data.[4] Many scientists complained publicly and privately over these restrictions and the public had no patience for such a gag order. The media argued that public funds paid for the research and that the public had a right to know the results. Government lawyers, meanwhile, considered their clients to be the natural resources – not the public. The natural resources were held in trust by the state and federal governments, and it was up to the governments to ensure that a court settlement would ultimately provide a chance for those resources to be restored.

At the same time that this legal and scientific tug-of-war played out, a management process was underway to plan for the big pay day in court. A Restoration Planning Work Group worked separately, but in cooperation with NRDA researchers and lawyers, to develop a plan of action for restoring the environment. In theory, this group would create a restoration plan, complete with a long-term budget, and lawyers would then seek enough money in court to pay for implementing that plan. The early settlement, however, upended this planning effort before a restoration plan could be developed.

Gearing up

On the morning of the spill, before the first pot of coffee had been emptied at the Alaska Department of Fish and Game office in Anchorage, fisheries scientists were already huddling together to plot a course of action for studying the spill's consequences. Biologists were holding emergency meetings while aides were busy chartering helicopters and boats. Similar meetings – at the management level at least – were being held at the National Marine Fisheries Service in Juneau, at the U.S. Fish and Wildlife Service in Anchorage, and at the University of Alaska School of Fisheries and Ocean Sciences in Fairbanks. Most of the scientists were only vaguely aware of the NRDA process, its goals and its implications. But, they were all well aware they had only a small window in which to react if they wanted to get out in front of the spill and collect data before the oil reached the more delicate ecosystems in western Prince William Sound.

The *Exxon Valdez* spilled its oil at the worst possible time of year, just as Prince William Sound was emerging from a storm-wracked winter and coming

Carcasses of bird species retrieved from oiled areas

Species	Death toll	Species	Death toll	Species	Death toll
Unidentified bird	2,927	Steller's eider	4	Unidentified murrelet	413
Unidentified loon	69	Common eider	17	Marbled murrelet	612
Common loon	216	King eider	9	Kittlitz's murrelet	67
Yellow-billed loon	87	Unidentified scoter	162	Ancient murrelet	311
Pacific loon	18	White-winged scoter	342	Cassin's auklet	48
Red-throated loon	5	Surf scoter	175	Least auklet	5
Unidentified grebe	65	Black scoter	132	Parakeet auklet	31
Red-necked grebe	120	Ruddy duck	1	Rhinoceros auklet	141
Horned grebe	277	Unidentified merganser	3	Unidentified puffin	46
Northern fulmar	426	Common merganser	2	Horned puffin	139
Unidentified shearwater	579	Red-breasted merganser	33	Tufted puffin	361
Sooty shearwater	360	Sandhill crane	2	Bald eagle	125
Unidentified petrel	69	Black oystercatcher	9	Unidentified raptor	7
Fork-tailed storm-petrel	363	Golden plover	1	Peregrine falcon	2
Leach's storm petrel	12	Unidentified sandpiper	11	Willow ptarmigan	1
Unidentified cormorant	219	Unidentified turnstone	1	Unidentified owl	1
Double-crested cormorant	38	Common snipe	1	Great-horned owl	3
Pelagic cormorant	418	Semipalmated sandpiper	1	Unidentified woodpecker	1
Red-faced cormorant	161	Lesser yellowlegs	2	Cliff swallow	3
Great blue heron	1	Western sandpiper	5	Violet-green swallow	1
Unidentified swan	3	Baird's sandpiper	1	Unidentified passerine	9
Emperor goose	2	Least sandpiper	4	Steller's jay	1
Canada goose	1	Surfbird	3	Magpie	7
Brant	3	Short-billed dowitcher	1	Common raven	18
Unidentified duck	30	Red phalarope	2	Northwestern crow	34
Unidentified seaduck	112	Red-necked phalarope	7	American robin	2
Mallard	11	Long-tailed jaeger	1	Varied thrush	1
Northern pintail	4	Unidentified gull	9	Hermit thrush	1
Green-winged teal	5	Glaucus-winged gull	555	Unidentified warbler	1
Unidentified scaup	4	Herring gull	8	Yellow warbler	3
Greater scaup	27	Mew gull	33	Pine grossbeak	1
Lesser scaup	2	Black-legged kittiwake	1,225	Unidentified sparrow	15
Unidentified goldeneye	25	Arctic tern	3	Golden-crowned sparrow	4
Common goldeneye	6	Aleutian tern	1	White-winged crossbill	8
Barrow's goldeneye	33	Unidentified alcid	173		
Bufflehead	21	Unidentified murre	8,851		
Oldsquaw	185	Common murre	10,428		
Harlequin duck	213	Thick-billed murre	669	Total	35,279
Unidentified eider	3	Pigeon guillemot	614		

Source: Summary of Effects of the *Exxon Valdez* Oil Spill on Natural Resources and Archaeological Resources, March 1991, filed in US. District Court in Anchorage as part of the rejected plea agreement and civil settlement.

alive with the productivity of spring. Pacific herring were gathering in massive schools, preparing to spawn along the freshly oiled shores. Sea otters were pregnant, some nursing newborn pups. Flocks of thousands of transient seabirds and shorebirds could be seen low on the horizon flying toward the spilled oil. Yet, the oil struck early enough in the season that wintering birds such as common loons and harlequin ducks had not yet left the region for their breeding grounds inland.[5]

By the end of the summer, 35,000 dead birds would be found, comprising 91 species. The carcasses of more than 1,000 sea otters would be recovered.[6] Two refrigerated semi-trailers would be filled with the frozen carcasses of animals pulled from Prince William Sound, the outer coast of the Kenai Peninsula, and the waters around Kodiak Island and the Alaska Peninsula.

The visible injury was staggering, but what about the injuries that could not so easily be detected? Scientists knew that the majority of animals killed by the oil would never be found.[7] Sick mammals often sneak away to their dens to die. Oiled carcasses often sink to the sea floor or get washed out into the open waters of the Gulf of Alaska. Many oiled carcasses were eaten by opportunistic scavengers, such as bald eagles, which then became secondary victims through oil exposure or oil ingestion. In addition to the death toll, scientists wanted to know about the sublethal and chronic effects of oil in the environment. What were the long-term implications of injury to plankton and the intertidal flora and fauna that serve as the food staples and habitat of a complex food web? Would the herring larvae and pink salmon eggs die from oil exposure or would they hatch with deformities or genetic mutations? Would the measurable concentration of hydrocarbons in the blubber of harbor seals impair their health?

Researchers were eager to answer such questions and, in the beginning, set out on their studies with only verbal commitments from their agencies that funding would somehow be found.[8] Mike Barton, chief forester for the Alaska Region of the U.S. Forest Service, recalled that he borrowed money from any account he had control over, relying solely on faith that his funds would eventually be replaced. "Some programs in other parts of the country were reduced in order to divert money to damage assessment in Alaska," Barton said during a presentation marking the 5th anniversary of the oil spill. "The watch word was stay legal, but be flexible and creative."[9]

Steve Pennoyer, who just three months earlier had taken over as director of the Alaska Region of the National Marine Fisheries Service, was in a similar bind. "No one knew what to do," he said. "There was no money. I was spending out of my regular budget, hoping I would be reimbursed through a supplemental appropriation."[10]

Federal and state agencies were acting under emergency procedures in an unorganized way that opened the door to begin oil spill research. "Damage as-

sessment" and "NRDA" were not yet the buzz words and acronym dominating the language of scientists, but they soon would be as the process became more and more structured. It would soon be led by a 4-person Trustee Council taking advice from attorneys and taking direction from Washington, D.C.

NRDA: A legal process

An adage of wilderness rescue is that the first priority is to take care of the rescuer, not the victim. The idea is to keep the rescuer healthy so that the victim will ultimately get the emergency treatment and evacuation he desperately needs. If the rescuer falls to illness or injury due to negligence, haste, or lack of diligence, then the rescue fails and the victim continues to suffer and deteriorate.

The NRDA process was established using the same basic philosophy. The first priority is NRDA itself, not restoration. If damage assessment is conducted properly, in both scientific and legal contexts, then it can lead to rescue of the injured environment. If damage assessment is poorly conceived and carried out, the risk is that the victims, the injured biota of the spill region, will never receive the restoration help so desperately needed.

NRDA regulations were promulgated by the Department of the Interior, as directed by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund).[11] Its ultimate goal is to encourage restoration through litigation. It lays out a process using scientific and economic research to document injury to the environment and the human users of the environment and determine a dollar-figure for the damages.

In an analysis of the spill and the governments' response to the spill written for the Center for Marine Conservation, authors Townsend and Henneman make the point that NRDA is driven more by legal action and the need to recover damages from the spiller than the need to learn the effects of the spill. They pointed out that a set of criteria and guidelines used to evaluate proposed damage assessment studies included a requirement that the study "by itself or in concert with a group of studies has reasonable expectations of resulting in a settlement greater than its cost." Townsend and Henneman wrote that "this may be appropriate for damage assessment, but it has nothing to do with science and little to do with learning the full effects of the biggest oil spill in U.S. history."[12]

Whether the study will eventually pay for itself through an increased settlement, however, is not an arbitrary guideline written by lawyers. The NRDA regulations require such a cost-benefit analysis to "ensure that there is a reasonable probability of making a successful claim before monies and efforts are expended in carrying out an assessment."[13] Likewise, the regulations require cost efficiency, stating that "data sufficient to pursue an assessment [must be] readily available or likely to be obtained at reasonable cost."[14]

Overseeing the NRDA process was a complex hierarchy of principal players.

The NRDA regulations call for the federal and state governments to act as trustees on behalf of the injured resources and to coordinate the damage assessment and restoration planning. On the federal side, that meant the highest Alaska-based officials for the Departments of the Interior, Agriculture, and Commerce were enacted as trustees. Serving in those roles were Barton for the U.S. Forest Service, Pennoyer for the National Marine Fisheries Service, and Walter Stieglitz, director of the Alaska Region of the U.S. Fish and Wildlife Service. In addition, Al Ewing, regional director for the Environmental Protection Agency, played a key, although non-voting, role. Don Collinsworth, commissioner of the Alaska Department of Fish and Game, was the lone state representative on the pre-settlement Trustee Council.[15]

While the Trustee Council made the final decisions regarding damage assessment and restoration planning, the federal trustees were subject to an even higher authority based in Washington, D.C. The Washington Policy Group was made up of high-level bureaucrats, usually assistants or deputies to the secretaries of the Interior, Commerce, and Agriculture and the directors of the Environmental Protection Agency and the Council on Environmental Quality. They served as go-betweens, ensuring that their cabinet-level bosses received regular progress reports and that policy decisions were handed down for the trustees to follow. Frequently, Barton, Pennoyer, and Stieglitz, would be summoned to the capital on a day's notice, meaning they had to fly the red-eye from Alaska, arrive in D.C. for a morning meeting, and then fly eight hours or more back to Alaska that afternoon. Collinsworth, the state's lone trustee, was not invited to these meetings until the state insisted on full inclusion.[16]

The Washington Policy Group played a vital role in the overall direction of the Trustee Council during the first Bush Administration. Those were the years immediately following the spill when the NRDA process led to a settlement and the post-settlement Trustee Council was getting established and working toward a Restoration Plan. During the Clinton Administration, starting in January 1993, the Washington Policy Group continued to meet, but concentrated mostly on habitat protection efforts. It was the Washington Policy Group that decided, for instance, how the federal government's share of the criminal settlement would be divided and used toward various land purchases. The Washington group made sure that the criminal monies were leveraged with the civil settlement to get the maximum amount of habitat protection through the Trustee Council.[17]

Research, scientists, and attorneys

The Trustee Council had the effect of reining in the research that was underway throughout the spill region, providing funding only for that research which it sanctioned. NRDA regulations required that the research have a probability of leading to an increased recovery in court. This meant that some of the research

underway that concentrated more on ecosystem injuries or on species whose injuries would not easily translate into a dollar-based loss were cancelled. If documenting injury proved to be too difficult or was likely to be inconclusive, studies were not started or renewed.[18]

One criticism frequently leveled by researchers was that the damage assessment process concentrated too heavily on the "charismatic species," the fish, birds, and mammals that were familiar to the public and whose injuries could be understood by juries. Several researchers pointed out 10 years after the spill that not a single damage assessment study was conducted on forage fish in the spill region, even though forage fish became a major focus years later as part of the Trustee Council's ecosystem studies. Studies were done on Pacific herring as a commercial fish species, but they didn't look at the species for its importance in the food chain. Herring and other forage fish, such as sand lance and capelin, are staples in the marine food web and play a significant role in the productivity and survival of many seabirds, some marine mammals, and larger fish. A dramatic change in forage fish can have a domino effect throughout the ecosystem. Sand lance, for example, burrow daily into the sands of the intertidal regions where most of the oil accumulated. "One of the biggest missed opportunities in NRDA was not looking at sand lance," said David Irons, an expert on seabirds with the U.S. Fish and Wildlife Service.[19]

This emphasis on species of monetary worth severely restricted researchers from obtaining a true picture of the spill's impact, said Jim Bodkin, a sea otter expert with the Biological Resources Division of the U.S. Geological Survey.[20] To make this point, Bodkin and Irons contrasted one of the most popular marine creatures with one of the most common. An oiled sea otter might be valued as high as $81,000 each (based on the cost of cleaning and rehabilitating them), looks cute, and was featured nightly on television news as the national symbol of oil's destructive force, Bodkin said. Compare that to an oiled sea star, which he says was worth barely a buck and a quarter. "Sea stars might be driving the entire ecosystem," Irons joined in. "But we would never know that because we weren't able to study it. It wouldn't pay for itself in court."[21]

To illustrate the intimidating legal atmosphere surrounding damage assessment decisions, Trustee Mike Barton remembered one council meeting that had 26 others in attendance, 24 of whom were lawyers representing state and federal agencies, private plaintiffs, Exxon, Alyeska and anyone else with a financial interest in the oil spill.[22] The attention of so many attorneys representing so many interests is a reminder that billions of dollars were at stake. Government attorneys were orchestrating a legal process, dictated by regulations, and in a public forum that invited scrutiny. At the same time, they had to maintain a cloak of secrecy so as not to give a strategic advantage to their opponents in court. Their advice was necessarily based on the law, not on science. Their job was to keep the rescuer,

in this case the damage assessment process, healthy so that restoration of the spill region could someday occur. And the Trustee Council, made up mostly of veteran agency administrators, was prone to follow the regulations rather than authorize science for science's sake.

Damage assessment was divided into ten categories: marine mammals, terrestrial mammals, birds, fish/shellfish, coastal habitat, air/water, subtidal, technical, archaeology, and economics. In 1989, the trustees provided $35 million for 72 studies, several of which got underway before the trustees began organizing the effort. The following year, 50 studies were renewed or started and $37 million in funding provided. During the 1991 research year, 42 studies were funded for a total of $35 million.[23]

Several studies of popular birds, mammals and fish were dropped from the assessment studies, usually due to the inability to document injury or the conclusion of researchers that no injury existed. Humpback whales showed no injury, for example. Steller sea lions did not appear to show any significant population decline or long-term effects. Similar conclusions were reached for crab, shorebirds, black bear, Sitka black-tail deer, small mammals, oysters, sea urchins, scallops, Peale's peregrine falcons, and other species of interest.[24]

Even though sea lions were seen swimming through oil near the grounding site at Bligh Reef, no carcasses were recovered attributable to death by oil exposure. Scientists needed to determine whether there was a significant injury to local populations, either in terms of actual losses or sub-lethal, but chronic impacts. Two years of studies to determine the amount of injury proved inconclusive, complicated by normal sea lion migration, a pre-existing decline in the population, and a lack of pre-spill data on the species. During the limited damage assessment studies, researchers were only able to determine that they would never know the real injury, if any, to sea lions within the spill region.

Baseline data

In order to get a *before* and *after* picture of the spill region, scientists need baseline information about the region. In the wake of the *Exxon Valdez*, biologists knew they desperately needed pre-spill data in order to compare post-spill effects of oil. But, this is not something that could be obtained once the oil did its damage. Some observations and samples were taken in western Prince William Sound and the Gulf of Alaska by fast-moving researchers who got out in front of the spill to collect sediments, count pink salmon fry in the streams, and observe sea otters and seabirds. But, this information would have limited value. In most cases, days and weeks of collecting data in front of the spill would not be enough. Their scant information would provide them only a snapshot – and a fuzzy one at that – during a dynamic period of spring migration, mating, egg laying, pupping, and outmigration of salmon fry.

The lack of baseline data would become, over time, the single greatest obstacle to understanding the degree of injury suffered by individual species as well as measuring their ability to bounce back.[25] If not the proverbial Achilles heel dooming spill research, it certainly has been the stretched Achilles tendon that continually keeps the effort limping along. The overarching lesson from the perspective of damage assessment and restoration is that baseline data must be collected (over time to show population trends) before a spill occurs. In the absence of pre-spill data, scientists are forced to resort to oiled-versus-unoiled comparisons, which are complicated by problems of geographic variation. Many scientists, environmentalists, and critics of the NRDA process have pointed to the need to have a steady program of data collection in sensitive ecosystems that could potentially experience an *Exxon Valdez*-like spill. Such information would make the difference between development of a clear picture of what occurred and an artist's-rendering of what scientists think occurred.

Speaking different languages

Conflicts between scientists and lawyers peaked in early 1990. As the Trustee Council began formulating a work plan for the summer research season, trustees relied heavily on attorneys and their hired experts for funding advice. This pitted the government attorneys against mostly government researchers in a meeting to determine NRDA funding for the following year.

The scientists were all professionals, used to working within a strict government structure. Yet, nothing had prepared them for the conflict of cultures that would take place when secrecy prevailed and lawyers were seen as calling the shots based on legal strategies rather than biological need. At least, that's the way many scientists perceived it.

The meeting is remembered by researchers 10 years later either with humor or with bitterness, but clearly not with fondness. Meetings in which project proposals would be analyzed and discussed and, ultimately, funding decisions made, turned into highly contentious full-fledged debates. Due to the litigation-sensitive information being discussed, the meetings were closed to the public, leaving only a scant administrative record.

At the 1990 meeting, a panel of attorneys and experts of different scientific disciplines filled the tables in the front of the room and listened as researchers pitched their proposals. Phil Mundy, a fisheries expert from Oregon under contract to the state, remembers "researchers were paraded in front of us like it was the inquisition." The hired experts, some world renowned and others lesser known, questioned researchers on their proposals, and then "passed recommendations up to our handlers," Mundy said. "Nobody knew who anyone else was working for."[26]

Attorneys and researchers – minds of different disciplines and objectives

– struggled to speak the same language and often broke down in frustration and anger. Researchers felt it was inappropriate for attorneys to be shaping the scientific approach to assessing damage. The legal team felt it was their role to adhere to the law while obtaining the best possible results for their litigation against Exxon. It's important to note that even in such an adversarial environment, attorneys and researchers agree that the legal process did not compromise the field research or the scientific conclusions. It did, however, dictate what would be studied.

"Scientists couldn't understand that lawyers and trustees weren't free to put together a great scientific program," said Stan Senner, a restoration planner who watched the process without direct involvement on the research or the legal sides of the issue.[27]

Despite the use of expert peer review to both improve the science and to advise the attorneys on funding, the breakdown of the 1990 winter meeting proved that such a mechanism was not good enough. Recognizing the problem, the attorneys decided to name a "chief scientist" that would interact with researchers, organize and oversee the peer review process, and advise attorneys on the overall direction of the NRDA research effort. Dr. Robert Spies, an independent ecologist on a leave of absence from the University of California's Lawrence Livermore National Laboratory, took on the role as chief of all NRDA science and later, as chief of all research and monitoring efforts under the post-settlement Trustee Council.[28]

NRDA secrecy

In the background of the contentious 1990 planning session was a rift developing between attorneys and biologists over the non-disclosure form each researcher had signed as a prerequisite to funding. The scientists were under enormous pressure from the public and the media to provide some detail as to how serious were the oil spill injuries. Speculation ran the gamut, with Exxon saying that injuries would be short-lived and that everything would be back to acceptable norms within a few years, and environmental groups saying it could take decades for nature to repair itself. Residents of the spill region wanted answers, especially the commercial fishing interests and the subsistence users who depend on healthy production in the marine ecosystem for their living and their survival. The media from around the nation were continually asking government researchers for their best analysis of the injuries. The scientists could provide only one unified response: due to litigation, they could not discuss the results of their research. The public demanded answers and the media published editorials condemning the secrecy, but none of it swayed the resolve of government attorneys to keep the information from leaking out.

The gag order was so pervasive that government scientists believed they were not allowed to discuss results with other government scientists unless it was necessary to interpret data.[29] This meant that bird researchers did not talk

with fish researchers or with marine mammal experts who were sharing the same offices. An unintended consequence of this secrecy was that researchers often did not know they had data or questions in common because they simply did not talk about their research openly. Bodkin recalled such an impact on his studies: "I didn't know that the guy working with clams was finding reduced populations and that information would have been important since sea otters eat clams."[30]

Simultaneous with damage assessment was research being conducted by a response team guiding the shoreline cleanup process. A wall of secrecy developed between the two government research efforts, even though they may have been studying the same type of information. The response team followed EPA regulations under the National Contingency Plan while the damage assessment team followed DOI regulations as part of CERCLA. Though regulations discourage redundancies, an unintended consequence of the litigation process was that the two study groups felt – rightly or wrongly – that they could not share data.[31]

Assistant Attorney General Craig Tillery, who helped coordinate damage assessment studies for the state in 1989, said that the secrecy edict among researchers was not a standing order, but more of a misunderstanding.[32] While scientists overwhelmingly recall the gag order as oppressive and uncompromising, lawyers say it was never meant to be all-encompassing. Scientists were not supposed to talk to the public or the press and they could not present data at conferences or publish the information in journals. But, lawyers now say, government scientists were free to talk to other scientists working on damage assessment. This was made evident in April 1990 when a technical workshop was held allowing researchers to present their findings in front of other government scientists. It was an invitation-only workshop, complete with guards at the doors, that excluded the public.

A third result of the secrecy surrounding the damage assessment process, was that scientists felt there was inadequate peer review. The scientific process can only work in an open forum, in which results can be discussed, analyzed, and debated. It's important for researchers to publish in peer-reviewed journals and present papers at scientific conferences in order to place their research methods, results, and conclusions in front of the scientific community. Without such openness, the oil spill research was sharply criticized in print and at conferences.[33] Exxon was able to capitalize on this mum process, by selectively releasing results of their research. It was able to jump start a shell-shocked public relations campaign with very little opposition from the scientific community.[34]

The corporation issued glossy publications and an oil spill newsletter highlighting the positive and ignoring references to ongoing injury. Scientists working for Exxon quickly issued papers, which were then distributed by Exxon, often complete with press conferences and media tours. A 1990 study, for example, conducted by a trio of British researchers, issued the following findings: "The area has retained its natural beauty; there are abundant signs of plant and animal life,

and recovery is well under way on even the most severely impacted beaches. . . .(T)he overall impact of the oil spill in Prince William Sound and Gulf of Alaska is likely to be short-lived."[35]

Strangely, the NRDA regulations actually encourage sharing of information with the "potentially responsible party." The regulations state: "The assessment plan shall contain procedures and schedules for sharing data, split samples, and results of analyses, when requested, with any identified potentially responsible parties and other natural resource trustees."[36] This is in direct contrast, however, with the litigation-oriented right to confidentiality, which, in practice, took precedence over the sharing of information.

Despite the growing pressure, the Trustee Council remained resolute in its commitment to keep silent about the injury to the environment from the nation's largest oil spill. The lack of information available to the public was one reason blamed for the rejection by the Alaska Legislature of the first settlement agreement.[37] Although the public and Legislature originally appeared to be supportive of the settlement, that support eroded as people began to question the extent of the injury. It was argued again and again that the fairness of the settlement could not be measured without knowing how seriously the environment was damaged by the spill. The federal government responded to complaints from the public and from Congress by filing a "summary of injuries" with the court. But, the information was not enough to satisfy any of the parties. They wanted to see the results of the economic studies, considered to be the most damaging evidence against Exxon.

Passive use

The economic study the public (or at least those organizations closely following the damage assessment process) most wanted to see was one that measured the sense of loss felt by the American public due to the spill. The state's contingent valuation study[38] was a $3 million household survey – considered by Cole to be the best of its kind ever undertaken[39] – that determined what the average American household would be willing to pay to prevent another *Exxon Valdez*-like spill. The idea was to determine what the lost wildlife and damaged ecosystem was worth to the people who owned it – the citizens of the United States. Even though most of the people surveyed would never see Alaska or Prince William Sound, the knowledge that such a wild and vibrant ecological system exists is considered "passive use" of the resources, which has a dollar value to most people. The idea of determining this passive use value did not come from enterprising attorneys or economists. It came directly from CERCLA.

The original NRDA regulations, as written by the Department of the Interior, emphasized the use of market values in assessing damages. This was challenged in federal court[40] and a judge determined that such a limitation did not meet the intent of Congress when it passed CERCLA. The language in CERCLA called for

regulations to establish procedures for assessing "both direct and indirect injury, destruction or loss."[41] The courts determined that the values of natural resources are not fully captured by the market system and that intrinsic value should be considered. The court suggested that intrinsic values could be the dollar amount an individual is willing to pay just for the "knowledge that a resource will continue to exist in a state of being," whether he or she plans to visit the area in question or not. One method upheld in court of determining the intrinsic value of resources was contingent valuation.[42]

This blessing by the court, however, came after the State of Alaska decided to move forward with a national survey to determine the loss of passive use. Had the court ruled the other way, it might have put a significant crimp in the state's ability to pursue damages in the vicinity of $1 billion.

In their analysis of the court's decision, Kopp *et al* wrote: "The importance of this issue cannot be overemphasized. Using contingent valuation to measure nonuse values means that someone in Florida who never intends to go near Valdez, Alaska, can still suffer a measurable loss as a result of the *Exxon Valdez* oil spill there. This greatly expands the possible number of people experiencing damage as a result of an accidental release. Since contingent valuation techniques are the only way known to measure these nonuse damages, they will play a key role in determining the magnitude of awards in certain cases."[43]

The public and the media wanted the results of this study because they knew it had the potential for a large damage figure. Published rumors set the figure at somewhere between $3 billion and $8 billion with the Los Angeles Times reporting the figure at $10 billion.[44] The study, however, resulted in an average willingness to pay of $31 per household. Extrapolated out to the number of U.S. households, this meant an overall contingent valuation estimate of $2.8 billion.[45]

The contingent valuation study is unarguably the single most important study, from a legal perspective, undertaken during the damage assessment phase. The fact that the State of Alaska, the federal government, and Exxon were willing to hash out an early settlement for over $1 billion was at least partially due to the fear by all parties of testing the impact of the contingent valuation study in court.[46] No one knew how a jury of Alaskans would react to a damage figure based on a survey of people who lived thousands of miles from the accident site. Whether the contingent valuation study actually had teeth remains unknown, but the record settlement is considered strong evidence that the study's growl, at least, grabbed Exxon's attention.

Restoration planning

While most of the scientific community was engaged in assessing the damage from the *Exxon Valdez* spill, a small group of agency personnel embarked on a similar, but separate track toward restoration. The Restoration Planning Work

Group (RPWG) was formed in the fall of 1989 to begin consideration of how to best restore, replace, or acquire the equivalent of natural resources injured by the oil spill. Restoration planning was undertaken to prepare for the day Exxon would pay for damages to the environment. It was thought at the time that the RPWG (pronounced ripwig) would use information from the damage assessment process as well as extensive input from public meetings to prepare a detailed Draft Restoration Plan,[47] complete with a final restoration cost, in time for the federal court fight between Exxon and the federal/state governments. The idea was for the Draft Restoration Plan to be presented in court as the primary tool for arguing the cost of restoration and the amount Exxon should pay. Once a check was in hand, the Final Restoration Plan could more easily be adopted, allowing the governments to quickly begin the restoration phase. The early settlement with Exxon, however, came well before a Restoration Plan could be drafted.

RPWG consisted of representatives from four federal and three state agencies.[48] While the damage assessment process was filled with tension, especially between state and federal agencies, RPWG fought to maintain a cooperative atmosphere. Members of that group were not fighting for funding or over who should have trust authority over which species. They had a unified goal with a single budget – plan for restoration, using information about injury from the damage assessment process and ideas forwarded by scientists and the general public.

During the early planning process, RPWG took five important steps toward restoration.

1) It organized a public symposium on the first anniversary of the spill, inviting speakers from around the state and around the nation to present ideas and arguments about restoration.[49] This forum was designed to introduce the wide range of potential activities, from "do nothing" to intensive economic development, habitat protection, and research efforts. Unfortunately, the forum had a very disappointing public turnout and had little impact, if any, on restoration planning.[50]

2) Public scoping meetings were held throughout the spill region. In order to gain restoration ideas from commercial fishers, subsistence users, recreationalists, business owners, and other residents of the spill region, members of RPWG placed themselves in front of the public at a time when the public was angry over secrecy of government studies. Almost every person testifying had a stake in restoration. Their livelihoods and their ways of life were directly related to the health of species and the entire ecosystem in the spill region, yet their own government refused to tell them about the seriousness and depth of oil spill injuries. Community meetings were held in Whittier, Homer, Kodiak, Seward, Kenai-Soldotna, and Anchorage. Stan Senner, who co-chaired RPWG along with Brian Ross of the Environmental Protection Agency, recalled that each meeting

began with an explanation of the process and an apology to the public for the secrecy. He would explain the litigation risks involved with divulging the information and forewarn everyone that they would not learn anything about the extent of injuries from the RPWG team. As representatives of the government, they nevertheless endured the wrath of many of the people who came to testify. Senner considered the scoping meetings well worth the effort, generating several specific ideas and providing a gauge of public support for such broad efforts as habitat protection.[51]

3) A review of literature was conducted to learn what restoration activities had been tried elsewhere and what types of restoration are most likely to work in the sub-arctic environment. Several databases were searched dating back to 1964.

4) A technical workshop was held April 3-5, 1990,[52] bringing government scientists working on damage assessment studies together for the first time to discuss their findings and generate ideas for restoration. This resulted in projects initiated for the 1990 NRDA field season as well as a list of long-term restoration ideas.

5) Several feasibility studies were funded to test the practicality of some restoration ideas. In cases where the success or benefit of a particular restoration technique was in question, RPWG urged the Trustee Council to fund feasibility studies in order to gather information or test effectiveness. Two such studies looking at upland habitat proved important as they were the first indications from the Trustee Council that it might be willing to consider habitat protection as a potential restoration tool.

These five steps taken by RPWG culminated in a "Progress Report"[53] published in August 1990 that detailed 190 restoration ideas received during its scoping sessions with the public. It combined those ideas with expert input from the technical workshop and laid out 124 specific restoration proposals that encompassed a wide-ranging restoration effort.

The genesis of ten years worth of restoration can be found in this report, according to Senner. "We went out to the public early and there were all these ideas and you can follow the chain of ideas from the public to the annual work plans and see that many of them ultimately bore fruit," Senner said. "The core of everything that was done (through the Trustee Council) is here and came from the public." [54]

The new Trustee Council

The four-person Trustee Council conducted the damage assessment phase of litigation in relative obscurity. While decisions were made during open sessions for the public record, important background information, arguments for and against

proposals, and the thought process of individual trustees were revealed only behind closed doors. There was little for the public to watch or pay attention to.

The settlement with Exxon resulted in a new six-person Trustee Council with some of the same players, and it also lifted the cloak of invisibility from the process. In the State of Alaska's Final Report chronicling the state's response to the oil spill, author Ernie Piper wrote that the settlement "thrust a little-known and somewhat speculative government planning operation into the public eye, and launched the program unexpectedly on the fast track." [55]

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

The end of the damage assessment process, the public emergence of the Trustee Council, and the development of a wide-scale restoration effort are chronicled in Chapter Three.

Damage assessment: epilogue

After the signing of the settlement between the governments and Exxon, the damage assessment phase of the oil spill saga should have come to an end. The Trustee Council's new job was to move forward with the restoration phase.

Instead, the post-settlement Trustee Council was met with a $30 million proposal for the 1992 field season that planned a one-year closeout of most of the NRDA studies, continued others, and called for monitoring of several species. There was not a single restoration idea in the package.

Shortly after making the transition to the post-settlement Trustee Council, Trustee Mike Barton wondered out loud what exactly the public received from its investment into NRDA studies. He and his fellow Trustees questioned whether the public got its money's worth from the damage assessment effort. Certainly the damage assessment studies helped deliver the billion-dollar settlement, but in the absence of litigation, could the science stand on its own? Was the gain in scientific knowledge worth the $100 million pumped into 164 separate and related studies over a three-year period? Barton had been involved in funding those

studies since the earliest formation of the Trustee Council, yet he felt frustrated that three years later, there were no proposals on the table for restoration of the spill region. Damage assessment did not appear to pave the way, scientifically, for restoration activities in the sound.[56]

For the most part, Barton was correct. NRDA studies for this marine spill were not easily transformed into restoration actions. They were vital for understanding the depth of injury and they became the best basis for monitoring natural recovery, but NRDA studies did not, in most cases, lead directly to restoration. One notable exception to that reality was restoration through management decisions. NRDA data proved vital in management actions to protect harvestable species, such as harbor seals, harlequin ducks, cutthroat trout, pink salmon, and rockfish. Yet, it was little consolation for members of the Trustee Council, who had hoped early on that they would take immediate action toward restoring the injured environment rather than simply study and monitor natural recovery. The realization that little was being planned for restoration during the 1992 field season led the trustees to make their wishes clear. They told their multi-agency staff that it was time to close all NRDA studies and stop monitoring efforts unless Chief Scientist Bob Spies deemed them vital. When they were through, the Trustee Council cut the proposed 1992 budget by 40 percent. The plan was to slow down, analyze the data that had been collected over the previous three years, and move forward only with a deliberate plan of research and monitoring connected to an overall Restoration Plan.

This decision to slow down and refocus was an important one. It signaled that the harried and hectic pace of oil spill response, NRDA planning, and litigation had ended. Scientists were expected to prepare better and more detailed proposals. Scrutiny of objectives, methodologies, funding levels, and results would become more organized and thorough. In short, the overall science program kicked it up a notch or more to require better science. "It never got really good until after the settlement, and then everyone could take a deep breath and conduct things in a deliberate way," Senner said.[57]

Researchers involved in the studies admit that mistakes were made during the NRDA process. Some studies were poorly conceived and/or poorly carried out. Other studies may have been unnecessary and would never have been funded under normal circumstances. But, it all must be considered in the context of the war-like urgency that followed the spill, the scope of injury during the height of spring migration and summer breeding, and the geographic extent of the nation's largest oil spill.

"The science was as good as it could be, but it was severely limited by what you could do from a scientific context and what you were allowed to do from a legal context," Bodkin said.[58]

"Any time you spend that amount of money doing that many things in a short

time, some of the science will not be good," Senner added. "But I would be astonished if anyone under the same conditions could have done any better." [59]

Footnotes - Chapter Two
Assessing the Damage

1. Natural Resource Damage Assessment (NRDA), 43 C.F.R. s11.32(a)(1)(ii).

2. *The Exxon Valdez Oil Spill: A Management Analysis*, September 1989, by Richard Townsend and Burr Heneman, published by the Center for Marine Conservation, p. 232. Also, *The Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 370.

3. In her analysis of NRDA, Danielle M. Stager compared the legal pursuit of restoration after the *Exxon Valdez* spill with the minimal restoration occurring after the 1975 (pre-NRDA) intentional discharge of the toxic chemical Kepone into freshwater tributaries of the James River in Virginia. Allied Chemical pleaded "*nolo contendre*" to criminal charges and was fined $13 million, but the judge was concerned that money would go to the state rather than to benefit the victims. Allied agreed to set up an $8 million "environmental endowment fund" for restoration of the environment and to benefit human victims and, in turn, the judge reduced the criminal fine to $5 million. Despite the judge's best effort, the net result was a minimal restoration effort for the James River area. Author Stager concludes that in the absence of NRDA and the legal mechanism to collect damages from the polluter, the state is usually unable or unwilling to invest money into damage assessment and/or restoration. *From Kepone to Exxon Valdez oil and beyond: An Overview of Natural Resource Damage Assessment*, by Danielle M. Stager, University of Richmond Law Review, Vol. 29, Pgs 751-788.

4. *The Exxon Valdez Oil Spill: A Management Analysis*, September 1989, by Richard Townsend and Burr Heneman, published by the Center for Marine Conservation, p. 232. . Also, *The Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 370.

5. In a 1991 summary of injuries filed in federal court, the oil spill was said to have struck "just prior to the most biologically active season of the year in Southcentral Alaska. During the two month period after the spill, seaward migrations of salmon fry, major migrations of birds, and the primary reproductive period for most species of birds, mammals, fish, and marine invertebrate species took place. The organisms involved in these critical periods of their life cycles encountered the most concentrated, volatile, and potentially damaging forms of the spilled oil." *Summary of Effects of the Exxon Valdez Oil Spill on Natural Resources and Archaeological Resources*, April 8, 1991.

6. *Summary of Effects of the Exxon Valdez Oil Spill on Natural Resources and Archaeological Resources*, April 8, 1991.

7. *Summary of Effects of the Exxon Valdez Oil Spill on Natural Resources and Archaeological Resources*, April 8, 1991.

8. Process to Identify and evaluate Restoration Options, by the Restoration Planning Work Group, Proceedings of the 1993 Oil Spill Conference, Pg. 245.

9. *Exxon Valdez* Oil Spill Symposium 1994, Mike Barton, speech.

10. Personal Communication, Steve Pennoyer, Feb 24, 2001.

11. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 107, 42 U.S.C. ss 9601-9675 (1988).

12. Townsend and Heneman also note that the criteria they quoted was a confidential version of the form. The public review version of the damage assessment plan says that the criterion was, "Study costs are reasonable in relation to the damage they are likely to document." *The Exxon Valdez Oil Spill: A Management Analysis*, September 1989, by Richard Townsend and Burr Heneman, published by the Center for Marine Conservation, p. 232.

13. *The Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 370.

14. *The Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 370.

15. The state's experience being outrepresented 3-1 by the federal government gave rise to the state's insistence that the representation be equal in the post-settlement Trustee Council.

16. Personal Communication, Stan Senner, co-chair of the Restoration Planning Work Group and, later, science coordinator for the Trustee Council, November 3, 2000

17. Personal Communication, Stan Senner, November 3, 2000.

18. *Exxon Valdez* Oil Spill Restoration Plan, November 1994, Appendix A: Summary Results of Injury Assessment Studies. Also, Personal Communication, Stan Senner, November 22, 1999.

19. Personal Communication, David Irons, February 21, 2001. Due to the lack of NRDA studies and the lack of baseline information, it is not known how seriously the sand lance populations were impacted by spilled oil. A noted reduction in sand lance may also be due to climatic change or other natural causes.

20. Personal Communication, Jim Bodkin, February 21, 2001.

21. Sea stars, however, were part of a $5 million coastal habitat study that included nearshore and intertidal flora and fauna.

22. *Exxon Valdez* Oil Spill Symposium 1994, Mike Barton, speech.

23. *The 1991 Natural Resource Damage Assessment Plan for the Exxon Valdez Oil Spill, EVOS Trustee Council*, Pgs. 4-8. Exxon originally provided $15 million for the government's damage assessment work. As litigation heated up, Exxon sharply disagreed with the direction of the damage assessment process and quit providing funding.

24. *The 1991 Natural Resource Damage Assessment Plan for the Exxon Valdez Oil Spill*, EVOS Trustee Council, Pgs. 1-2.

25. This is mentioned numerous times in several Trustee Council publications, including the Restoration Plan, the federal governments' Summary of Injuries (filed April 8, 1991), and the March 1999 Update on Injured Resources and Services. The EVOS Restoration Planning Work Group drew this conclusion in its joint presentation at the 1993 Oil Spill Conference. "In most cases, knowledge of the nature and severity of injury is imperfect. This is due to the lack of pre-spill (baseline) data, the time required to assess injury meaningfully . . . and the extremely large area affected by the spill. . . . Where data is imperfect, one has to judge injuries to natural resources and services by the weight of the best available evidence and best professional opinion."

26. Personal Communication, Phil Mundy, February 21, 2001.

27. Personal Communication, Stan Senner, November 3, 2000 "When the Trustee Council developed those early work plans, it wasn't just six people around a table making decisions. It would be a large conference room with standing room only filled with agency personnel, principal investigators, and lawyers."

28. Spies continued on as chief scientist after the settlement, but was contracted for only a few months at a time. Eventually, he agreed to serve as chief scientist until October 2002. He remains as scientific advisor for the lingering injury phase of the long-term Gulf Ecosystem Monitoring Program (detailed in Chapter 7).

29. Personal Communication (Senner). Also*, the Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 368.

30. Personal Communication, Jim Bodkin, February 21, 2001.

31. *The Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 368.

32. Personal Communication, Craig Tillery, January 7, 2000.

33. There were numerous newspaper stories nationwide. The Anchorage Daily News and The Anchorage Times rarely agreed on much, but both published back-to-back editorials calling for the spill studies to be released.

34. Examples here are numerous. Exxon published the *Exxon Alaska Update*, an occasional newsletter that touted the successful cleanup and the ongoing recovery. It also produced colorful annual updates promoting a clean spill region. A glossy October 1992 edition entitled *Three Years After: Conditions in Prince William Sound and the Gulf of Alaska*, starts by saying the environment is "thriving" and that "few signs of the spill remain, . . ." Other

publications centered on Exxon-sponsored research, saying that air and water quality were great. One publication, dated February 1991, was titled *Sea otters thrive in Prince William Sound*, while another was called *The abundant bald eagles of Prince William Sound.*

35. Environmental Recovery in Prince William Sound and the Gulf of Alaska, Jenifer M. Baker, Robert B. Clark, Paul F. Kingston, June 1990, Institute of Offshore Engineering, Scotland.

36. *The Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 365.

37. "The demise of the March settlement can be traced largely to the frustration that members of Congress, public interest groups, scientists, and others had expressed over the confidentiality surrounding natural resource damages." *The Exxon Valdez Oil Spill and Confidentiality of NRDA Data*, by Ann D. Cummings, Ecology Law Quarterly, Vol. 19, P. 368. Also: "They lose votes in the legislature by keeping it secret. I'm more likely to vote no without the information." — Rep. Gene Kubina (D-Valdez), in the Anchorage Daily News, March 31, 1991, *Spill lessons stay secret*, by Charles Wohlforth. "It's going to be very difficult for us to approve the settlement if we don't have some factual data." — Rep. Max Gruenberg (D-Anchorage), in the Anchorage Daily News, March 19, 1991, *Cole requests spill studies be kept secret*, by David Postman.

38. The federal government also conducted a contingent valuation study, spending another $1 million. This study, however, was never finished.

39. Personal communication, Charlie Cole, February 17, 2001.

40. State of Ohio v. United States Department of the Interior.

41. 42 U.S.C. § 9651(c)(2) 1988.

42. Ohio v. DOI, 880 F.2d at 475 n.72 and 476 n.73.

43. Natural Resource Damages: The Economics Have Shifted After Ohio v. United States Department of the Interior, by Kopp, Portney, and Smith, Environmental Litigation Report, Vol. 10, Pg. 130.

44. Anchorage Daily News, March 31, 1991, *Spill lessons stay secret; suits keep studies – and answers – under wraps*, by Charles Wohlforth. Los Angeles Times, October 8, 1991, *Studies estimate costs of damages in billion*s, by Michael Parish.

45. Richard T. Carson, et al., *A contingent valuation study of lost passive use values resulting from the Exxon Valdez Oil Spill*, November 10, 1992.

46. Personal Communication (Tillery, Cole) Also, *From Kepone to Exxon Valdez oil and beyond: An Overview of Natural Resource Damage Assessment*, by Danielle M. Stager, University of Richmond Law Review, Vol. 29, Pgs 751-788.

47. In its 1990 Progress Report, RPWG outlined an order of events that showed the Draft Restoration Plan in place before litigation against Exxon would commence. *Restoration Planning Following the Exxon Valdez Oil Spill, August 1990 Progress Report,* Pg. 9.

48. Agencies taking part in PRWG were the Alaska departments of Fish and Game, Environmental Conservation, and Natural Resources. Federal agencies were the departments of Agriculture, Commerce, and the Interior, as well as the Environmental Protection Agency.

49. A report from this symposium was prepared documenting the comments of invited speakers. *Restoration Planning Following the Exxon Valdez Oil Spill, Proceedings of the Public Symposium*.

50. Personal Communication, Stan Senner, November 3, 2000.

51. Personal Communication, Stan Senner, November 3, 2000.

52. An extensive report from this workshop was prepared documenting the findings and recommendations of the participants. *Restoration Planning Following the Exxon Valdez Oil Spill, Draft Technical Workshop Report.*

53. *Restoration Planning Following the Exxon Valdez Oil Spill*, August 1990 Progress Report.

54. Personal Communication, Stan Senner, November 3, 2000.

55. The *Exxon Valdez Oil Spill, Final Report, State of Alaska Response*, June 1993, Alaska Department of Environmental Conservation, P. 182.
56. Trustee Council meeting transcripts, December 19, 1991.
57. Personal Communication, Stan Senner, November 22, 1999.
58. Personal Communication, Jim Bodkin, February 21, 2001.
59. Personal Communication, Stan Senner, November 22, 1999.

Photo courtesy State of Alaska

Chapter Three

The Early Years

Introduction

The *Exxon Valdez* Oil Spill Trustee Council set out to fulfill what its members later described as "mission impossible"[1] when it opened its first meeting December 5, 1991. Its first order of business was to matter-of-factly vote itself into existence.

The six voting members of the Trustee Council took their seats at 7:00 p.m. and faced an audience of about 80 people, mostly familiar faces who had been shaping the restoration process either from the inside as agency personnel or from the outside as activists. The expectations of everyone in the room were somewhat guarded. There was a great deal of hope attached to the ideal of restoration – mostly because there was a great deal of money attached – but trepidation over the process appeared deeply imbedded amongst trustees and audience members alike. After all, they were about to embark on a 10-year journey, the likes of which had never been attempted in the history of the United States. The Trustee Council's mere existence was unprecedented, its charge of returning the spoiled Prince William Sound to its pre-spill condition[2] probably unachievable, and its financial backing enormous and guaranteed. The trustees were on a mission without a map to guide them. The people in the audience, representing the varied interests around Alaska and the United States, wanted to serve as cartographers, each hoping to

shape the map to fit their interests.

It would take nearly three years for the map to be finished and the "Restoration Plan" to be published. The Restoration Plan, published in November 1994,[3] became a highly successful guiding document for the trustees and its professional restoration staff to follow. Once published, it provided philosophy, direction, and a 10-year budget, which was followed to the letter. It was guided by environmental law, built on a solid foundation of public input and backed up by supporting documents that allowed the main components of "research and monitoring" and "habitat protection" to move forward rapidly and procedurally. The Restoration Plan stands 11 years after the settlement as a remarkable achievement, but it required 35 months in the making, far longer than even the most cautious bureaucrats predicted. The slow start to restoration generated frustration and anger inside and outside the Trustee Council and boiled over into a fisherman's blockade of the tanker route through the Port of Valdez, an unflattering General Accounting Office report, Congressional grandstanding, and critical reports in the national media.

The Trustee Council

The establishment of the Trustee Council and the framework for restoration are largely adapted from CERCLA and its accompanying NRDA regulations. These federal laws served as a guide, but it was the Memorandum of Agreement (MOA) between the federal and state governments[4] that served as the founding document for the Trustee Council. The MOA makes it clear that the agreement supersedes NRDA, allowing the federal and state governments to craft their own restoration plan to fit the needs of restoration in the spill region.[5]

The makeup of the Trustee Council is one area that went beyond federal regulations. The settlement assigns the task of restoration to three federal and three state trustees:

State	Federal
Commissioner Department of Fish and Game	*Secretary* Department of the Interior
Commissioner Department of Environmental Conservation	*Director* National Oceanic and Atmospheric Administration
Attorney General Department of Law	*Secretary* Department of Agriculture

In practice during its first 10 years, the federal trustees delegated their responsibilities to the leading agency officer residing in the State of Alaska.[6]

In theory, at least, the federal trustees were not alone. The MOA notes that the Environmental Protection Agency would serve to advise the federal trustees and coordinate the federal approach to long-term restoration. This provision was added, strangely, due to political etiquette and respect for the chain of command. Soon after the *Exxon Valdez* ran aground, President George Herbert Walker Bush designated EPA Director William K. Reilly to be in charge of restoration for the federal government. This became problematic when considering that CERCLA did not provide for the EPA to have a role in restoration. Rather than disregard the president's orders, the EPA became a chief advisor to the federal trustees. The EPA role, however, was short-lived and, in practice, the agency provides little or no advice to trustees.[7]

A more substantive role is played by the U.S. Department of Justice, which reviews all Trustee Council decisions to ensure that they are lawful and within the parameters of the settlement and MOA. The Department of Justice must go to court jointly with the state Department of Law and request funds to be released for restoration purposes. If Justice disagrees with a Trustee Council position, based on its interpretation of the law, it can simply refuse to request the funds. In effect, this creates a seventh trustee, since Justice opposition can be tantamount to veto power over council decisions. Department of Justice attorneys have played significant roles in restoration proposals, arguing for instance, that many education-related programs and projects to prevent marine pollution could not be funded because those methods are not specified as restoration tools in the legal documents.[8] At one point, Justice also opposed the concept of research and monitoring and the establishment of a reserve account, two of the three main elements of the Restoration Plan.

On the state side, the Department of Natural Resources also plays a significant role in the restoration program. As the Alaska agency empowered with managing most state lands, including tidelands and submerged lands, the DNR logically should have been Alaska's third representative on the Trustee Council. But, at the time of the settlement there were two factors working against it. First, the commissioner of DNR, Harold Heinze, was a former president of ARCO Alaska, one of the largest oil companies on the North Slope. This was seen as a potential conflict of interest and also, a convenient excuse to exclude the agency. Second, and more important, Alaska Attorney General Charlie Cole, the state's chief architect of the settlement, believed that the state's interest would best be protected if he personally sat on the Trustee Council. He had a strong personal desire to watch over the nearly billion-dollar fund and oversee creation of the Restoration Plan.[9] While Cole sat as trustee, the DNR played a leading role in day-to-day planning and implementation of the restoration effort, especially when it came to the Trustee Council's habitat protection program.

Veto power for all

The role of each trustee is made more substantive when considering an unprecedented requirement spelled out in the MOA that all decisions of the Trustee Council be unanimous. In short, the Council cannot establish policy, set direction, or spend money without complete agreement of all six trustees. The unanimity requirement was included at the insistence of the State of Alaska as a way for the state to retain equal control over the restoration process and to cut down on the politicking and funding tradeoffs between agencies. It was a big gamble, one that effectively gave any one trustee veto power over all decisions. Cole insisted on the measure, believing that it would allow the state to resist the pressures brought to bear by Washington, D.C. politicians and bureaucrats who might try to sway the restoration process to their own advantage. During his introductory remarks at the council's first meeting, Cole addressed the need for unanimity among trustees: "This was a subject of which there was considerable debate among the representatives of the Department of Justice and the State of Alaska, and I think it came down to a recognition – especially on the part of the state representatives – that the state would have a firm hand in this joint trusteeship. And it was one of the governor's principal views that he did not want to see this joint trusteeship and the use of these monies controlled by Washington, D.C." [10]

Trustees and observers alike approached the concept of unanimous consent with trepidation and suspicion, seeing it as a tool for gridlock rather than cooperation. And for the first few years, those fears were at least partially borne out. But, 11 years later, past and present trustees agree that it provided a strong foundation for the council. Trustees credit the unanimity requirement for forcing competing agencies, both federal and state, to work together, understand each other's needs, and avoid duplication.[11]

The drafters of the MOA did not entirely trust in the workability of unanimous consent. A provision of the MOA that has never been invoked gives the trustees a choicematters cannot be agreed upon. The governments can either resort to litigation and let the courts settle the matter or they can submit the issue to non-bind

Getting Started with "existing structure"

The Trustee Council's first meeting December 5, 1991, was short and to the point. At the table for the state were Attorney General Cole, Commissioner John Sandor of the Department of Environmental Conservation, and Commissioner Carl Rosier, representing the Department of Fish and Game. On the federal side were Mike Barton, chief forester for the Alaska Region of the U.S. Forest Service, Steve Pennoyer, director of the Alaska region of the National Marine Fisheries Service, and Curtis McVee, special assistant for Alaska to Interior Secretary Manuel Lujan.

The MOA required that the trustees meet and agree to an organizational

structure within 90 days of the signing of the civil settlement. At the first meeting, 59 days after the settlement, organizational structure was the primary item on the agenda.

The meeting was largely an informational session, a chance for each trustee to introduce himself to the public, make a short statement about restoration, and take a first small step in what would be a long, often burdensome journey, perhaps without end. It turned out, however, that that first step was not so small and most certainly set the Trustee Council headed in the wrong direction.

Just hours before the 7 p.m. meeting, McVee provided the other five trustees with a rough outline for an organization. The trustees quickly reviewed the document and invited McVee to present it to the public that evening.

The proposed organizational structure was centered on a premise that appealed to the conservative leaning Bush and Hickel administrations. It called for using "existing structure" within the trustee agencies to manage the restoration effort. In this way, restoration funds would be reserved for restoration rather than be expended on a new federal-state bureaucracy. Such a proposal seemed to make good administrative sense, considering the structure already in place through the NRDA restoration planning efforts was made up mostly of trustee agency personnel. It also made good sense from a public perspective, appearing to make more funds available for the various restoration goals of different interest groups. There is little evidence that anyone associated with the restoration effort held up a cautionary flag at the idea.[12]

The Trustee Council adopted McVee's plan without question. As a result, trustees steered directly into the bureaucratic quagmire in front of them rather than attempt to rise above it. It is only with hindsight that this moment, which took place just one hour after coming into existence, can be seen as pivotal for the trustees. It chose to adopt an organizational structure with very little debate or forethought. One can argue, however, that a thorough discussion of the matter would have resulted in the same decision. For a new entity embarking on a massive restoration effort with very little to guide them, it seemed expeditious and prudent to take advantage of the administration, in-house accounting, and natural resource expertise of existing agencies. In addition, there was a certain level of comfort in going with the familiar. The trustees were directors of (or within) their agencies and, therefore, they understood agency procedures and had faith in the ability of their agencies to get the job done. From most angles, the use of existing agency structure appeared to make good sense. Yet, it proved to be the overarching lesson from the first three years.

The Trustee Council's biggest challenge, it turned out, would be navigating through the varied requirements of six different resource agencies under two different governments (at times led by opposing political parties) and in the historical context of inter-agency competition, jealousies, and disputes. Its biggest

accomplishment may be how it transcended all that, eventually bringing all the groups together and writing an effective restoration plan that worked. The trustees endured a very painful learning curve in the process, which ultimately ended in the abandonment of existing structure.

The Restoration Team

When the trustees chose to drive the restoration wagon into the quagmire, they relied on their Restoration Team to power them through. The Restoration Team was made up of six agency members, one appointed by each trustee, who coordinated the restoration planning effort. Its role was monumental. Restoration would not move forward without the research, planning, and direction it provided. Procedurally, this group was empowered to review and approve all matters before forwarding them to the Trustee Council.

Leading the restoration effort was Dave Gibbons,[13] a U.S. Forest Service veteran with a Ph.D. in fisheries. Although he oversaw the Restoration Team, Gibbons did not have a vote nor did he have any sway over any of its members, except, perhaps the representative from the U.S. Forest Service. Gibbons accepted the interim role as director of restoration while the Trustee Council searched for a permanent professional executive director. This temporary stint would stretch to more than two years and would cover many of the council's most difficult moments. It also covered the period in which the highly complex foundation for a restoration plan was laid and most of the blue print for a restoration program was designed.

In a perfect government, this simple system of six deputies representing the six agency trustees in developing a restoration plan should have worked. But, history and their agency careers had never prepared the individual members to pull with the uniformity of a team. Such a long-term restoration effort involving this much money to be shared by so many federal and state agencies was unprecedented. The turf wars, budget wars, and politics common within and between government agencies would not be easily overcome.

The public record is almost mute when it comes to recording the actions of the Restoration Team. Meetings were held according to Alaska's open meetings laws, but there was very little public interest in watchdogging this group. Even after some members of the public realized that many of the key decisions were being made at the secondary level, their interest waned when they realized how long and boring Restoration Team meetings were. They would literally meet 8 am to 6 p.m. or later, with few breaks, and do this for days on end. Rather than focusing on the big picture, as the Trustee Council sought to do, the Restoration Team delved into the minutiae, including the technical or scientific aspects of each project and the dollars allotted for wages, equipment, charters, travel, per diem, and administrative overhead. This was the level at which more than

1,000 restoration ideas would be combined and condensed into about 400 funding proposals before being debated, tweaked, and finally voted on. In the end, maybe 60 projects would make it into a draft annual work plan that would then go to the Trustee Council for review and approval. The Restoration Team was also responsible for writing policies, objectives, and goals that would anchor the Restoration Plan. Team members would help establish the Public Advisory Group (to be discussed in Chapter 6), conduct public hearings, create threshold criteria from which they could evaluate projects and habitat, and establish objectives to evaluate the recovery rate of injured resources.

The Trustee Council, however, was not a rubber stamp of the Restoration Team's efforts. In fact, just the opposite was true. There proved to be a deep communication gap between the Trustee Council and the six-member team that did much of the day-to-day planning. The team's reports before the Trustee Council were usually very detailed and thorough, but they faced strong questioning by trustees who were still trying to feel their way through the restoration process. The first two work plans submitted by the Restoration Team were ripped apart by the Trustee Council, eventually passing only after independent review by Chief Scientist Bob Spies, major changes in the focus, and with severe funding cuts. The first draft restoration plan, the document on which $700 million would be divvied up, was rejected outright. The Restoration Team, it seemed, consistently moved the restoration effort in a direction that made the Trustee Council uncomfortable.

Rumors circulated about the team's unchecked spending and blatant politicking, essentially trading votes in order to get support for their agency's proposals. There is little in the public record to support this, since detailed notes and transcripts were not made. But, 10 years later, Gibbons wasted no words in describing the situation.[14] Like the Trustee Council, the Restoration Team set itself up by establishing a unanimity agreement. This proved to be a big mistake, Gibbons said. Agencies were fighting for their projects, he said, with one agency voting against the other in order to leverage support. The Department of the Interior and the Alaska Department of Fish and Game were frequently at odds in this funding battle. Voting records support Gibbons' observation, showing numerous times when the Restoration Team would vote 5 to 1 to support a particular project, usually with the Interior representative opposing a state-sponsored proposal. The leveraging of power led to agreements among Restoration Team members to support each other's proposals, Gibbons said. "In the end, the budgets went way up," Gibbons said. This gridlock was alleviated somewhat when the Restoration Team changed its unanimity requirement, choosing instead to allow a supermajority of five to move a project forward, effectively taking away the veto power of the individual.

Gibbons found himself in a nearly impossible situation. He was charged with overseeing the restoration effort, including the Restoration Team, yet he

had no authority over its members. He was a federal employee representing the U.S. Forest Service and was expected to manage a staff that came from two other federal agencies and three state agencies. "I had no authority and yet I was to be held accountable," he said.

Gibbons did not have a vote on the Restoration Team and could not change the group's decisions. If he was given an inflated work plan to present to the Trustee Council, he presented it as is. Today, he argues that at the very least, he should have had line-item veto authority over the annual work plan before presenting it to the council.

The Trustee Council, perhaps looking ahead to making sweeping changes with a czar-like executive director, did not seem interested in providing that authority for its current administrative director. During a first-year review of Restoration Office procedures, Gibbons presented the Trustee Council with a list of recommended changes, saying that he needed additional staff and more authority over the Restoration Team, including disciplinary authority. The Trustee Council responded by ignoring his request for more authority, with some members threatening to cut, rather than increase his budget.[15]

After that meeting, Gibbons told Mike Barton, the U.S. Forest Service trustee, that "It's time for me to get out of here. It's not working the way it is."

This was not news to Barton or any of the trustees. Wholesale changes were needed. Reluctantly, perhaps, one trustee after another came to the conclusion that agency loyalists making key decisions to fund themselves was not going to work. The conflicts, real and perceived, were too many to overcome.

Toward a restoration plan

The Restoration Team quickly created several subgroups, each set up as a temporary entity to move restoration from concept to reality and to implement the requirements of the settlement and MOA.[16] Chief among those subgroups was the Restoration Framework Group, which had the ultimate task of developing a Restoration Plan. The first step in that very lengthy legal and highly public process was to write a draft Restoration Framework.

The Trustee Council's first meeting was short and decisive. It had no briefings by professional staff. There was only a short and informal period of public testimony. An organization for restoration was established but not yet staffed.

The second meeting, two weeks later, was much more typical of things to come. It was largely an educational session for the trustees to get up to speed on the many issues before them. They listened to briefings from each of the subgroups and were expected to respond with direction for the groups to follow. Unlike the first meeting, all six trustees were deeply engaged in the matter of restoration. Each topic was discussed and debated and the group chairs were subjected to a number of questions.

It was at this meeting that the trustees clearly began to grasp the complexity of the legal issues before them. The trustees knew they had to establish a long-term Restoration Plan to guide the process, with the ultimate goal of full restoration of the oil spill region. But, even with a guaranteed budget of $700 million over the next 10 years, it was difficult to imagine how such a plan would be written and adopted.

The answer — for good or bad — would be found in the National Environmental Policy Act (NEPA).[17]

The National Environmental Policy Act

NEPA, passed by Congress in 1969, is the act that created the Council on Environmental Quality as part of a national effort to attack a chronic and growing pollution problem. The act also established required procedures for any significant federal action affecting the environment – road building, forest plans, and the filling of wetlands, for instance. It relies heavily on public involvement before action significantly impacting the environment can begin. In such cases, detailed environmental impact statements, showing possible alternatives to the action and potential consequences of each alternative, must be submitted for public review. For matters with less potential impact on the environment, a simpler "environmental assessment" would do the job, although it would still be subject to public scrutiny. Other activities, such as monitoring in which no animals were handled, could qualify for a "categorical exclusion" and go forward without any formal public process.

NEPA compliance quickly became an irritant to the trustees and a source of friction between the state and federal sides of the table. Federal agencies are subject to NEPA while state agencies are not. What's more, different federal agencies interpret NEPA regulations differently, some more strictly than others. This is one area where the Trustee Council's unanimity requirement became a burden. In effect, it forced the entire council to satisfy the trustee agency with the most rigorous NEPA requirements.[18] Not surprisingly, that turned out to be the U.S. Department of the Interior, which oversees National Parks, National Refuges, National Monuments, and other properties such as the National Petroleum Reserve. Department of the Interior lawyers warned Trustee McVee that he could not vote to spend any settlement funds unless the department's NEPA process was followed precisely. This meant some sort of NEPA analysis was required for each of the dozens of projects funded through the Trustee Council each year. To the trustees, that meant money and delays.

Gibbons at one point told the Trustee Council that "every time we turn around, we've got a NEPA requirement of some kind that tends to slow the process down."[19]

The NEPA process was a bureaucratic nightmare to state Trustees Cole, who was appointed to his position after a long career in the private sector, and Sandor,

a lifelong federal forester. At one meeting Cole complained that "nothing ever gets done" because of NEPA and "before we get done we're going to need a NEPA statement (to) go to the bathroom." [20] Sandor argued that NEPA compliance involves "not just a time delay, . . . (but) a tremendous amount of money." [21] Cole obtained an Alaska Department of Law opinion that said Trustee Council actions were not subject to NEPA and he later suggested that Congress grant the Trustee Council an exemption from NEPA.[22] But, in the face of three federal trustees, all of them backed by their department solicitors and the Department of Justice, he acquiesced.

In practice, NEPA compliance required the Trustee Council to make two votes to approve projects; the first to fund NEPA compliance and the second to approve implementation of the project itself. To combat this nagging demand on the restoration process, the Trustee Council decided that it would rather climb one significant mountain than traverse hundreds of mole hills. It decided to prepare a programmatic environmental impact statement covering the entire Restoration Plan. Once completed, it was thought that the overarching EIS would satisfy NEPA regulations for a minimum of five years and, with periodic updates, keep regulators happy for the remainder of the Trustee Council's existence.

This, however, proved to be too optimistic. Despite about a half-million dollars in costs, the finished EIS did little to benefit the restoration effort. It proved to be only partially successful in easing the bureaucratic frustrations and costs involved in implementing the Restoration Plan. Despite the programmatic EIS, the trustees continued to approve work plans pending compliance with NEPA. Each project was still reviewed by attorneys and about 90 percent of them received a Categorical Exclusion from NEPA action, not due to the EIS but because of the type of activity. The remaining 10 percent still required an Environmental Assessment (EA) or a full-blown EIS.[23]

Such a massive undertaking came as a surprise for the drafters of the Restoration Plan. Subgroup chairman Stan Senner had already been put on notice by the trustees that they wanted a Restoration Plan as soon as possible. Senner and his group were in the process of writing and publishing the Restoration Framework, an outline of the issues and potential solutions surrounding the restoration effort. The Framework, to be released in March 1992, was a scoping document, allowing the trustees to float issues and ideas in front of the public and in front of agency professionals to get feedback. A detailed Draft Restoration Plan could be written based on that input.[24] When Senner predicted in December 1991 that the Restoration Plan would be finished in June 1993, the trustees made it clear that it would not wait a year and a half to get a plan in place. Trustees Cole and Sandor were particularly strong in their views that the entire planning effort appeared too slow and too costly. Sandor predicted at that time that such a timeline would result in a public backlash. The trustees endorsed

continuation of the planning effort, but made it clear that they wanted a finished plan by fall of 1992.

Senner again addressed the council in April 1992. This time he was considerably less accommodating. The Restoration Team, he said, was in agreement that given the new requirement for a full-scale programmatic Environmental Impact Statement, it would be impossible to meet the trustees' deadline. The earliest a Restoration Plan could be completed was May 1993. "[W]e thought we'd rather give you the bad news now than five months from now," Senner said.

Built into the lengthened timetable was a new lesson that the trustees and the agency staff needed to get used to. "[O]ur experience in producing the Restoration Framework suggested that it is not easy to get six agencies and trustees to agree on the content of a document that has as many policy implications as these do," Senner said. "And the Restoration Framework, in truth, will be a piece of cake in comparison to the Restoration Plan where something really big is at stake."[25]

Delays and more delays

The programmatic EIS would inevitably complicate and delay an already enormously complicated and slow process. Despite the cautious approach by the Restoration Team, the drafting of a Restoration Plan would take considerably longer and involve more public meetings, agency meetings, trustee briefings, drafts, and redrafts than anyone involved imagined.

When the Trustee Council naively demanded that a Restoration Plan be in place by late 1992, it had no idea of the complexity of the task. How did an expected one year planning effort turn into a three-year grind? The reasons are many, sometimes very simple and often quite complex. After review of Trustee Council meetings and interviews with restoration insiders, six key reasons emerge, which account for much of the delay.[26]

The first is that the trustees were unrealistic in their expectations, even under ideal circumstances. Theirs was not a tried and proven process. The trustees and the Restoration Team were breaking new trail most every step of the way. Theirs was a multi-government, multi-agency effort and it could have been anticipated that the going would be slower and the work more difficult than the normal government process.[27]

Second, every document was subject to a multi-level review. As Senner said, getting six agencies and their trustees to agree to the many hundreds of issues within each document was a monumental time-consuming task.[28]

A third element delaying the restoration planning process was that the trustees did not have a clear vision of what they wanted. It was not uncommon for the Restoration Team to have one idea on how a document should be presented and, after hammering out a draft for the trustees, learn that their bosses had a com-

pletely different idea in mind. The trustees did not appear to know (collectively) what they wanted in a document until a finished product was laid out in front of them. Then they were able to give solid direction to the Restoration Team, but it sometimes required the team to regroup and start afresh.[29]

Fourth, as noted above, the inclusion of an all-encompassing environmental impact statement added a significant burden to the process and many months to the timeline.

Although it is not easily quantifiable in terms of time lost, a fifth reason for delay can be shouldered on the requirement that all actions by the Trustee Council be unanimous. There were numerous debates during the first two years of council meetings that went unresolved due to the objections of a single trustee. Sometimes, it was difficult to find a point of agreement and the topic, which required decisive action, would be tabled.[30]

The sixth primary reason for delay was the extensive public process and the keen nationwide interest in the planning effort. As Senner said, something really big was at stake – $700 million in restoration funds – and the untapped pot of money did not go unnoticed. Different groups looked at restoration and the settlement fund in different ways. Environmental organizations, in Alaska and in Washington, D.C., recognized an opportunity to acquire and protect lands that were threatened by development, especially logging. Native communities foresaw improvements to docks and fish processing facilities and development of cultural centers. Landowners saw a chance to sell their lands at a premium price without the headaches or potential environmental degradation of development. Commercial fishermen wanted aquaculture and hatchery improvements and a better understanding of the life cycle of salmon. Native hunters wanted to know why harbor seals were on the decline and sought organizational funding to become partners with the federal government in managing the species. Scientists, both in the government and private sectors, knew that marine research would be a key component of restoration and wanted to structure the plan to fit their specialties. The University of Alaska and its advocates saw a chance for endowed chairs. Spill-wary residents wanted money for preventive measures and equipment to respond rapidly and effectively should another spill occur. Spill area communities hoped for economic investments into visitor information centers, museums, dock improvements, fish processing facilities, aquariums, and anything that might be considered on the cusp of restoration. If the building of a rocket launch pad could have somehow qualified as restoration, no doubt a group would have emerged to promote the idea and lock in a chunk of the settlement fund.[31]

Public involvement & the restoration plan

Just as during the settlement negotiations, the many oil spill constituencies remained deeply involved in the planning process. At the same time, the United

States Congress[32] and the Alaska Legislature[33] each felt it should have a say in how funds were spent. Every move of the Trustee Council was under intense scrutiny by a self-interested public.

Many of them found hope for their cause in the loose wording guiding the use of settlement funds. The MOA called on the governments to use the settlement fund "for the purposes of restoring, replacing, enhancing, rehabilitating or acquiring the equivalent of natural resources" injured by the spill. In addition, the human services — subsistence, commercial fishing, and recreation/tourism — that were lost or reduced due to injuries to the resources were also eligible for restoration. Restoration was defined by the MOA as "any action which endeavors to restore to their pre-spill condition (or replace) any natural resource injured, lost, or destroyed as a result of the oil spill and the services provided by that resource. . ."

These key phrases in the settlement lend themselves to interpretation and advocates were free to fight for the interpretation that best fit their cause. The trustees and planners correctly felt that a solid foundation of public input would be needed to draft an effective restoration plan. Trustees regularly found themselves in conflict when it came to two overriding concerns. First, they wanted public input into the Restoration Plan from all corners of the spill region and from all interest groups. Second, they wanted the final plan out as soon as possible. But, meeting their first objective inevitably led to delays in the second objective and that, in turn, led to a disgruntled Trustee Council.

Public participation had a profound influence on the outcome of the Restoration Plan and the splitting of the restoration pot. During the spring of 1993, more than 2,000 people participated in 22 public meetings held throughout the spill region and/or forwarded written comments to the Trustee Council, spelling out how they thought the money ought to be spent. To experienced government planners, such a large public turnout is impressive. Comments flowed in from the spill region, throughout Alaska, and the nation as a whole. In the end, the Restoration Plan followed very closely the collective wishes of the people within the spill region.

Surprisingly, the chain of events that led to this overwhelming public turnout almost never took place. It resulted from a coup, of sorts, orchestrated by lower level planners who were unhappy with the complicated Draft Restoration Plan being written by the Restoration Team. The draft plan was hundreds of pages in length, complicated in its depth, and extremely specific in its scope. It was to include every potential project to be funded over the remaining nine years of restoration funding. Such a tactic would provide long-term security for agencies carrying out those projects by locking in the funds.

This was not a philosophy embraced by all team members or their staffs. The Draft Restoration Plan was scheduled to be completed in mid-June and rebellious staff saw the timing of its release as an opportunity to make a pre-emptive strike

against the draft plan and usurp the efforts of the Restoration Team.

In Alaska, the public typically will not attend nor will it tolerate public meetings from May through September. That's fishing season. Alaskans (especially those in the spill region) make their livings during the short summer months, either through tourism or commercial fishing. In addition, rural Alaskans put away most of the fish, meat, berries, and other foods they need to subsist for the remainder of the year. And those people who don't depend on summer for a living, most certainly depend on it for recreating.

In an effort to gather public input on the draft plan before the summer season, a frustrated Trustee Council reluctantly approved a redundancy in the planning effort. In lieu of using the actual draft plan, trustees agreed to fund publication of a "summary" of the plan that would be used in 22 public meetings to be conducted in April.

While the Restoration Team hammered out the mammoth draft plan, lower level planners Bob Loeffler, of the state DEC, and Veronica Gilbert of the state DNR, wrote and created the 10-page summary. Marty Rutherford, the DNR representative on the Restoration Team, helped shepherd the idea through the team and the Trustee Council. The summary they created was simple and straightforward, providing only basic information to understand the injury to the environment, the restoration process, and five restoration alternatives for public comment. It also included a question and answer form, allowing public participants to quickly provide written comment. The publication was printed in a newspaper format and mailed to every address within the spill region.

Eight years later, Rutherford and Loeffler discussed the publication as if it were the prize accomplishment of their government careers.[34] It was their hope, Loeffler said, that if the newspaper was presented properly, it would create its own momentum with the public and change the direction of the restoration effort for good.

"If the Restoration Team had understood what we were doing," he said, "I'm convinced they wouldn't have let us do it."

"What it was was an attempt to steal the process, and it worked," Rutherford added. "Thank God for it."

This stopgap publication turned out to be the defining document of the entire planning process. It was the easiest to read and to understand, serving as a textbook for the facilitators who traveled the spill region, explaining the process and the five listed alternatives. Almost every participant used this document as his or her primary source of information and more than 2,000 public comments were compiled. The results were telling and had a profound influence on the drafting of the Restoration Plan.[35]

By the time the Draft Restoration Plan was placed before the Trustee Council, the preliminary results of the public meetings were already tabulated. The trustees

had read many of the comments and were downright exuberant about the level of public participation.

The influence the tabloid had on the Trustee Council is one for conjecture. There's no telling how the council would have reacted, in the absence of the tabloid, to the draft plan submitted to them. But, coming on the heels of the tabloid and after the public meetings, the draft restoration plan appeared overly bureaucratic and rigid.

After 18 months of discussing the plan, the trustees finally saw the proposed draft in front of them two weeks before it was supposed to be released. It was nothing like they wanted. The plan, presented June 1, 1993, was strongly criticized and rejected outright. Rather than a plan with hundreds of pages of detail, the trustees wanted a draft plan that provided only guiding principles and included a preferred plan for the public to comment on. Despite the trustees' desire for a speedy conclusion to the process, the draft plan was sent back to the Restoration Team, this time with a Thanksgiving deadline to provide them with a new one. Sandy Rabinowitch, a planner with the National Park Service, and Bob Loeffler were assigned to actually write the document. At that point, at least, the Trustee Council was able to provide clear direction as to what it wanted.

At the same meeting, the Trustee Council literally trashed a draft of the programmatic EIS, which was based on the rejected draft plan. They had contracted with a private firm that had a great deal of experience in writing NEPA-related documents. The unfinished draft, hurriedly printed for trustee review, was placed before the council in an unedited format. The idea was to show the council how the Draft Restoration Plan and the $300,000 EIS would work together. Both documents were mammoth in size and unfriendly to the reader. The draft plan could be as simple or complicated as the Trustee Council wanted to put before the public. The EIS, however, had a set format to follow and was necessarily bulky. When the council was done criticizing the Draft Restoration Plan, it saw no reason to stop there. The council focused on several typos and some factual errors in the EIS and ordered that the entire document be redone.[36]

The public grows impatient

As months and then years passed with very little true restoration to show for the effort, the public, the media, and politicians became more and more agitated. Just as Sandor predicted at the Trustee Council's second meeting, public perception that nothing was getting accomplished would lead to an uprising.

The election of Bill Clinton brought with it a substantial change in the dynamics of the Trustee Council. If federal trustees were once hesitant to endorse habitat protection as a restoration tool, that would quickly change to become a primary focus under Clinton and his new Secretary of the Interior, Bruce Babbitt.

This political shift was set in motion less than a month after Clinton became

president, when Congressman George Miller (D-CA), chairman of the House Committee on Natural Resources, requested a General Accounting Office audit of the Trustee Council's spending habits. Auditors began analyzing the Trustee Council's budgets and procedures in February 1993 and, at Miller's pushing, finished its critical report on August 20, just three days before Secretary Babbitt was scheduled to address the Trustee Council in Anchorage. Miller immediately released the report,[37] along with a press release, to the media. The news, however, was embargoed for use by the media until the day Babbitt addressed the council. Members of the Trustee Council never saw the finished report until after they were inundated with phone calls from reporters. On the morning of the highly anticipated visit by Babbitt, the Anchorage Daily News headline read: "Oil spill trustees rebuked, GAO study criticizes settlement spending."

The GAO report[38] had several specific criticisms:

- There was no restoration plan in place and the schedule for issuing one was continuing to slip.
- Annual work plans were not tied to a comprehensive restoration plan.
- Some projects being funded did not have clear links to the oil spill or appeared to duplicate normal agency responsibilities.[39, 40]
- Projects were not being competitively bid and went almost entirely to federal and state agencies.[41]
- Parcels considered under "imminent threat" of development were being acquired before a habitat acquisition plan was in place and acquisitions were not tied to a restoration plan.[42]
- Agencies proposed, reviewed, approved, and carried out the restoration projects, leading to public skepticism that restoration projects were not objectively selected.
- The Trustee Council did not have an executive director to lead the effort.[43]
- Meaningful public participation and independent scientific viewpoints were not always sought.
- Financial audits and program reviews were not being conducted nor were any planned.
- Additional projects were approved and funded even though related project reports were poor in quality and rejected by the chief scientist.[44]
- Some planning meetings lacked procedures and focus.
- High travel costs were incurred by trustees living in Juneau but attending frequent council meetings in Anchorage.[45]

Trustee Council members were livid over the generally critical tone of the

report, especially considering they were not offered a chance to respond formally. The state trustees, in particular, considered the audit completely "irregular" and "unprofessional."[46] Cole called the report "unadulterated nonsense on stilts." In other words, circus-fare. Sandor considered the entire thing orchestrated from Rep. Miller's office and an embarrassment for the General Accounting Office.

Secretary Babbitt used the opportunity to call for cooperation among trustees and to move forward with restoration. "My view of it is rather than having an endless discussion about what did or did not happen, what might have been or what might not have been, that the important thing is that we move on to the future," Babbitt said.

Nevertheless, the trustees voted 5-0 to ask the GAO to rescind and redo its report, with the new Interior representative, Assistant Secretary George Frampton, abstaining.

In truth, there was very little in the GAO report that was surprising to any of the trustees. The real anger from the trustee perspective was borne from the feeling that they were blind-sided by the release of the report, that they were never given an opportunity to respond to its criticisms, and that the report made no attempt to put the Trustee Council's failings in context with its accomplishments.

The Trustee Council was barely one year old at the time the audit began and was developing procedures while at the same time moving ahead with restoration. The growing pains were many and expected. Almost every criticism in the report was recognized and debated by the trustees themselves during open meetings, and all of it was in the public record for the auditors to review. Most of the problems were well known and were being addressed. Yet the audit provided none of this context, leaving the impression that the trustees were "stumbling along," as Frampton once said.[47] For example, the audit did not once mention the constraints the trustees faced through the NEPA process, even though this was a point strongly made by trustees in meetings with auditors. The trustees knew, also, that the line between normal agency responsibilities and EVOS-funded projects could be rather thin at times or that the link to oil spill injuries was not always clear. But they felt such calls were entrusted to a well-informed council of six people who had to agree unanimously and it was completely inappropriate for two auditors from Washington, D.C., to presume to know better.

Steve Pennoyer, the Alaska director of the National Marine Fisheries Service, was clearly frustrated by the suggestion in the report that killer whale studies were possibly unrelated to the oil spill and that they should be part of normal agency management. This issue had been debated *ad nauseum* and Pennoyer was regularly teased by his fellow trustees for his unflinching support of killer whale studies. The public strongly supported killer whale studies, whether it's determined that they were injured by the spill or not, he said. "At some point in the future, if in fact the pods do not recover, somebody's going to ask why. The

agency responsible for the marine mammals, I don't think, can stand up and say because we decided not to look at it, we can't tell you."

Ten years after the spill, killer whales remained one of eight species categorized as "not recovering." The species was upgraded to "recovering" in 2002.

Simultaneous with the release of the GAO report was another watershed event, this one having much greater implications for the 10-year restoration process. The uprising that Sandor predicted 20 months earlier was underway in Prince William Sound.

The fishermen's blockade

In Prince William Sound, where the spilled oil settled on hundreds of miles of shoreline and covered many salmon streams, the proverbial "other shoe" dropped during the spring and summer of 1993. The greatest fear for the majority of families in Prince William Sound who depend on the annual return of salmon and herring was that the spill would have long-term impacts on commercial fishing and subsistence. The 1989 spill was followed, instead, by record herring harvests and record salmon returns in 1990 and 1991.[48]

Then, during the summer of 1992 the pink salmon return plummeted. Skeptical fishermen grumbled about an *Exxon Valdez* impact, but also had to agree that natural returns fluctuate greatly from year to year, for many reasons known and unknown. The following April, when the herring larvae hatched during the oil spill were due to return for the first time as adults, the herring population crashed. It went from a record biomass of 118 metric tons in 1992 to an unharvestable population of 14 metric tons in 1993. The $12 million fishery was cancelled.[49] Four months later, for the second year in a row, the pink salmon again failed to show in commercially harvestable numbers and the seiners in Cordova began to talk about wholesale bankruptcies and repossessions of their boats.

Cordova's fishermen, like many others in the spill region, were frustrated by the pace of restoration. They argued passionately that no other group (except, perhaps, Prince William Sound subsistence users) suffered more due to the spill. They wanted restoration funds used to protect Prince William Sound fisheries through both science and habitat protection. Fishermen traversing the sound were witnesses to the stripping of trees from the mountainsides along Montague Island and Orca Narrows. They knew very well the extent of logging planned for the area. They had long been at odds with the timber industry, believing that logging was detrimental to salmon streams and inhibited successful spawning. They saw habitat protection through the Trustee Council as the best chance to permanently protect salmon streams and therefore permanently protect their livelihoods. In addition, they understood better than any single group the need for an ecosystem-wide understanding of Pacific herring and pink salmon. The life cycles of herring and salmon are, at least in part, mysteries that have eluded

researchers for a century. What happens to juvenile herring from the time they float away from the shores as larva until they return four years later to spawn as adults? Where do Prince William Sound pink salmon go after leaving the streams as three-inch fry until they return 15 months later as three-pound adults? What limiting factors result in overwhelming survival some years and almost nonexistant survival other years?

On August 20, 1993, the same day that the GAO report was released to the media, the commercial fishermen of Cordova decided they had waited long enough for the pink salmon to return. Channel 6 of the marine band radio was the round table of the airwaves for the Cordova fleet. It was always monitored for emergency messages and general information. On that particular day, it became the rallying point for a spontaneous upwelling of anger, fears, and frustration.

Exxon and the oil companies ferrying their dangerous cargo through the sound were primary targets of their anger. Especially Exxon. Commercial fishermen were angry with Exxon for refusing to negotiate a settlement of their class action civil suit over the spill.[50] The governments received a settlement, but the people most affected by the spill had yet to get any kind of satisfaction from the courts. Likewise, they were angry with the Trustee Council for moving too slowly on restoration. In their minds, they heard a lot of talk but saw little action.[51] They wanted a combination of habitat protection and far-reaching studies that centered on the primary commercial species of Prince William Sound – Pacific herring and pink salmon.

When someone broadcast the idea of organizing a protest, the angry fishermen instantly understood the most effective way to send a loud message that they had run out of patience. A fleet of seiners began a blockade of the Port of Valdez that kept tankers from reaching the Alyeska Pipeline terminal for three days. During the blockade at the Valdez Narrows, no oil tankers could enter or leave the Port of Valdez. If this kept up for long, it would force the shutdown of the Trans-Alaska pipeline, at a cost of tens of millions of dollars a day. And since the State of Alaska has a 25 percent royalty on that oil, the move would not only impact the multi-national oil corporations, but also affect the bottom line of state government and all residents of Alaska.

Governor Wally Hickel and Attorney General Cole flew to the site of the protest on Day Two of the blockade.[52] Hickel promised that there would be no foreclosures on commercial fishing loans from a state revolving fund. Cole talked about progress with habitat protection and the need for ecosystem-based studies. On Day Three, Bruce Babbitt and George Frampton, Jr. flew into Prince William Sound at the urging of Governor Hickel and promised fishermen they would encourage the Trustee Council to dedicate $5 million a year toward research on Pacific herring and pink salmon.[53] After obtaining Babbitt's support for a significant research effort, the blockade disbanded and went home. The following day,

Babbitt presented his support to the Trustee Council.

This had a far-reaching impact on the Trustee Council and the Restoration Plan because it moved the focus of the scientific effort from species-specific research to ecosystem-based research. Fishermen weren't the first to call for ecosystem research, but they were the loudest and most forceful of the voices. A team of scientists formed a coalition with Cordova fishermen and together they hammered out a five-year study proposal known as the Sound Ecosystem Assessment (SEA). This broad-based study, ultimately funded with more than $21 million, was centered out of Cordova and focused on determining the limiting factors in the life cycles of Pacific herring and pink salmon. It was the first of three such ecosystem-based studies funded by the Trustee Council[54] and led to a new focus in the Restoration Plan. The first two of 21 policies published in the final Restoration Plan established that ecosystem-based research would become the priority for the Trustee Council:

1. Restoration should contribute to a healthy, productive and biologically diverse ecosystem within the spill area that supports the services necessary for the people who live in the area.
2. Restoration will take an ecosystem approach to better understand what factors control the populations of injured resources.[55]

A new direction

On November 30, 1993, two significant events marked the turning of the tide for the Trustee Council. First, the Draft Restoration Plan, debated heavily for the better part of two years and rejected outright five months earlier, was adopted without discussion. Five months of rewriting and review, in careful communication with the trustees, resulted in a 45-page draft plan that melded to the wishes of the Trustee Council. The second big event was that Jim Ayers presided over his first meeting as the Trustee Council's first executive director.

Ayers, 47 at the time, came to the position after serving as director of the Alaska Marine Highway System and deputy commissioner of the Alaska Department of Fish and Game. He was known for his tight management structure, his ability to communicate with a broad audience, and perhaps most important, his political savvy in achieving his goals. It was the political savvy that trustees found most appealing in their new executive director. He was a political veteran, having worked closely with three widely disparate governors – and thrived. Bringing the six trustee agencies and the Alaska Department of Natural Resources under one authority would require that same skill, a practiced combination of finesse and muscle. The restoration effort, at times, acted like a six-spoke wheel without a hub. Ayers' job was to center that hub and to make sure each spoke was attached firmly. Whereas Dave Gibbons had no disciplinary power over Restoration Team

and Work Group members, Jim Ayers was their executive. He would preside over a three-month transition that would consolidate all decisions to his office and all planning through his independent staff.

Simultaneous to the hiring of Jim Ayers was the Trustee Council's strong endorsement of its number two choice in the search for an executive director. While hiring Ayers, the council let it be known that it also wanted Molly McCammon, a former public radio journalist and Alaska homesteader, who became special assistant to Governor Bill Sheffield and, later, a legislative expert on natural resource issues. Ayers hired McCammon as his director of operations and together they completely revamped the restoration office, consolidating all power in a czar approach to restoration. Their first objective, to the relief of many inside and outside the restoration office, was to eliminate the Restoration Team and the remnants of the Restoration Planning Work Group.

These groups were replaced with a Restoration Work Force, made up of agency personnel that would review materials, advise the Restoration Office, and serve as liaisons to the trustees. The Restoration Work Force included former members of the Restoration Team, but their influence had waned to a mere crescent of their former power. Their roles were advisory only.

Ayers considered the dismantling of the agency machine to be the most important step he would make coming into the new position. He had to assert total control over the process. The former marine did so with the full backing of his generals, the Trustee Council.

The use of the quagmire image in this text to describe the Restoration Team comes from Jim Ayers.[56] At a small breakfast and coffee shop next to the historic Baranof Hotel in Juneau, Ayers searched for the right word to describe the situation when he took over. It wasn't quite anarchy, he said, but more of a quagmire in which the restoration process was stalled and getting further entrenched.

"The people who worked for the Trustee Council had taken over," Ayers said. "Six independent agents, occasionally in concert and usually in conflict with one another."

"A lesson from the spill is that from the very beginning, someone has to have authority. I still contend that all that chaos early on was because no one knew who was in charge. Instead, there was a network of people, all of whom thought they were in charge."

The one person who was supposed to be in charge knew without a doubt that he wasn't. Dave Gibbons worked closely with Ayers in analyzing the strengths and weaknesses of the agency system and reinforced Ayers' view that the Restoration Team had to be eliminated.

Ayers struggled to put these observations in context, concerned that it painted a wholly negative image when he knew it was not that black and white. The individuals involved worked as hard as any he had ever seen. "I think they did a

wonderful job of diving into the war, the disaster, with no training and no manual," Ayers said. "If you've ever been the first at a disaster site and you throw yourself into the role to help the others and try to make things right again, and then the EMTs come in, it's both a relief and a serious conflict when asked to let go and let someone else take over."

Ayers' idea was to relieve the Restoration Team members of their responsibilities at the disaster, and then slowly bring them back into the process, one by one, as they were ready to return. "To the best of our abilities, we wiped out the separate entities of each agency and each agent," Ayers said. "They all had to have the same game shirt, working as one team."

Management by objective

Ayers approached restoration from a very traditional management perspective, focusing on mission, objectives, and goals and then a plan to accomplish each. The difference he brought to the Trustee Council was immediate. Ayers' first order of business before the Trustee Council was both symbolic and substantive. He presented the trustees with a mission statement, originally composed on a napkin at the Channel Bowl Café in Juneau, that encompassed the intent of the settlement, and he reminded them that every decision made and every project funded must follow a direct trail back to that mission.

> *. . . to efficiently restore the environment injured by the Exxon Valdez oil spill to a healthy, productive world renowned ecosystem, while taking into account the importance of quality of life and the need for viable opportunities to establish and sustain a reasonable standard of living.*[57]

The statement was adopted enthusiastically. Ayers then asked trustees to endorse a transition plan that had three main components.

First, he called for elimination of the Restoration Team. Second, Ayers asked that the chief scientist report directly to him. Chief Scientist Bob Spies would remain an independent overseer of the restoration effort, but Ayers wanted Spies to work more directly with the Restoration Office in the day-to-day planning efforts. His criticisms and advice would go first to the executive director, not to the agencies or the trustees.

Finally, Ayers announced that he wanted to create a staff of about 16 people, including a director of operations, a director of administration, and a project management coordinator. In addition to his staff, the administration budget would continue to pay salaries or partial salaries for each member of the Restoration Work Force.

The trustees, appearing cautious at approving such a large staff, were clearly shocked to learn that the current administration budget paid for 31 full-time equivalent positions. It was a telling clue that the trustees, who tended toward micro-management and were generally stingy about staffing levels, had no idea

the number of people or full-time equivalents working at the administrative level.[58,59]

Ayers asked the trustees to tentatively approve an administrative budget (developed under the old system), but promised he would return the next meeting with proposals to cut the budget by at least 15 percent. The trustees approved the plan. At the next meeting, Ayers returned to the trustees with a 20 percent reduction in the administrative budget and spelled out his plans for restructuring the administration and implementing the Restoration Plan. Frampton spoke for the trustees when he commended Ayers and his staff near the end of the meeting. "I think it's very promising to see the real organization developing here," Frampton said. "We are well through the transition to a permanent staff and, I think, a functioning organization where the trustees can appropriately function as trustees and board members and make policy and fiduciary decisions and not micro-manage the operation."

Turning the corner

Things were changing rapidly for the Trustee Council and the Restoration Office. Charlie Cole, the force behind the settlement and the dominant personality on the Trustee Council, attended his last meeting on the day Jim Ayers attended his first. Cole mysteriously resigned as attorney general one month later, in an unexplained dispute with Gov. Hickel and his chief of staff, Pat Ryan. He was replaced by Deputy Attorney General Bruce Botelho, who named Craig Tillery as his permanent designee on the Trustee Council. Tillery, picked nearly five years earlier to begin the state's litigation with Exxon, had worked side-by-side with Cole while negotiating the settlement and overseeing restoration.

By the time Ayers entered into the restoration picture, the trustees and Restoration Team had endured a two-year learning curve that resulted in many negative perceptions in the press and the public. Bitterness toward the trustees in some parts of the spill region ran deep. Yet, it's worth repeating that when Ayers took over and the Trustee Council turned the corner toward true restoration of the spill region, they had a solid foundation to work from:

- The Draft Restoration Plan was approved and published.
- The procedures for habitat protection were laid out so that an objective analysis of lands could be made.
- The fishermen's blockade had resulted in a movement toward ecosystem-based research, which would dominate the remaining years of the settlement fund.
- The transition from damage assessment to restoration was complete and policies were in place concerning many of the biggest controversies, such as completion of annual and final reports, normal agency management, and links to injuries. (See Chapter 5.)

- Injuries to resources and services were determined and restoration objectives were established.
- Two significant land purchases, protecting 63,349 acres along Kachemak Bay and on Afognak Island, were completed and nearly 1 million acres of uplands were identified for possible protection. (See Chapter 4.)
- The Public Advisory Group was created, a charter approved, and its 17 members selected. The PAG met eight times during its first year, offering its opinions on two detailed work plans and literally every item detailed above. (See Chapter 6.)

The Trustee Council and Restoration Team had started with the single-sentence instruction to use the settlement money "for the purposes of restoring, replacing, enhancing, rehabilitating or acquiring the equivalent of natural resources." Two years later, it had carved out a plan with procedures for obtaining these goals. It made big strides and it took significant tumbles along the way.

New credibility

Key to the success of the Restoration Plan is that it not only identified the main elements of a restoration program, but backed up each component with a dollar figure. This allowed long-term planning based on a long-term budget, and also ended the contentious public debate over allocation of the settlement. Whether proponents of habitat protection were happy with their $342-$372 million share or not, at least they knew where they stood and could begin planning accordingly. Likewise, research scientists and community leaders knew they would have $192-$222 million over a 10-year period, plus they expected to receive the majority of funds from the $108 million Restoration Reserve.

To make this happen, Ayers became the diplomat and the deal maker. Bruce Babbitt, with his Assistant Secretary George Frampton, Jr., at the Trustee table, was the most active cabinet-level official taking part in council decisions. His mind was set on habitat protection – the more the better – and he had the sway with the President to ensure the other federal trustees joined him in this pursuit. At the same time, he had initiated the National Biological Service, a research arm of the Department of the Interior working to monitor the ecological health of our national parks, refuges, and other federal lands, as well as U.S. waters. With the National Marine Fisheries Service and the Alaska Department of Fish and Game sitting at the trustee table, there was never any doubt that research and monitoring would also get a significant chunk of the settlement money. But, the state, led by Governor Hickel, had two priorities for the money that were clearly not priorities with Babbitt. Hickel wanted $25 million to be used to build a saltwater visitor center in Seward, conceived more as a tourist attraction, but with a bent toward reasearch of northern marine species.[60] He also wanted a permanent endowment

established for future use in the spill region, preferably to sustain the research and monitoring efforts indefinitely.

Hickel and Babbitt were both veteran politicians experienced in the art of positioning and compromise. And because Hickel had served as Secretary of the Interior during the Nixon administration, both men also understood the weight of managing the nation's most precious lands and resources. With Ayers' help and the endorsement of Katie McGinty, the director of the White House Council on Environmental Quality, the two men shook hands on a deal that would give both what they most wanted.[61] Hickel, who originally wanted settlement funds to be used to buy timber easements and create a "world class park" out of Prince William Sound, accepted a stronger habitat protection effort without the park image. He also scaled down the tourism-orientation of the Seward facility and agreed to a "Woods Hole" type of marine research facility that doubles as a tourist attraction. Babbitt, in turn, agreed to support the Restoration Reserve, although his representative on the Council, Deborah Williams, later refused to allow use of the fund to be restricted to research and monitoring. When the two men shook hands, the Restoration Plan was essentially completed.[62]

Ayers and McCammon would exert their influence over the final restoration plan in other significant ways. They improved the work plan process, providing uniformity, predictability, and accountability, and effectively opened restoration funding to a larger audience of non-agency researchers. And to improve the likelihood of success in the habitat protection program, they instilled procedures that were more flexible for working with the specific needs of Native landowners.

Most important, however, was the credibility factor. By their sheer presence, they began to transcend the perception that the restoration effort was just a self-perpetuating funding machine for Trustee agencies. In truth, restoration has always been an agency-dominated effort. Creating an independent office did not change that. Government agencies are the designated trustees of the public's natural resources and it should be no surprise that agency scientists won the majority of research and monitoring funding. But, the independent restoration office did open the process to non-agency proposals which then received independent peer review.

Chief Scientist Bob Spies will also argue that such competition improved the quality of the research. Agency scientists, many for the first time in their government careers, would be required to act like independents who must compete openly for funding. Proposals would have to be more detailed, better thought out, and budgeted to the dollar. Each year, detailed annual or final reports would have to be written and filed on deadline and submitted for peer review. Expenses were audited annually by an independent firm. All researchers, government or independent, were encouraged, and often funded, to write articles for professional

journals.[63]

No one can say whether many of the changes implemented by an independent office would have eventually taken place under the agency system. Progress was being made under the Restoration Team and the substantial kinks in the system were being addressed. But, what is clear is that the Restoration Team's progress was painfully evolutionary while the move to an independent office was an overnight revolution. Change occurred quickly and, no doubt, for the better. The spontaneous fishermen's blockade was ample evidence that the local public had no faith in the old system and desperately wanted the revolution. The GAO report and media attention showed that, for reasons both perceived and real, the restoration effort was severely tainted on a national level. Even under an independent office, it would take many years to undo those perception problems. Based on the critical nature of media coverage on the five-year anniversary and the more generous and gracious media attention on the 10-year anniversary, faith on the national level was for the most part restored. On a local level, however, there is still a remnant of distrust, much of it based on the early years as the public fought for a restoration plan, and much of it based on controversies surrounding the implementation of that plan.

Footnotes - Chapter Three
The Early Years

1. Cole referred to the concept of restoring injured species and human services to pre-spill conditions as "mission impossible," a sentiment shared by his fellow trustees and members of the Restoration Team. Trustee Council meeting, April 27, 1992.

2. This was an often-stated expectation, usually by the public, but the Trustee Council itself would never adopt this as a goal. It comes from the *Governments' Memorandum of Agreement* which defines restoration as "endeavors to return to pre-spill conditions." The Trustee Council felt then and now that natural change is constant and that a return to 1989 conditions, even without the impact of an oil spill, would be impossible. The trustees and researchers were also well aware that no one knew the state of the spill region at the time of the spill. There were very few pre-spill studies available to determine population levels and trends prior to the spill injuries. Therefore, it was impossible to know what the pre-spill conditions were for most species.

3. *Exxon Valdez Oil Spill Restoration Plan*, *Exxon Valdez* Oil Spill Trustee Council, November 1994.

4. *Governments' Memorandum of Agreement and Consent Decree*, August 29, 1991.

5. For example, CERCLA/NRDA does not include archaeological artifacts and sites as a resource qualifying for restoration. The MOA adds archaeological resources. The MOA states: "Nothing in this MOA constitutes an election on the part of either Government to adhere to or be bound by the Natural Resource Damage Assessment Regulations codified at 43 C.F.R."

6. A separate memorandum of agreement allowed the federal trustees to delegate their responsibilities. The Department of Interior role normally falls to the Assistant to the Secretary for Alaska, although Deputy Secretary George Frampton, Jr. (based in Washington, D.C.) held the position and took an active role from 1993-1995. The NOAA position has always been filled by the Alaska Regional Director for the National Marine Fisheries Service. The Department of Agriculture position, normally occupied by the Regional Forester, Alaska Region, for the U.S. Forest Service, has also been filled by the administrator of the Chugach National Forest.

7. Personal communication, C. Cole, C. Tillery, B. Herman, J. Donahue, M. McCammon, February 17, 2001.

8. The Department of Justice reviewed all annual work plans and provided a confidential opinion to the federal trustees as to whether each proposal could be justified under the terms of the settlement. Several popular Trustee Council projects were originally questioned and some rejected by DOJ attorneys. It was only after considerable negotiation between the Restoration Office and Justice attorneys (and subsequent refinements to the proposals) that the projects were allowed to go forward.

9. Cole recalled that back in the 1970s, the state received about $900 million from oil leases let in the Prudhoe Bay region. Within years of that windfall, bumper stickers began appearing in Alaska that said: "Please, Lord, give us another oil boom and this time we won't piss it away." Cole said he was thinking of that bumper sticker when he asked Governor Hickel to allow him to serve as a trustee over this new $900 million fund.

10. This was an overriding theme expressed by Cole throughout his two-year tenure on the Trustee Council. From meeting to meeting, Cole would reiterate that "the state must be careful not to lose control to D.C." As the Trustee Council was developing, Cole and Governor Hickel were leading an unrelated state lawsuit against the federal government for billions of dollars in what was a politically popular state's rights claim on legally questionable grounds. The lawsuit claimed that the state lost billions of dollars in revenue from resources locked up by federal regulation on federal land which covers roughly two-thirds of Alaska. During a February 28, 1992, Trustee Council meeting, Cole joked openly with federal Trustees Curtis McVee and Michael Barton about the state and federal governments suing each other. McVee was quietly served with court process papers during the council meeting.

11. In a study of public trusts, authors Guenzler and Fairfax wrote: "Although this rather harsh requirement was a source of considerable concern at first, most observers agree, more or less emphatically, that the requirement has evolved into an essential ingredient of EVOS effectiveness. Since unanimity is required, an individual trustee is reluctant

to be the deal breaker. 'You can see the wall you are about to hit,' commented one observer, 'and therefore you make special efforts to avoid it.' " *Conservation Trusts*, Pg. 108, by Darla Guenzler and Sally Fairfax, University Press of Kansas, 2000.

12. One member of the public, however, testified at the December 19, 1991 meeting that he thought using "existing structure" was a bad idea. Randall Hagenstein, who did not give any affiliation, told the Trustee Council: "I disagree with . . . the point that we ought to be looking at existing agencies to take over a lot of these functions. I think that's a good way to spend a lot of money that will just get subsumed by existing bureaucracy and be used to increase the complexity of existing bureaucracy. I think we ought to be looking at fresh organizations that are outside of the existing framework."

13. After serving as interim director, Gibbons occasionally sat in as a trustee for the Department of Agriculture. When he took over as Supervisor of the Chugach National Forest (which is located within the spill region) in 1999, Gibbons was also named the trustee designate.

14. Personal communication, Dave Gibbons, February 19, 2001.

15. Trustee Council meeting transcript, December 12, 1992.

16. Each agency wanted a representative on each of the many subgroups to influence decisions and follow the progress. This inflated the administration costs. In addition to the Restoration Framework Group, other subgroups were: 1) the NRDA/1992 Work Plan Group, to phase out of the damage assessment work begun in 1989 and develop an annual work plan process geared more toward restoration; 2) the Public Participation Group, responsible for creating a Public Advisory Group, which would review all restoration efforts and advise the Trustee Council from a public or user's perspective; 3) the Budget and Process Group, which had the complex job of developing a workable system to provide budget and accounting procedures that will work using the many state and government agencies, universities, and private research firms that would take part in restoration efforts; 4) the Habitat Protection Group, to identify tracts of uplands, shorelines, and streams that were in private or public ownership and were potentially threatened by development. Its job was to develop a fair and justifiable means of identifying and evaluating the lands and come up with procedures for protecting them. In addition to these early work groups, other groups were organized and sunsetted over time. They include the Geographic Information System (GIS) Group, the Cultural Resources Group, the Environmental Compliance Group, and the Management Group. After each group concluded its charge, it would be disbanded.

17. National Environmental Policy Act of 1969, 42 U.S.C. ss 4321-4370b (1990).

18. Trustee Council meeting transcripts, December 12, 1992.

19. Trustee Council meeting transcripts, December 12, 1992.

20. Trustee Council meeting transcripts, December 12, 1992.

21. Trustee Council meeting transcripts, November 30, 1993.

22. Trustee Council meeting transcripts, March 10, 1993.

23. "I don't think the full blown EIS did anything for the process to speed up NEPA review," said Molly McCammon, Executive Director of the Trustee Council since 1994. (Personal communication, April 28, 2001)

24. Senner was state co-chair of the Restoration Planning Work Group, which was established in 1989 as part of the NRDA process to begin planning for restoration. After publishing the Restoration Framework in May 1992, Senner left the state to accept a position in Pennsylvania. He returned in 1995 to become the Trustee Council's first science coordinator, a non-agency role that independently oversaw the research and monitoring programs.

25. Trustee Council meeting transcripts, March 9, 1992.

26. The actual reasons were many, ranging from illness to weather-related cancellations of meetings to broken copiers. The six reasons extracted here are meant to be instructive as to how consequential delays developed in the process. This information was derived from the transcripts of 33 meetings held from December 1991 to November 1994.

27. Another example of unrealistic expectations can be seen in the Trustee Council's establishment and seating of the Public Advisory Group. Although the trustees originally stated they thought the Public Advisory Group could be

seated and meeting by mid-January 1992, PAG members were not named until mid-August and the first meeting did not take place until late October. With the names of all PAG candidates in front of them, the Trustee Council required four meetings and three months to debate PAG membership and name all the members.

28. A typical document would take months to get a first rough draft completed as the planning team sought information and advice from dozens of research biologists and other experts familiar with the oil spill and its injury. First the six-agency Restoration Team would debate the conceptual foundation for the document, then the rough content and finally the wordsmithing. It would then be submitted to the chief scientist and a large number of peer reviewers. Their input would be debated and changes would be made to the document before submitting the text to the Public Advisory Group and the Trustee Council. Only after the Trustee Council approved the draft would it go to the public for a 60-day comment period.

29. The most prominent example of misdirection from the Trustee Council occurred when it completely rejected the Draft Restoration Plan. This is detailed in the text of this chapter. Another example occurred at the January 20-21, 1993 meeting, when trustees met to approve the 1993 Work Plan. That meeting turned into a frustrating and bitter debate over funding and priorities and resulted in a 60% reduction in the proposed budget. The Anchorage Daily News quoted Dave Gibbons as saying: "I really don't understand" as he explained that the budget process was presented to the council the previous spring, the proposed budget was presented in October and discussed again in December. "Then all of the sudden this crops up. We liked the package we gave them." Gibbons went on to say that the trustees have not been clear on the level of detail they need before they make decisions about what land to buy, or what type of restoration work needs to be done. Cole agreed that the trustees have not been clear. "We are trying to find that level," Cole said. Anchorage Daily News, January 22, 1993, *Trustees fuss, fight, then OK spill studies*, by Natalie Phillips. During an August 6, 1993 meeting, after rejecting the Draft Restoration Plan and the Draft EIS, Trustees Cole, Rosier, and Pennoyer each stated that the fault was with the trustees for not providing the Restoration Team with adequate direction.

30. A two-thirds majority or even a supermajority of five would likely have moved the decision process forward more rapidly. The unanimity requirement worked considerably better after an executive director was in place. The executive director served as a broker on tough issues by discussing major points of interest with individual trustees before the meeting would occur. In this way, many of the sticking points could be resolved before the meeting and policy statements and action items could be crafted in such a way as to minimize debate.

31. A rocket launch facility was built on Kodiak Island in 1998, although not with restoration funds.

32. In Spring 1992, Congressman George Miller (D-CA), chair of the House Natural Resources Committee, proposed legislation requiring that the federal trustees spend no less than 80 percent of the "federal share" of the settlement on land acquisition. Miller surmised that the federal share was worth about $400 million. The legislation which passed the House would have barred the federal trustees from approving any spending that did not have habitat protection as its primary purpose. Anchorage Daily News, May 21, 1992*, House bill details spill-settlement funds, cuts Bristol Bay leases*, by David Whitney. The Senate version of the energy bill contained no such reference and Alaska Senator Frank Murkowski (R) successfully killed the provision in conference committee. Anchorage Daily News, October 2, 1992*, Conferees cut Alaska provisions from energy bill*, by David Whitney.

33. The Alaska Legislature maintained throughout the settlement negotiations and after the agreement was signed that the Alaska Constitution made the Legislature the only entity in the state authorized to expend state funds. Since the settlement was seen as a joint federal-state fund, the Legislature believed it had the right and the obligation to scrutinize and approve or reject all trustee spending decisions. Legislators saw this as a constitutional issue and were not about to negotiate away their constitutional rights. This matter was settled when Cole worked out a deal with legislative leaders that required restoration funds going to the state to be subject to approval by the Legislative Budget and Audit Committee, rather than the full Legislature.

34. Personal communication, Marty Rutherford and Bob Loeffler, Februrary 22, 2001. Rutherford went on to become deputy commissioner of the Department of Natural Resources and Loeffler became the director of the DNR's Division of Mining, Land, and Water.

35. This compares to 211 commenters responding to the Draft Environmental Impact Statement. Rod Kuhn, EIS project manager, told the Trustee Council "My feeling in looking at what we received (in response to the EIS) and looking at what was received in response to the (newspaper) brochure, the brochure was a much longer period and a much more exhaustive effort, and is much more statistically valid sampling of public opinion, if a person is trying to measure public opinion." Trustee Council meeting, August 23, 1994.

36. Trustee Council meeting transcript, June 1, 1993.

37. It is normal GAO practice to provide the finished audit to the Congressman who requested the audit. That person then has 30 days to release the audit before the GAO makes it public. The press release was released on Friday, August 20, but it was embargoed for publication until Monday, August 23. This was timed so that the news would be released the same day as Babbitt appeared before the Trustee Council and help heighten the media interest in Babbitt's presentation.

38. *Natural Resources Restoration: Use of the Exxon Valdez Oil Spill Settlement Funds*, a Briefing Report to the Chairman, Committee on Natural Resources, House of Representatives; August 1993, General Accounting Office (GAO/RCED-93-206BR)

39. The GAO report singled out two projects as examples. The first was the monitoring of a long-studied pod of killer whales in the spill region, under the management authority of the National Marine Fisheries Service. Thirteen of 36 members of the AB pod in Prince William Sound disappeared in the year following the spill, a level much higher than the historical average. But there was no evidence that the oil spill caused the disappearance, and the chief scientist was on record saying he had his doubts whether it was an oil-related injury. The second example was the study of the impacts when too many sockeye salmon enter the Kenai River, as they did during the oil spill year. The GAO argued that this "overescapement" was a common occurrence and that studies of such impacts should fall under normal agency management.

40. There is nothing in the settlement that forbids the funding of normal agency management, as long as there is a direct link to injured species. It has long been Trustee Council policy, however, to not fund research or monitoring that would otherwise be funded by the management agency, given their mandates and historic funding levels. This is discussed in greater detail in Chapter 5.

41. The Trustee Council frequently questioned the Restoration Team on this issue and the chief scientist had previously written a letter to the council saying that increasing competition in the process would improve the quality of the work. Trustees were already on record saying they wanted to improve the competition and have more non-agency projects in the annual work plans.

42. Cole could not understand this point. He noted that he had asked auditors in face-to-face meetings several times why it was essential to have the Restoration Plan in place before acting. "If you look at this report, you would think that we were absolute sinners for not having a restoration plan when we decided to purchase lands at Kachemak Bay, or Seal Bay, or to undertake habitat acquisition studies." Trustee Council meeting transcripts, August 23, 1993.

43. The Trustee Council had already finished advertising for an executive director and was in the process of sorting through the 80-plus applications received.

44. This was a sore point with the Trustee Council. It had already directed the Restoration Team that funding would not be continued the next year if project reports were not in on time and approved by the chief scientist. Trustee Council meeting transcripts, March 10, 1993.

45. Five of the six trustees were based in Juneau, yet most meetings were held in Anchorage. This could cost $450 for roundtrip airfare as well as per diem. That is the accepted cost of doing business in Alaska. The trustees chose to meet in Anchorage because that is where most of the Restoration Team was located, along with the vast majority of the public constituency that followed the restoration process. Anchorage also served as the transportation hub to all points in the spill region. The trustees addressed this issue at their first meeting and suggested that the second meeting be held in Juneau for convenience sake. Members of the audience condemned the idea and the trustees for making it. It was clear that the public would not leave the fate of restoration of the spill region to poorly attended meetings convened in Juneau. At their third meeting, February 5, 1992, the trustees also agreed in principle that their travel expenses would be borne by their agencies and would not come from restoration funds. This commitment was maintained until about 1997, when trustees began requesting restoration funds for their travel.

46. The General Accounting Office normally (but not always) provides a draft report to the agency or entity it is auditing. The group being audited then has the opportunity to write a response to the audit, which is then published as part of the GAO document released to the public. At Miller's request, the GAO did not offer the Trustee Council an opportunity to provide a written response to the report. It did discuss the report with trustees and summarized the Trustee Council's response, but provided the council only three hours to review the draft document before col-

lecting all copies. The trustees learned at the meeting that the GAO report was not really an audit, but a "Briefing Report" to Miller and as such did not fall under normal audit procedures. This nuance made no difference to the Trustee Council or the media, which repeatedly reported it as an audit.

47. After the Clinton Administration moved into the White House, Interior Secretary Bruce Babbitt named his assistant secretary, George Frampton, Jr., as trustee. Before attending his first meeting, Frampton was quoted as saying the Trustee Council "has been stumbling along, hemorrhaging money for two years. There is an opportunity to leave a tremendous legacy in terms of ecosystem restoration, and right now the opportunity is being frittered away." This remark brought a sharp rebuke by Cole at an August 8, 1993 council meeting: "In light of the remarks attributable to the Department of the Interior, I am of the view that we should give serious thought to not committing any additional funds . . until we can ascertain from the department whether the prospective expenditures will lead to another accusation that we're continuing to stumble along and frittering away opportunities."

48. Pacific herring that returned in 1990-1991 were fish that were already mature and out to sea during the spill. The large returns of pink salmon were made up mostly of hatchery salmon that were unaffected by oil on the beaches and in the streams.

49. Later research determined that for reasons that remain unclear, a normally latent virus and fungus had spread as an epidemic through the population of herring, resulting in the deaths of all year classes, not just those hatched in 1989.

50. Anchorage Daily News, August 21, 1993, *Beleaguered fishermen protest in Sound*, by Daily News staff and wire reports.

51. Nowhere was the bitterness toward the trustees more evident than in Cordova. Even at the January 31, 1994 meeting, after the trustees committed $6 million for the first year of a multi-year ecosystem project requested by Prince William Sound fishing interests, one Cordovan after another testified both thanking and condemning the Trustee Council in the same breath. At the 10th year public symposium held in Anchorage March 23, 1999, that bitterness was still evident. Torie Baker, a long-time member of the PAG and a principal instigator behind the SEA ecosystem study, thanked the trustees for listening to their concerns in 1994, and added with all seriousness, "But we had to pull pretty damn hard."

52. Associated Press, as it appeared in the Juneau Empire, August 22, 1993, *Fishing boat blockade forces oil tanker retreat,* by Rosanne Pagano.

53. Anchorage Daily News, August 23, 1993, *Tanker blockade ends: Babbitt presses Exxon to meet with Sound fishermen*, by Hugh Curran.

54. The Nearshore Vertebrate Predator (NVP) project was a 6-year $6.5 million effort to determine the lingering effect of oil on two fish eating and two invertebrate-eating species. The Apex Predator Ecosystem Experiment (APEX) was an 8-year $10.8 million effort, started in 1994, to determine the relationship between forage fish abundance and the population/health of seabirds. You can learn more about the ecosystem-based projects in Chapter 5.

55. *Exxon Valdez* Oil Spill Restoration Plan, *Exxon Valdez* Oil Spill Trustee Council, November 1994.

56. Personal Communication, Jim Ayers, February 22-23, 2001.

57. The mission statement went on to say: *The restoration will be accomplished through the development and implementation of a comprehensive interdisciplinary recovery and rehabilitation program that includes: Natural Recovery; Monitoring and Research; Resource and Service Restoration; Habitat Acquisition and Protection; Resource and Service Enhancement; Replacement; Meaningful Public Participation; Project Evaluation; Fiscal Accountability; Efficient Administration.*

58. Ayers guessed that, including all Trustee Council projects funded through the annual work plan, the Trustee Council was paying for 80-100 full-time equivalent positions and carrying about 200 people for all or part of the year. Trustee Council meeting transcript, November 30, 1993.

59. Pamela Brodie, a member of the Public Advisory Group representing environmental groups, told the trustees during the public comment period that day that "it does not inspire confidence in the bureaucracy . . . that no one seems to know how many people work for the Trustee Council." Trustee Council meeting transcript, November 30, 1993.

60. Anchorage Daily News, *Steller opportunity: Research funds bail out Seward's struggling Alaska SeaLife Center*, May 27, 2001, by Tom Kizzia.61. Personal Communication, Jim Ayers, February 22-23, 2001.

62. The Department of Justice and Trustee Frampton made sure that the SeaLife Center conformed to the agreement, by withholding their approval until the idea was reworked. "There is a real contribution that an Alaska Sea Life Research Center in Seward might be able to make this program," Frampton said. "However, as presented to date, this is not presented as a research program, but rather as a visitor center, education and visitor destination facility, and it is on that basis that the Justice Department objects to the federal Trustees considering this project." Trustee Council meeting, November 30, 1993.

63. Deborah Williams, a long-time Department of the Interior trustee who succeeded George Frampton, Jr., is remembered for her frequent emphasis on getting *Exxon Valdez* research into the mainstream of world scientific literature. She often urged researchers to "publish, publish, publish." By October 2002, more than 520 articles were published in the peer-reviewed literature. Another 434 annual and final reports also received peer review.

Photo by Daniel Zatz

Chapter Four

Protecting Habitat

Introduction

The idea of using the proceeds of an Exxon settlement to buy and protect sensitive habitat within the spill region is nearly as old as the spill itself. Politicians, attorneys, and environmental activists did not have to stretch their imaginations very far to foresee an enormous settlement from one of the world's largest corporations. The idea that the money should be used to protect the region from further environmental harm, began spreading from boat to boat even while the oil continued its progression through the spill region. Timber production was underway on Montague Island in Prince William Sound and on Afognak Island north of Kodiak. Plans were being drawn up to log Orca Narrows near Cordova, Two Moon Bay near Tatitlek, and 23,800 acres of private land within Kachemak Bay State Park. Proponents of habitat protection were asking: How would the species injured by the oil spill recover when the habitat they depend on is continually being stressed through human activities?

The habitat protection bandwagon was large and vocal. By the time the Trustee Council held its first meeting, the spill was nearly three years old and proponents of land purchases were impatient for action. They would become both disappointed and agitated. To the Trustee Council, any habitat protection effort had to be 100 percent defensible from a restoration point of view. Trustees felt that habitat protection must first be a set of policies, guidelines, and priorities, before it could become a program. This caused the council to move slowly, but deliberately, while fending off criticism from Congress, the national media, and activists who charged that trustees were "ideologically opposed" to habitat protection.[1]

Habitat protection has been the most popular and the most political of the restoration efforts undertaken by the Trustee Council. Public comment received by the Trustee Council, both written and oral, from inside the spill region and from around the country, has overwhelmingly favored acquiring coastal habitat, uplands, and salmon streams for protection. Yet, those Alaskans who believe private lands should not be purchased and placed into government protection – when the government already controls about 88 percent of the land in Alaska – have created a political split that has been hard to ignore. For example, editorials in the Anchorage Daily News[2] have enthusiastically supported habitat protection efforts while editorials in the Voice of the Times[3,4] (a holdover from the defunct Anchorage Times) have consistently condemned the idea. Congressman George Miller (D-CA) has attempted to force the Trustee Council into more habitat purchases[5] while Senator Frank Murkowski (R-AK) has attempted to limit the habitat program.[6] The Alaska Legislature has refused to approve some land purchases that would go to the state,[7] only to be trumped by Alaska Governor Tony Knowles, who used little-known gubernatorial powers to approve purchases with his signature alone.[8]

Always cognizant of the contentious political atmosphere in Alaska and in Washington, D.C., the Trustee Council developed an all-encompassing habitat protection program that started out painfully slow, but led to a domino-like finish. Once a plan was in place and the foundation laid, the habitat program quickly grew to protect almost 650,000 acres, including about 1,400 miles of shoreline and 300 salmon streams.[9] In addition, $25.2 million has been set aside for a long-term habitat protection fund.[10]

Perception of trustees as obstructionists

During the public comment period at the April 27, 1992 Trustee Council meeting, the heated words of Alan Phipps, issues director for the Alaska Center for the Environment, illustrates the contentious atmosphere involving habitat protection and the perception by the environmental lobby that the trustees were unenthusiastic about pursuing land acquisition as a restoration tool.

In particular, Phipps focused his anger toward Alaska Attorney General Charlie Cole. Four days earlier, Cole had testified before a legislative committee in an effort to kill a bill that would have divvied up the state's $50 million share of the criminal settlement, using most of the money to buy land. Cole told the committee that portions of the bill would not qualify for restoration under the settlement and singled out the acquisition of Cape Suckling, along the Gulf of Alaska between Cordova and Yakataga, as outside the spill area. "If Cape Suckling is an equivalent resource, then Yosemite is an equivalent resource," Cole told the legislators.[11] Phipps angrily refuted that statement, pointing out that Cape Suckling was considered part of the "greater Prince William Sound region"

Large Parcels Protected

Parcel Description	Acres	Coastal Miles[3]	Salmon Rivers[4]	Total Price*	Trustee Council's Share
Acquisitions Complete					
Afognak Joint Venture	41,750	99	18	$73,966,348	$73,966,348
Akhiok-Kaguyak	115,973	202	39	$46,000,000	$36,000,000
Chenega	59,520	190	45	$34,000,000	$24,000,000
English Bay	32,537	123	31	$15,371,420	$14,128,074
Eyak	75,425	189	80	$45,129,854	$45,129,854
Kachemak Bay State Park	23,800	37	3	$22,000,000	$7,500,000
Koniag (fee title)	59,674	41	11	$26,500,000	$19,500,000
Koniag (limited easement)[2]	55,402			$32,100,000	$32,100,000,
Old Harbor[1]	31,609	183	13	$14,500,000	$11,250,000
Orca Narrows (timber rights)	2,052		2	$3,450,000	$3,450,000
Seal Bay/Tonki Cape	41,549	112	5	$39,549,333	$39,549,333
Shuyak Island	26,665	31	8	$42,000,000	$42,000,000
Tatitlek	69,814	212	50	$34,719,461	$24,719,461
Total:	635,770	1,419	305	$429,286,416	$373,293,071

1. As part of the protection package, the Old Harbor Native Corporation agreed to protect an additional 65,000 acres on Sitkalidak Island as a private refuge.

2. The Council's full-priced offer of $31,950,000 includes $4.5 million for a limited easement until December 2011. Koniag can then choose whether to accept the remainder of the monies to sell the land in fee.

3. Approximate miles of coastline protected.

4. Approximate number of anadromous rivers, streams and spawning areas protected, in whole or in part.

* Price paid over time includes interest.

Figure 4.1 This table shows the status of the Large Parcel Habitat Protection Program as of December 31, 2002.

and that injured species living primarily within the sound depended on the outer area for feeding habitat. Given Cole's opposition to the legislative bill, most of which involved habitat purchases within the spill region, Phipps concluded that "the habitat acquisition process being discussed and established by the Trustee Council is little more than a charade."[12]

Cole bristled. After reaffirming the statements he had made to the legislature, Cole added a comment directly to Phipps. "I'd also like to tell you, if you think you've furthered the environmental movement by your remarks here this afternoon, savaging me in the fashion that you've elected to do, I think it's been

a terrible mistake. Okay?" Minutes later, a second member of the public sought assurances from Cole, that given this statement, he could remain objective on habitat protection issues. Cole promised that he would.[13]

This exchange is telling in retrospect, because it shows that Cole and the Trustee Council did not freely open up to the public about their personal or collective thoughts concerning the overall importance of habitat protection to the Restoration Plan. Despite the acknowledgment that land acquisition was popular with the public, the Trustee Council passed no resolution or statement showing its support for habitat as a restoration tool. Pam Brodie, an 8-year member representing environmentalists on the Public Advisory Group, would later say that Trustees "play close to their vests" when it comes to the principle of buying habitat.[14]

What neither Phipps or Brodie or anyone else following the process knew at the time was that Cole would play a principal role in developing a wide-ranging and largely successful habitat protection program. The Anchorage Daily News did a large front-page feature on Cole under the headline "The Deal Maker," noting that his Fairbanks country charm belied the fact that he was a skilled negotiator.[15] He had not only brought a quick settlement from Exxon, but he had also settled a record number of decade-old oil royalty and tax disputes with several oil companies. The deal maker, however, appeared to many as a deal stopper when it came to habitat protection. That is certainly the way Alan Phipps saw him – and for good reason. Cole spent much of his first year as a trustee brushing back opportunities for the Trustee Council to acquire lands and protect them from development. Like the other trustees, Cole appeared rather indifferent toward habitat protection. Whether that was positioning or he had a change of heart during the public debate over habitat remains uncertain.[16]

In the back of his mind, Charlie Cole had a vision that he could not shake. During one of his many trips to Washington State, Cole drove through Snoqualmie Pass and then flew over the islands of the Inside Passage in British Columbia. He saw mountainside after mountainside stripped of trees and considered the landscape scarred as a result. His thoughts drifted to Prince William Sound, Kachemak Bay and the Kodiak Archipelago and he could not imagine that same scar dominating the landscape of the spill region. Cole was in the unique position as architect of the settlement and a member of the post-settlement Trustee Council, to do something about it; yet for unknown reasons, the lawyer kept his courtroom face on during meetings and rarely divulged his leanings.

On February 16, 1993, during a Trustee Council meeting in which habitat protection guidelines and policies were unveiled and explained, Cole opened up.

"I continue to be struck, as I will for the remainder of my life, as I drive through Snoqualmie Pass. . . and I see these magnificent slopes and rocks and cirques. . . and slashed on each side from road to the highest mountain top is this clear cut. And I, for the life of me, I will never understand who in the Department of Agriculture. . .

approved that. 20,000 cars a day go through there and I suspect for the rest of my life as I go through there, it will remain as unsightly as it is today.

"So, as I think about that, I think about these tour ships that cruise the sound . . . Is part of (the Trustee Council's habitat protection) analysis going to . . . look at . . . these slopes where these tour vessels and these people go through there and allowing cutting the back sides where there's no view? I mean that's what I'm talking about. Really a broad look at these lands in the sound and that's what continues to trouble me as we work through this process. Are we taking a fundamentally broad look at it and are we looking from the eastern sound to the western sound and down, you know, towards the Kodiak area and that's what concerns me as we go through this process. That's what I would like to see done. A broad look at the whole land pattern picture. That does not mean to say that I think we can buy all those lands, but as we evaluate all those lands, then we take the big picture as we get it eventually put together and then we make the hard decisions . . ."[17]

Establishment of the "big picture," in developing the Restoration Plan and, as a subset of that plan, creating a comprehensive habitat protection program, was a hallmark of the Trustee Council. Although there are significant exceptions to this rule, the Trustee Council regularly put off decisions concerning restoration options until after a Restoration Plan was in place. Despite being approached by various landowners that were on the brink or in the midst of timber production, the Trustee Council chose not to enter negotiations for purchase of those lands until after guidelines for acquisition were developed and approved. This included, then, even the lands that appeared to have an imminent threat to habitat. In the absence of a strong signal from the trustees that they were serious about protecting habitat as a restoration tool, public supporters of the idea would become suspicious of trustee intent, impatient for action, and increasingly vocal.

"Acquire the equivalent of . . ."

The concept of protecting habitat as a restoration tool is made possible through CERCLA and its accompanying NRDA regulations, which require that settlement monies be used to restore, replace, or acquire the equivalent of natural resources injured by the spill. "Acquire the equivalent of" has often been interpreted in NRDA history as buying and protecting land beneficial to injured resources.

It's important to note, however, that the trilogy of "restore," "replace," and "acquire" is an ordered trilogy. It not only provides restoration options, it specifies the priority. Legislative history makes it clear that the intent of Congress was to create a hierarchy of options. Robert Adler, senior staff attorney for the Natural Resources Defense Council, pointed this out in March of 1990 during the first public symposium on restoration options following the oil spill.[18] But, Adler argued that it is not a lineal hierarchy. "You don't first do restoration, wait

two years, see how well it worked, and then talk about replacement," he said. "I'm talking about a planning hierarchy where you predict how much restoration would be feasible, how much you need to fill in the gaps with replacement, and how much you need to fill in the gaps with additional resources."

The Trustee Council approached habitat protection in this context. Just as restoration needed its grand plan, developed with public input, reviewed by the Public Advisory Group, and ultimately approved by the trustees, so did habitat protection. Despite the public pressure, all six trustees were unwavering on this point. Not only did they want to know how habitat protection fit in with the overall Restoration Plan, they also required that it have its own comprehensive plan that would provide a proven benefit to the injured resources. It wasn't enough to buy land under the philosophy advocated over and over again in public testimony to "do no more harm" to the spill region. It also was not enough to protect the region from clearcuts because they would be unsightly and an insult to the already damaged ecosystem and to the people who live there. The trustees rejected those arguments, not because they didn't believe them, but because their first priority was restoration. Mike Barton and Charlie Cole each reminded their fellow trustees of this point during early discussions about habitat protection.[19] If habitat protection was to be used as a restoration tool, then they wanted to have clear evidence that it had restorative value. They wanted to see a direct link between the purchase of land and the benefit to the injured resource.

The link to injured resources

One question originally asked by the trustees and repeated often by the public concerns the restorative value of uplands in mitigating an oil spill that never reached beyond high tide. How does buying trees, hills, and any other non-coastal habitat help injured species recover?

There are actually several injured species that depend on upland habitat for all or part of their survival needs. Prominent among those are pink salmon and sockeye salmon, which spend their first winter and spring as eggs, larvae, and then fry in the upper stretches of streams, rivers, and lakes. Degradation of essential habitat in the Pacific Northwest has taught Americans that "depleted salmon populations cannot rebuild if any habitat that is critical during any of the life stages is seriously compromised."[20] This lesson extends, as well, to other fish, birds, and mammals injured by the oil spill.

Perhaps, the most direct beneficiary from saving the maritime forests of the spill region is a small seabird, the marbled murrelet. The marbled murrelet nests in the moss of old-growth forests and is designated as threatened throughout the west coast of the United States and Canada. Alaska is its last stronghold, although its numbers in Prince William Sound have declined by two-thirds over the last 20 years.[21] Preservation of old-growth maritime forests is an important part of the

effort to keep these seabirds off the endangered species list. Early NRDA studies of this little-known species led to a better understanding of its habitat needs and convinced the Trustee Council to consider protection of forested areas as a key restoration tool.

Other injured resources requiring upland habitat include harlequin ducks, river otters, Dolly Varden, cutthroat trout, bald eagles, as well as archaeological resources, and the ecosystem service that supports recreation, subsistence, commercial fishing, and passive uses. Other birds, such as pigeon guillemots, black oystercatchers, and common murres require coastal habitat above the high tide mark for nesting and rearing.

Marine animals, such as harbor seals, sea otters, Pacific herring, mussels, and many seabirds benefit indirectly if the protection of the upland areas leads to reduced human activity at the shoreline level. Logging, for instance, requires staging along the shoreline for removal of logs and can lead to muddy runoff. Lodges require docks and the daily ingress and egress of boats and float planes, resulting in minor spills, localized pollution, and trampled vegetation.

Cole had another philosophy about the restorative value of habitat protection. At a symposium marking the fifth anniversary of the spill, Cole argued that the acquisition and protection of land was justifiable on the basis of the contingent valuation study, which documented a $2.8 billion sense of "passive use" loss by residents throughout the United States. "If we realized a settlement in excess of what hard damage numbers were, based largely on the result of the contingent valuation study showing non-use damage, why is it not possible to utilize some of the damage recoveries for the restoration of the non-use damages," he said.[22] In other words, habitat protection would go a long way toward restoring the public's perception of the area as a pristine environment.

Land ownership in Alaska

Habitat protection is another way of saying land acquisition. It means buying land or conservation easements from private individuals or businesses and placing it in protection by federal or state agencies. It means taking the development opportunities of that land off the table. For some residents, it means lost jobs. For others, it means preservation of the wildness, the livelihoods, and way of life that defines Alaska. This restoration option cannot be discussed without considering the political context of land ownership in Alaska and its tie to Alaska's resource-dependent economy. After all, Alaska's five top industries – oil and gas, commercial fisheries, tourism, mining, and timber – are all based on the exploitation of natural resources and nearly every non-military job in the state depends in one way or another on natural resources.[23]

Alaska consists of 365 million acres, roughly one-fifth the size of the continental United States. As the Trustee Council considered purchasing land and

placing it under federal or state management, it was well aware that more than 60 percent of Alaska was already controlled by the federal government and another 28 percent was owned by the state. Less than one percent was privately owned by Alaska's 600,000 residents.[24] The remainder, about 11 percent of the land in Alaska, was owned by Native corporations created as part of the Alaska Native Claims Settlement Act (ANCSA) in 1971.[25] It was primarily these Native-owned lands that became the target of habitat protection efforts.

ANCSA was enacted to settle all Native land claims and was a prerequisite for the building of the Trans-Alaska Pipeline and the tapping of oil from Prudhoe Bay. To settle these land claims, Congress developed a complicated formula allowing 220 Native villages to select about 44 million acres of public lands in Alaska and set up corporations to manage those lands to provide economic benefits for their Native shareholders. Lands were selected for proximity to villages, historical uses, and future development opportunities. Native corporations wanted the land with the best potential for economic development and selected large blocks of land, usually the finest timber tracts, mineral deposits, the most productive estuaries and bays, and valuable salmon streams in the area. In the spill region, Native lands were selected from the midst of the Chugach National Forest, Kodiak National Wildlife Refuge, Kenai National Wildlife Refuge, Kachemak Bay State Park, Katmai National Park and what would soon be Kenai Fjords National Park and Lake Clark National Park. Numerous corporate landowners had control of large contiguous blocks that provide critical habitat for many of the fish and wildlife species injured by the spill. This land became the natural focus of the proposed habitat protection effort.

During its first year, the Trustee Council was approached by several Native corporations that owned up to 125,000 acres each. The landowners identified themselves as willing sellers of vital habitat, with at least four of them planning to log the lands if they couldn't first find a buyer for the property. The trustees, however, refused to enter into negotiations or even to commit publicly to a deal in the future. Instead, they put out the message that they would not be in the business of buying land until there was a full plan in place that included benefit analysis for injured resources, policies for appraising and negotiating, and a geographic approach taking into account all private lands in the spill region.

The trustees also expressed concern that they not be blackmailed into buying these lands. The threat that the Trustee Council either had to buy the land or it would be logged was seen alternately as a ploy to build public pressure and as a fact of business.[26] For many of the Native corporations, logging was the best way to build capital and provide shareholders with a dividend. Nevertheless, the trustees were careful not to react to the threat of logging, but instead, to act according to a thoroughly prepared plan. It became a not-so-funny joke in the Restoration Office that every time a landowner called to offer land for sale, "there were chainsaws

running in the phone booth" to add urgency to the offer.

Jim Ayers captured this sentiment when he told trustees: "Certainly there are those who . . . have suggested that the whole concept of imminent threat in some ways was self-fulfilling. There's been a lot of discussion about that, and as soon as you talk about imminent threat, it generates imminent threat."[27]

Imminent threat

The long-awaited habitat plan was presented to the council on February 16, 1993, the same month that Congressman Miller requested a General Accounting Office audit[28] of its spending. Congressman Miller was highly critical of the Trustee Council's lack of movement toward a habitat protection program. The Habitat Protection Work Group, working by contract with the local office of the Nature Conservancy,[29] had spent almost a year identifying the lands available within the spill region, documenting the threats to the habitat, dividing the lands into blocks, devising a schema for assessing the habitat values, and ranking the parcels based on their benefit to injured resources.

The plan was presented in three parts. First were procedures for protecting land under "imminent threat" of development. Second was a more comprehensive approach, looking at all large parcels (over 1,000 acres) in the spill region. And third was a vague acknowledgement that, in some cases, small parcels might also have strategic value and should be considered at a later date.

Imminent threat lands were self-evident: logging was either ongoing or the permitting process to log the lands was near completion. Imminent threat lands were given priority and were not subject to a formally-approved Restoration Plan. The Trustee Council authorized immediate action to protect these threatened lands, even before a full valuation of the habitat was completed. For the first time, it also authorized the Restoration Office to contact all owners of large tracts of land within the spill region to ascertain their interest in selling qualifying parcels.

Three parcels were negotiated under the imminent threat guidelines, two of which were successful.

Kachemak Bay State Park

Having emphasized the repeated direction from the Trustee Council that it would not enter into negotiations with landowners until there was a comprehensive plan in place, it's time to explain the one exception to that rule.

At the very front of the imminent threat list was 23,800 acres of Sitka spruce forest on the southern shore of Kachemak Bay. Seldovia Native Association selected these lands from within Kachemak Bay State Park, one of the most popular destinations in Alaska. The state park is located across the bay from Homer, a community of about 3,000 residents built along a coastal hillside and famous for its five-mile spit stretching halfway across the bay. The view from

Photo by Roy Corral

Ongoing logging operations were considered an imminent threat to the terrestial and nearshore habitats of the spill region.

just about anywhere along the coast or the hillside is of the mountains, glaciers, and fiords of Kachemak Bay State Park. The prospect that this viewshed would be clearcut had been a threat over the community for 20 years. Seldovia Native Association had long said it planned to log the virgin Sitka spruce, some standing more than 100 feet tall with trunks measuring 14-feet in circumference. Yet, the corporate directors had always hoped there would be a better alternative. The corporation had for several years offered to sell the land to the state, but in the post oil-boom era, the Alaska Legislature was not willing to come up with the $22 million asking price. Seldovia Native Association entered into a logging agreement with Koncor Forest Products, an association of several Native corporations with timber holdings in Southcentral Alaska, and in 1990 put everyone on notice that it was getting serious about logging the land while market prices were high.

When the Exxon settlement was reached, it was thought throughout the environmental community that purchase of these inholdings and saving Kachemak Bay State Park would be the first order of business. The land was within the spill

region, in an area impacted by spilled oil, under imminent threat of development, and its acquisition had strong political and public support. Public testimony had shown that habitat protection was popular and that saving Kachemak Bay State Park was the number one desire among those supporting habitat protection. Despite this, the Trustee Council during the summer of 1992 continually put off any action on Kachemak Bay or other threatened lands, arguing instead that it needed to have a complete plan in front of it.

So it came as a shock to his fellow trustees when Charlie Cole made the motion December 11, 1992 for the trustees to dedicate $7.5 million for the acquisition of about 7,500 acres of the Seldovia Native Association land. Cole justified the proposal by displaying four maps showing the habitat uses of marbled murrelets, river otters, harlequin ducks, and bald eagles overlaid on top of maps showing the areas to be logged. This illustrated the direct link to the resources, showing that 7,500 acres of park inholdings were imminently threatened by logging and that development would seriously impact the habitat of injured resources. "Lord, if there's ever habitat that this Trustee Council ought to buy, this is it," Cole said.[30]

Sandor, Pennoyer, and Barton each responded by saying they had long thought that making a move to protect Kachemak Bay State Park was the appropriate thing to do. But, they were all clearly surprised that it was Cole who suddenly burst through with a proposal. After all, there had been several discussions about this and other threatened lands where the trustees agreed to wait for an overall habitat protection plan and, particularly, criteria for identifying threatened parcels. And it was Cole who led that charge. "I guess I'm having a little trouble squaring a vote now with what happened in the last two meetings when we went from (discussion of) everything from spruce bark beetles to the need to do a restoration plan before we actually acquired any property," Pennoyer said. "I think this probably is a high priority. I'm just having a problem right at this minute shifting gears from what I thought was (decided) at the last two meetings to an acquisition right now."[31]

Cole, "the deal maker," did not really explain himself, except to note that the time was right to make this deal happen. What he had known for the previous several months, but kept to himself, was that a settlement in the works with Alyeska Pipeline Service Company for its slow and inept response to the spill contained money specifically for the Kachemak Bay acquisition. The $31.7 million Alyeska settlement had been finalized just two weeks earlier and provided $7.5 million to acquire inholdings within the park.[32] If the state legislature would be willing to contribute $7 million to the package, then the entire Seldovia Native Association package could be purchased, thereby protecting the entire 23,800 acres. Funds from all three settlements – Exxon civil, Exxon criminal, and Alyeska civil – were eventually meshed, with the Alaska Legislature's cooperation,[33] to purchase the Kachemak Bay land and bring this 20-year old problem to an end.

The state took possession of the property in August 1993.[34]

Photo by Daniel Zatz

Logging on Afognak Island

Afognak Island (Seal Bay and Tonki Cape)

Cole would play even a bigger role in the next Trustee Council acquisition, the protection of 41,549 acres on the northeast corner of Afognak Island and the subsequent creation of Afognak Island State Park.

After the Kachemak Bay package was completed, the next highest ranking property on the imminent threat list was the 17,391 acres surrounding Seal Bay on Afognak Island. The old-growth forest on Afognak was estimated to be 250-300 years old, offering a habitat for some animals, especially marbled murrelets, that is hard to match. It was owned by a joint venture made up of two Native corporations from Kodiak Island, the Akhiok-Kaguyak and Old Harbor corporations. The joint venture, known as Seal Bay Timber Company, was actively logging the property (under contract with Koncor Forest Products) and shipping logs to Korea, Japan, and China. The landowner, however, expressed an interest in selling the property and spent about three months in discussions with representatives of the Trustee Council before presenting a potential agreement to the council. Unlike the Kachemak Bay acquisition, the Seal Bay negotiations were conducted after an imminent threat process was developed and adopted by the Trustee Council.

Due to the high value of the timber, negotiators for the Trustee Council presented the package May 13, 1993, in three options. They recommended that the options be presented and discussed in executive session, but Cole objected and the council agreed that it should be "doing the public's business" in the open.[35] Option One was presented as 4,004 acres of the highest quality habitat along the coast for $27.9 million. Option Two would buy 11,461 acres (including option one) for $29.95 million. Option Three would buy the entire package, 17,391 acres for $48.7 million.

The trustees questioned their staff at great length about the habitat value to injured resources, subsurface rights, the impact of ongoing logging activities, the cost of appraisals, and activities of adjacent landowners. Cole asked about a peninsula to the east of Seal Bay and learned that most of that land, more than 25,000 acres, was also owned by the joint venture. The Tonki Cape land wasn't under consideration at that time because much of it had already been clearcut and its

habitat values were not as high. It just wasn't a priority under the imminent threat ranking system, even though it was a substantial habitat for injured species.

Cole engaged the Seal Bay representatives in a debate about appraised values. He wanted the council to pay the offer on the table or the appraised value, whichever was lowest. Cole rejected the argument from the other side of the table that a higher appraised value should allow the seller to cancel or renegotiate the deal. He felt that the seller is supposed to come to the bargaining table with a good idea of the land's value and what it would be willing to accept and therefore, should not be able to change the deal based on appraisals.

In addition, Cole exploded – and then apologized for exploding – after hearing his own negotiator say that the council had to act now or lands would be logged. "Frankly, I'm really tired of hearing about this is going to be cut if we don't jump. I mean, I've sort of heard it all for the last time, frankly, that I personally want to hear it. And, I'm almost to the point if I hear it once more, I'm just going to flat vote no on this whole acquisition because we cannot run this business of the Trustee Council under this hour-to-hour and day-to-day threat. . . So, I just want to say, with a note of testiness, that we should not hear quite so much about better move this very minute or there will be a chain saw firing up."

The quick apology came because Cole realized that he blew up at the wrong people. Walt Ebell, representing Seal Bay, responded with strong words emphasizing that he has never approached the Trustee Council under any threat and that his company was following a business plan that existed long before the trustees came into existence and the whole idea of habitat protection became known. Seal Bay Timber Company, he pointed out, had been exemplary in their dealing with the Trustee Council.

Shortly after this exchange and about one minute after Cole told Seal Bay's lawyers that "we're not here negotiating," Cole made a bold move. As the Trustee Council began considering a motion to adopt Option Two, Cole offered an amendment. He proposed that in addition to the 11,461 acres included with Option Two, Seal Bay Timber Company throw in the 25,000 acres on Tonki Cape at no extra cost. In response to the awkwardness in the stunned meeting room, Cole added "Really, I'm serious about that." He proposed further that the entire group take a long lunch and, perhaps, that would give the Seal Bay representatives time to contact the company's board of directors for a response.

After the lunch, Ebell and his partner, Jim Wilkens, faced the council and made a counter offer. If the council acquired Option Three, for $38.7 million, Seal Bay Timber Company would donate the 25,000 acres they owned on Tonki Cape. For the second time that day, the council and the room of observers sat in stunned silence. The Trustee Council had before them that morning an opening offer of $48.7 million for 17,391 acres and by afternoon agreed to a deal for 41,549 acres at $10 million less than the asking price.

Brodie, the Sierra Club representative and member of the Public Advisory Group, told the Anchorage Daily News that she was "amazed" that Cole had first prevented the council from going into executive session for negotiations and, then, made such a bold and public counter offer. Brodie said she didn't know if the Cole's counter offer would turn out to be "a poison pill or brilliant negotiating."[36]

In his scholarly review of the Trustee Council's first two years and, in particular, the Seal Bay acquisition, Christopher Carr noted that Cole had a very simple philosophy when it came to negotiating. During a Trustee Council discussion about formalizing and financing a negotiating team for future purchases, Cole balked, saying it would result in unnecessary complexity and unnecessary expenditures. Cole told his fellow trustees: "You don't have to hire a bunch of negotiators and make this a big deal. It's essentially an art form that we're dealing with . . . Like I said earlier, you call these people up and ask if they want to sell, and they start talking about it."[37]

In writing about the Seal Bay acquisition, Carr wrote: "In this negotiation, Cole was surely the artist, not the scientist." And, "The seemingly insuperable impediments to agreement were overcome by Cole's negotiating wizardry."[38]

The battle for the Seal Bay land was not entirely over, however. The conservative Voice of the Times did not share the exuberance of the environmental community over Cole's deft negotiating. It proposed that the state adopt a "no net loss" policy to open up 42,000 acres of state forest to development in turn for "locking up" the Afognak land.[39] Many members of the Alaska Legislature were like-minded and it would require a two-thirds vote of the Legislative Budget and Audit Committee to approve the purchase and accept the new state land. Anticipating such a fight, the trustees placed the Afognak lands in a trust under the Nature Conservancy. The Trustee Council resolution called for the land to be transferred to the federal government if, after one year, the state had failed to adopt the property and designate it a state park. Some legislators referred to this as a blackmail clause, but it was effective. The committee was persuaded, but narrowly, voting 6-3 to approve the deal. The Alaska Legislature designated the Seal Bay property as park land, and in May, 1994, Afognak Island State Park was created.

In recognition of his role in both the Kachemak Bay and the Seal Bay acquisitions, the National Association of State Park Directors presented Cole with its President's Award in the Fall of 1993.[40]

Orca Narrows

The Trustee Council attempted only one more acquisition under the imminent threat process, but failed to reach an agreement with the landowner. Eyak Corporation came to the Trustee Council soon after the council was formed with an offer to sell its timber interests on more than 60,000 acres in eastern Prince William Sound. Spilled oil never came close to fouling the eastern portion of Prince

William Sound, yet acquisition of the Eyak property had strong public support. Eyak owned most of the land surrounding the community of Cordova, which became known as the "economic ground zero" of the spill region due to oil's impact on commercial fishing and its long-term effect on commercially harvestable species. Nowhere is the stress from the oil spill more evident, even 12 years later, than in Cordova. The idea that the community would soon be witness to clearcuts throughout the eastern sound and, in particular, within view of Cordova, added to that stress. The community, already split between people who wanted to build a road connecting Cordova to the state's highway system and those who preferred the isolation, between those who chartered their boats to Exxon during the cleanup and made a lot of money and those who refused any alliance with Exxon, was now also split between those who wanted to prohibit logging in the area and those who supported or made their living as loggers.

The U.S. Forest Service, on behalf of the Trustee Council, entered into negotiations with Eyak Corporation during the spring of 1993, focusing on three core tracts for their habitat value and a fourth, known as Orca Narrows, for its proximity to Cordova and its importance to the community's tourism industry. Negotiations faltered and in July 1993, the corporation began logging at Orca Narrows. Cordovans protested and called on the trustees to step up their efforts to protect the land. Loggers, in turn, protested that the trustees were trying to lock up the land and put them out of business. To facilitate negotiations, Eyak Corporation temporarily stopped logging at Orca Narrows and transferred its efforts elsewhere.

Negotiations, however, were going nowhere. The Trustee Council wanted nothing less than an outright purchase of the core tracts, especially Sandor and Cole, who felt conservation easements would not offer sufficient protection and would be difficult to manage and enforce. Eyak's desire to sell timber rights would have allowed all other forms of development and did not offer enough protection for the Trustee Council. Eyak's negotiators were equally reticent about selling fee title to their land. They argued that their Native shareholders would not allow selling land they had fought so hard to regain. With each side seemingly exasperated by the other, negotiations broke down over the Trustee Council's insistence that logging be stopped until a package deal could be worked out. Eyak would only stop the logging with a firm offer or if the trustees paid for a moratorium. The corporation refused to make available documents that proved it was contractually committed to logging and would suffer financial harm if the logging was stopped. The Trustee Council unanimously refused the corporation's final offer to sell 13,000 acres of core tracts outright for $21 million and the timber rights on another 61,000 acres for $50 million. One day later, Eyak Corporation closed its Cordova logging operation, citing poor market value of its timber as the reason.[41]

The failed negotiations led to bitterness on all fronts, including the landowner,

the trustees, and Cordova residents. Nancy Barnes, president of Eyak Corporation, speaking at a 10th anniversary symposium in Anchorage, recalled that both sides then endured four years of "fits and starts," that included mediation.

"These efforts became contentious and acrimonious at times and reached an impasse that few thought we'd ever overcome," Barnes said.[42]

In 1995, the two sides did agree to a transaction involving about 2,000 acres along Orca Narrows. The remainder of the Eyak land deal was eventually resurrected in 1997, but not until after the Trustee Council had evolved in its philosophy and policies about buying Native-owned lands.

The new Trustee Council

The remainder of Trustee Council acquisitions took place after publication of the Restoration Plan in November 1994. By that time, a ranking system and schema for a habitat protection program were in place, willing land owners had been identified, a long-term budget range of $342 million to $372 million had been set, and negotiations were underway. Meanwhile, significant changes were taking place in the makeup of the Trustee Council that impacted the habitat protection efforts.

It started with the election of Bill Clinton as President of the United States, in November 1992, and his choice of Bruce Babbitt as Secretary of the Interior. Clinton and Babbitt, in contrast to their predecessors George Bush and Manuel Lujan, chose to make a strong push on the Trustee Council for habitat protection. Under the Clinton Administration, the $50 million federal portion of the Exxon criminal settlement was dedicated primarily to assist the Trustee Council with acquiring habitat.[43] In addition, Babbitt named his Assistant Secretary for Fish, Wildlife, and Parks, George Frampton, Jr., a former president of the Wilderness Society, as his representative on the council. Frampton would provide an energetic and determined push to turn the Trustee Council's habitat protection program into an example for the country to follow in any future environmental restoration effort. His predecessors had laid the ground work, providing the mechanism for habitat protection. Frampton would lead the charge during the next phase, fulfilling the potential of the program by successfully negotiating with willing landowners. The Department of the Interior would ultimately become the land manager for about half of the newly protected lands. In addition to Frampton, the new Clinton Administration brought in Phil Janik to replace Mike Barton as the U.S. Forest Service representative on the council. Steve Pennoyer was retained as the National Marine Fisheries Service representative on the Trustee Council.

A second major change on the Trustee Council was the abrupt resignation of its chief architect, Charlie Cole. Cole resigned as attorney general after an unexplained dispute with Hickel and his chief of staff. Cole and Frampton had worked together on the Trustee Council for less than six months. Despite a highly conten-

tious and public first encounter, in which Frampton accused the Trustee Council of "stumbling along" and Cole berated Frampton for his political grandstanding, the two men became friends and allies on the council.

"They formed a bond that was very strong and very powerful," said Marty Rutherford, who served as Cole's representative on the Restoration Team. "And that had a big impact on habitat, because the two powerbrokers had coalesced and people realized they couldn't resist it."[44]

A third shift in the Trustee Council occurred in late 1994 when Tony Knowles replaced Wally Hickel as governor of Alaska. Knowles not only brought a different philosophy to the governor's mansion, he also took with him the council's highly competent executive director. Jim Ayers resigned his post directing the restoration effort in order to become Knowles' chief of staff. Molly McCammon, Ayers' assistant director, smoothly assumed the executive director's responsibilities without interruption to the program. Most of the habitat protection effort would come to fruition under her watch.

Before Knowles could take over, however, the Trustee Council concluded two enormously eventful meetings designed, at least in part, to allow the outgoing Hickel Administration to wrap up its three-year effort on the Trustee Council. Negotiators had been busy on all fronts and were able to provide reasonably detailed sketches of what the likely outcomes would be on the acquisition of large parcels throughout the spill region. On November 3, 1994, just hours after formally approving the final Restoration Plan, the trustees put that plan into motion by making offers to acquire 220,000 acres from three Native corporations on Kodiak Island. One month later, just days before changing state administrations, the trustees locked in the targeted large parcels on Afognak Island, Shuyak Island, the Kenai Peninsula, and throughout Prince William Sound by specifying acreage and purchase amounts for each one. This created a very detailed habitat protection blueprint to be followed by the incoming Knowles Administration, which worked effectively with the Clinton Administration to accomplish what were mutually held goals.

A new governor meant new faces on the Trustee Council. Knowles retained Hickel's new attorney general, Bruce Botelho, as his attorney general and Botelho, in turn, retained Assistant Attorney General Craig Tillery to serve as his representative on the council. Frank Rue, the director of the state's habitat division under Hickel, was named as Commissioner of the Department of Fish and Game under Knowles. Sandor was replaced on the council by the new Commissioner of Environmental Conservation, Gene Burden, and later, by his successor, Michele Brown. As it readied to make its push for acquisition, the dynamics on the Trustee Council had changed so that it leaned more heavily in favor of habitat protection as a restoration tool.

Hard lessons and new philosophies

To develop this blueprint (and to follow it) required that the Trustee Council let go of some earlier notions about habitat protection and develop more creative and open-minded strategies that took into consideration the needs of the sellers. The Trustee Council would be forced into several concessions and learned valuable lessons in the process. They were to learn that the habitat acquisition structure held its own, but only if trustees were willing to bend on the details. The trustees would soon encounter several major policy issues:

1) The council and agency desires to acquire fee title to all the land would prove unworkable for many landowners. The willingness on the governments' part to consider conservation easements and timber easements would become a prerequisite for many Native landowners to enter into negotiations. This meant that state and federal land management agencies had to incorporate into their management schemes land that the public didn't completely own.

2) In contrast to the principle that public land, paid for with public monies, should be open to the public, the Trustee Council and land managers occasionally had to restrict public access to acquired lands. When a Native corporation had a compelling reason, it would negotiate to sell the conservation easement with no public access to the land. This was done by Chenega Corporation to prohibit access to the traditional Chenega village site.[45] Tatitlek Corporation also negotiated restricted public access on Bligh Island, a parcel highly ranked for its habitat. Residents depended on Bligh Island for subsistence hunting, fishing, and gathering, and for spiritual reasons.

3) Maintenance of subsistence, a term that encompasses a way of living and thinking as well as a means of sustenance for the entire village, became a priority for all sides in negotiations. It was widely recognized that subsistence rights had to be maintained as a moral obligation to the sellers. Without such recognition, very few acquisitions would have taken place. When English Bay Corporation negotiated the sale of its land within Kenai Fjords National Park, the subsistence angle took on an added dimension. Because subsistence, especially hunting on park land, was not compatible with National Park rules, the Department of the Interior negotiated a sale of subsistence rights as a separate part of the package. The residents of Nanwalek, formerly known as English Bay, rarely used the area on the central and eastern side of the park for subsistence. The corporation sold those rights in a separate transaction to the federal government for an additional $1.24 million. On the western side of the park, however, an area closer to the village and frequented by subsistence users, English Bay Corporation

retained its subsistence rights to 9,000 acres.[46] The National Park Service bent its rules, but completed one of the most widely sought and popular transactions of the entire habitat protection program.

4) Economic development zones and shareholder homesteading became part of some packages. These were scattered coastal sites of 3-10 acres that would be retained by the corporation in the midst of thousands of acres to be sold. Some of the acreage would be parceled out to shareholders as home sites while other acreage was being retained with the idea of developing small scale lodge operations. The corporations doing this, including Chenega, Tatitlek, and Eyak corporations in Prince William Sound, wanted to keep their options open for developing ecotourism operations and providing some economic development opportunities for local villagers. Agency negotiators, in turn, sought to limit these sites and keep them reduced in scope so as to not negate the protection effects of acquiring the surrounding habitat.

5) The Trustee Council decided that placing protected lands in the management hands of state and federal agencies was not enough to protect them in perpetuity. The council recognized that the political landscape could change over time. Protected federal lands could be opened for development if a majority of Congress voted to make the change. Likewise, state parks could be opened to development, or even sold, if the state legislature voted to do so. To give the lands an added layer of protection, each Trustee Council acquisition has a clause that provides the non-managing government with an easement over the land. Should the land management agency fail to protect the lands properly, the other government can step in to enforce the original protection easement. In other words, if the state approved logging within Afognak Island State Park, the federal government could force the state in court to live up to its original promise to protect the land.

6) During its early negotiations, the Trustees quickly learned that landowners were not about to be highgraded. The Trustees had dutifully identified all of the best habitat available on each parcel of land and expected to buy only that land which had substantial restoration value. The Akhiok-Kaguyak, Incorporated, (AKI) land on Kodiak Island, for instance was divided into nine smaller parcels and each parcel was ranked for its habitat. But it soon became clear that sellers were not interested in selling the best of their land, only to be left with the least usable and least valuable acreage. The Trustee Council, therefore, acquired the highly-ranked Olga Bay parcel from AKI as well as the adjacent low-ranked Olga Narrows parcel. Negotiated packages, therefore, included a mix of high-, moderate-, and low-value habitat. One benefit of buying low-ranked parcels

is that it provided large contiguous blocks of protected land so that the highly-ranked habitat would not be compromised by development efforts on adjacent parcels.

Two other issues will require greater length to explain. They are:

1) The use of government appraisals for acquiring lands that have no real marketable use; and
2) The debate over the purchase of Alaska Native lands. This issue includes a substantial conflict between the role of Native corporations and the wishes of village residents, many of whom are not shareholders in the corporations.

Market value v. habitat value

Government appraisals, the tool accepted throughout government and industry as the means of determining fair market value for land, did not work when acquiring parcels that had very little or no market value. Appraisals typically estimate the value of trees, minerals, or other commodities, the potential for residential subdivisions, and the potential for development of marketable services such as tourism operations. If the marketable commodities are low or non-existent and the tourism potential limited or highly speculative, then the appraisal is necessarily low. But the Trustee Council was not interested in market values. It was in the business of protecting habitat and that is the only value used in determining its ranking system. The appraisal process does not, for example, take into account that a parcel provides prime habitat for black oystercatchers, an injured species that may have a worldwide population of less than 11,000, half of which are in Alaska. To the Trustee Council, oystercatcher habitat makes it very valuable land. To the appraiser, it is nearly worthless.

One of the original premises of the early Trustee Council, that it would acquire land and pay no more than fair market value,[47] would have been unworkable had it survived and become part of the Restoration Plan.[48] Instead the Restoration Plan says that the Trustee Council will follow all applicable state and federal laws regarding acquisition of land and that a standard appraisal process will be used. In approving use of council funds, however, the trustees will "specifically consider the restoration benefits to the injured natural resources, services, and the ecosystem relative to the appraised fair market value of the land or interests in land."[49] It says nothing about adhering to appraised values.

When talking about appraisals, the Trustee Council recognized two types of properties. The first has marketable commodities, specifically, timber. Timber values were high already and the trustees negotiated the packages based solely on appraised values. The acquisitions on Afognak and Shuyak islands, as well as

Appraisals vs. purchase price

Landowner	Acres	Landowner Appraisals		Government Appraisals		Price Paid	
		Overall	Per Acre	Overall	Per Acre	Overall*	Per Acre
Afognak Joint Venture	41,750			$ 62,800,000	$1,504	$ 70,500,00	$1,689
Akhiok-Kaguyak, Inc	118,674	$ 88,000,000	$ 742	$ 22,000,000	$ 185	$ 46,000,000	$ 388
Chenega Corp.[1]	59,520	$ 93,000,000	$1,562	$ 8,854,400	$ 149	$ 34,000,000	$ 571
English Bay Corp.	32,537	$ 18,646,680	$ 573	$ 4,118,100	$ 127	$ 14,128,074	$ 434
Eyak Corp.	75,425			$ 11,800,000	$ 156	$ 45,000,000	$ 597
Orca Narrows	2,052			$ 3,450,000	$1,681	$ 3,450,000	$1,681
Koniag Corp. (fee)[2]	59,689					$ 26,500,000	$ 444
Easement to 12/15/01	57,082					$ 2,000,000	$ 35
Koniag Total	116,771	$101,211,883	$ 867	$ 15,000,000	$ 128		
Old Harbor Native Corp	31,609	$ 19,000,000	$ 601	$ 4,200,000	$ 133	$ 14,500,000	$ 459
Seal Bay/Tonki Cape[3]	41,549	None		$ 41,000,000	$ 987	$ 39,549,333	$ 952
Seldovia Native Assoc.	23,800	$ 25,600,000	$1,076	$ 20,000,000	$ 840	$ 22,000,000	$ 924
Shuyak Island[4]	26,665	None		$ 33,320,000	$1,250	$ 42,000,000	$1,575
Tatitlek Corp.	69,814	None		$ 34,946,000	$ 501	$ 34,350,000	$ 495

1. Chenega: The government appraisal was based on recreation being the highest and best use for the land and did not reflect the value of timber on the land. A government review determined that Chenega could realize $6 million from the harvest and sale of its timber.
2. Koniag: The negotiated price for permanent protection of 59,689 acres was $26.5 million. A 10-year easement on 57,082 acres was acquired for $2 million. This chart does not include the $32 million set aside to someday make this easement permanent.
3. Seal Bay / Tonki Cape: The appraised fair market value of $41 million was for the Seal Bay parcel (17,166 acres) only. The sellers donated the Tonki Cape parcel (24,383 acres).
4. Shuyak: The appraised value of $33.2 million was based on a single lump-sum payment. Payments for this parcel were spread over seven years, raising the value to $42 million, which was calculated to equal the appraised value.

Figure 4.2. Government and landowner appraisals compared to actual price paid.

parts of Prince William Sound, fell into that category.

The second type of property has little or no marketable timber or minerals. These acquisitions were limited to sites on Kodiak Island, in Kenai Fjords National Park, and parts of Prince William Sound. For example, the Akhiok-Kaguyak property on the southern tip of Kodiak Island is virtually treeless, but it contains important habitat for salmon, pigeon guillemots, black oystercatchers, bald eagles, river otters, and several injured species that use the intertidal areas. Appraisers using market values determined that its 115,973 acres were worth $22 million or $183 an acre.

At the same time, appraisers for the land owners valued the land using "public

interest" considerations. "Public interest" theory was based on the same basic premise as "contingent valuation," that the public was willing to pay for the inherent value of this legendary Alaska wild land. The public not only had a strong interest in protecting habitat for injured resources, it also wanted to protect the home of the famous Kodiak brown bears and make the Kodiak National Wildlife Refuge whole again. This argument was a strong one, considering a national lobbying effort was underway that included environmental organizations working with outdoor and hunting groups,[50] for the public purchase of the Kodiak land. The Trustee Council officially had no interest in brown bears or the management problems of the Kodiak National Wildlife Refuge, but these considerations nevertheless had an important impact on the perceived value of the land. Given the "public interest" considerations, appraisers working for the landowners valued the Akhiok-Kaguyak property at $88 million or $742 an acre.

As one landowner said, "Appraisals feign accuracy when there is none. But they do provide both sides with a point of departure."[51] Akhiok-Kaguyak would quickly walk away from a deal that would be capped at $183 an acre for land that included 202 miles of coastline and 39 salmon streams. Another way of looking at the same appraisal would be that each square mile of land, including one mile of coastal frontage, would sell for less than $110,000 or about the same as a half-acre residential lot in Anchorage. In the end, the Trustee Council paid $46 million for the Akhiok-Kaguyak land or approximately $400 an acre.

Discussion on the record of this issue is limited to occasional references because appraisals were kept confidential and briefings about ongoing negotiations were routinely held in executive session. Jim Ayers, who served as executive director while the Akhiok-Kaguyak package was being negotiated, justified the policy of paying above appraised value by saying he felt "it would have been morally wrong to take it away from the Natives for $100 an acre."[52]

"I came to the conclusion that $350 to $400 (an acre) was the general range and I came to that based on discussions and reading the appraisal," Ayers said. "I came to the conclusion that we could put several hundred thousand acres of that land into protection and it was not unreasonable to pay that amount for the land."

Yet, he didn't make that decision on his own. Before Ayers and the Trustee Council moved forward with an offer three times the government-appraised value of the land, they knew they had backing that went all the way to the White House. According to Ayers, Katie McGinty, the director of the White House Council on Environmental Quality, personally approved the plan and shepherded it passed the trustees' cabinet-level bosses.[53]

The Anchorage Daily News questioned the high cost of the Kodiak land purchases when it published a front page story October 22, 1995, about the Trustee Council ignoring appraised values. Under the headline of "The price of

pricelessness," the newspaper added a subhead referring to the land deals as "a classic boondoggle." The story quoted appraisers as saying the Trustee Council's willingness to pay above appraised value set a dangerous precedent.

Yet, the Trustee Council already had history to contend with on the issue. In what was billed as the "megatrade" in the early 1980s, a group of Native corporations sought to swap Native land within the Kodiak National Wildlife Refuge, as well as lands within other federal refuges, for land with oil potential in the Arctic National Wildlife Refuge. Government appraisers at that time valued 891,000 acres of Native land at $90 million, or about $100 an acre. The Department of the Interior, however, ignored the appraisals and agreed to swap the Native land for $539 million worth of ANWR land.[54] The deal fell through after the *Exxon Valdez* oil spill when Congress decided not to open ANWR for oil development. But high expectations lingered on from the government's willingness to pay six times the appraised value.

In addition, Congress was considering at the time a buyback of Native lands belonging to Calista Corporation in western Alaska. The Congressional legislation would have paid eight times the government-appraised value for the land. This legislation eventually passed in 1999.[55]

After the Anchorage Daily News story, the newspaper reversed itself on its editorial page, saying that "such public interest considerations could perhaps justify paying a small premium, but when the price doubles or triples, the theory becomes an excuse for gouging."[56] It had previously lauded acquisitions on Kodiak Island, calling it a "no-lose proposal" and concluding that use of the settlement money "to protect this extraordinary habitat would be a fitting settlement of the state's worst environmental accident."[57]

McCammon, executive director at the time of the newspaper story, responded frequently to questions about the appraisal process by offering a simple analogy. The market-driven appraisal system, she would say, is out of touch with reality when it comes to valuing a piece of America's last frontier. "If you and I were able to buy a piece of wild Alaska within the Kodiak National Wildlife Refuge for $180 an acre or even $400 an acre, there would be a land rush," she said. "Wouldn't any of us be willing to buy a prime piece of Alaska at that price?"[58]

"Under the circumstances, considering Native heritage and Native-owned lands," McCammon also said. "I would rather be accused of paying too much than too little."

Buying Native land

An unknown legacy of the habitat protection program will be the long-term impact these multi-million dollar purchases will have on the Native villagers who live near the land and the Native corporations which owned and then sold the land. Will the sale of the land change the way Native villagers use or view

the land? Will the sudden inflow of money into the corporations provide new economic opportunities in lieu of resource development on their lands? Will the sale provide long-term benefits for Native shareholders?

An important distinction to understand is that many of the people who live in the Native villages do not hold shares in the corporations named after that village. ANCSA provided that each resident receive 100 shares in their local village corporation at the time it was founded. This means anyone born after 1971 is not a shareholder unless the shares were inherited or given to him/her by a family member. Other Natives moved into the villages after 1971 and some residents are non-Natives who do not qualify for shares. Also, over the years, many shareholders moved away from the villages or they inherited shares, but live elsewhere.

This dichotomy sometimes creates a split between village residents and Native shareholders. Although Native corporations have a general history of working cooperatively with the Native villages they represent, they do not always share the same goals. Native residents, especially those with no shares in the corporation, want above all else to protect their subsistence way of life and maintain a sense of tradition, which includes a spiritual connection to the land around them. Many of them fear that selling the land might break that spiritual connection and impair their subsistence economies.

Native corporations, on the other hand, were created with the expectation that they would use their land resources to develop market-based economic opportunities for the village residents and their shareholders, which in 1971, were one in the same. For many village corporations, which did not have significant resources on their lands, this promise turned out to be empty. For others, especially those with valuable timber, economic development came at a steep price. To make a profit and provide dividends, they would have to log the land and risk altering the subsistence and spiritual connection for generations to come.

This is one reason why many Native landowners in the spill region approached the Trustee Council. It was the choice of their Native boards of directors that they would rather sell the land and protect it, than be forced to begin logging. Other landowners without good timber prospects saw in the habitat protection program a chance for the long-held promise of ANCSA to be fulfilled. With millions of dollars in hand, they could finally establish a varied portfolio, invest in economic development for the village, and provide shareholders with dividends.

Ron Bernston, secretary for Old Harbor Native Corporation's board of directors, spoke about this conflict at the 10th anniversary symposium in Anchorage. Native corporations were being asked to "serve two masters," he said. "This program helped us solve an almost unsolvable problem faced by our village elders and board of directors – how to provide a financial return to shareholders from our lands while at the same time protecting our ancestral lands and subsistence way

of life so that they could be there for our grandchildren and great grandchildren to use and enjoy as our grandparents did before us."[59]

But to others, inside and outside the villages, selling the land was the ultimate insult – first Exxon oil on their shores and then government bureaucrats waving money to take their land away. To them, it had been a long battle for ownership of the land surrounding their villages and no amount of money could justify giving up that ownership. Port Graham Corporation withdrew its land from consideration in deference to this view by Native villagers.

Considering this context, the Trustee Council became sensitive to the long-term impacts of the habitat protection program on the Native population. It developed a flexible approach to negotiations in an effort to protect the habitat while at the same time protecting subsistence and the prospect of small-scale economic development opportunities for villagers. It changed its early view that acquisitions had to be outright purchases and negotiated packages that included conservation easements and timber easements as a substantial portion of the package.

Eyak Corporation President Nancy Barnes, also speaking at the symposium, said that her board would have preferred a habitat package that included only conservation easements. "Our position was and is that such easements can be drafted to accomplish the same protection as fee to allow title to be left in Native ownership," she said. "This is a subtle, but important point. Considering the sale of any of our land was very difficult for us as Alaska Natives and particularly to reconcile with the long fight for our land through ANCSA."

Native corporation land entitlement vs. sold in fee vs. conservation easements

Native Corporation	Parcel Location	Land Entitlement	Acreage Acquired in Fee	Percent Acquired in Fee	Acreage Acquired in Conservation Easements	TOTAL Percent Acquired
Akhiok-Kaguyak, Inc	So. Kodiak Is	164,460	76,211		42,463	
Old Harbor Native Corp	E. Kodiak Is.	115,200	28,609		3,000	
AKI/Old Harbor	Seal Bay/Tonki Cape		41,549		0	
Subtotal		279,660	146,369	52.3%	45,463	68.9%
Afognak Joint Venture	N. Afognak Is.	125,000	41,350	33.1%	400	33.4%
Chenega Corp.	W. PWS	76,093	37,236	48.9%	22,284	78.2%
English Bay Corp.	S. Kenai Pen.	76,400	32,537	42.6%	0	42.6%
Eyak Corp.	E. PWS	148,730	55,357	37.2%	20,068	50.7%
Koniag Corp.	W. Kodiak Is.	207,360	59,674	28.8%	55,402	55.5%
Seldovia Native Assoc.	Kachemak Bay	181,109	23,800	13.1%	0	13.1%
Tatitlek Corp.	N.Central PWS	137,246	32,284	23.5%	37,530	50.9%
TOTAL		1,231,598	428,607	34.8%	181,114	49.5%

Figure 4.3. The Native corporations participating in the Large Parcel program sold about one-half of their land entitlement, either in fee or in conservation easements.

"The more that the Eyak Board of Directors and our shareholders thought about this effort, keeping in mind the underlying purpose of ANCSA providing an economic, social, spiritual, and cultural future for our people, the more we felt that it was possible for our interests and the public's interests to coincide."[60]

The trustees were heavily criticized for even tempting Native corporations with its offers to buy. Testimony of village residents and non-residents frequently condemned the trustees for this program. Senator Frank Murkowski, R-AK, asked the General Accounting Office (GAO) to investigate the conflict of interest of Interior Secretary Bruce Babbitt because of his prominent role in the habitat protection effort and his statutory responsibility to protect the interests of Native peoples.[61] The argument that the Trustee Council should not be tempting Native corporations was summarily rejected by the council, however. At its core, the Trustee Council believed that habitat protection was a vital long-term tool to restore injured resources and services. In establishing this program, it could not treat Native landowners differently than other landowners in the spill region. It was not the trustees' place to exclude Native landowners from the habitat protection opportunity. To sell or not to sell was a choice for the Native landowners to make in consideration of their duties to shareholders and their commitment to the residents of the villages they represent.[62]

Most of the Native corporations managed to cushion the controversy surrounding the land transactions (and bring comfort to the trustees) by using a portion of the proceeds to establish "settlement trust funds." The money was invested in a diverse portfolio of stocks, bonds, and real estate, with annual earnings divided equally amongst the stockholders, based on a complex formula. Each fund was inflation-proofed and required that the corpus be left intact. This not only provides a direct financial benefit to the shareholder, but relieves some of the pressure from the Native corporations to provide large dividends, thereby helping them grow.

Such trust funds were set up for Old Harbor, Akhiok-Kaguyak, English Bay, Chenega, Tatitlek, and Eyak corporations. The individual boards of directors shared a similar philosophy when it came to selling their lands, said Walt Ebell, an attorney who helped negotiate several of the transactions. "They felt that the money that came in was a substitute for the land," Ebell said. "And the money should be protected for future generations in the same way that the land would have been there (to provide monetary dividends) for future generations."[63]

Such a plan, however, is subject to shareholder cooperation. The worst-case scenario for critics of the Native land sales and for the Trustee Council became reality in the summer of 2002, when Akhiok-Kaguyak, Inc.(AKI) bowed to shareholder pressures and disbursed most of the principal from its trust fund. The 147 shareholders received a one-time payout of $30,000 shortly after the sale of their land and were receiving monthy dividends of about $1,500 from interest and other earnings since then. Many shareholders were not satisfied with the dividend and in

1997 attempted a takeover of the board of directors in hopes of getting one-time payouts of about $100,000 each.[64] Five years later, they succeeded. The board of directors agreed to liquidate three-quarters of its $40 million trust account, providing each shareholder with two checks totaling $200,000. The five-year battle for the money created a strain on the community and among shareholders, with family members and neighbors not speaking to each other. The president of AKI, Ralph Eluska, who guided the corporation through the land sale and set up the trust account, quit rather than take part in the disbursement of the money. "I didn't believe in selling the land and giving the cash to just one generation," Eluska said. "I'm so saddened by the whole thing."[65]

However, Eluska was philisophical and understanding about the fight by many shareholders for cash payments. "If you're unemployed, it's your one chance to get yourself out of poverty," he said.

All of the other trusts remain intact, providing regular financial dividends to shareholders. Old Harbor Corporation, for example, used $25 million from its sales on Afognak and Kodiak islands, to establish a trust that paid out dividends ranging from $1,000 to $5,000 during its first 7 years (1994-2000). English Bay Corporation took a step beyond the trust fund, setting aside an additional $500,000 for cultural and educational purposes, including archaeological research and the curation of artifacts.[66]

The popularity of land sales among Native shareholders has been varified through overwhelming votes of approval on many of the package deals. To satisfy state law, corporations selling a significant portion of their assets must have the approval of two-thirds of their shareholders.[67] For each such transaction, the sale was always dependent on the outcome of a shareholder vote. All were approved with 81 percent to 88 percent of shareholders endorsing the habitat protection packages.

Table 4.3 shows the Native land packages in comparison to the land entitlement for each of the Native corporations. Altogether, the Trustee Council acquired title to about 428,000 acres from Native corporations, which represents about 35 percent of the land owned by those corporations. Conservation easements and timber easements make up another 15 percent of the Native corporation land. The corporations retain title to and full use of the remaining 50 percent. There are also several Native corporations in the spill region, owning an additional 1 million acres, that did not take part in the habitat protection effort.

How the sale of these lands will ultimately impact the way Native villagers view and use the land may take decades to analyze. Will the new public access to these remote areas bring more hunters, sport fishers, campers, and other recreating tourists? And if so, will that have a negative or positive impact on local residents and village economies? Will the sudden intake of hundreds of millions of dollars by spill area Native corporations trickle or flow down to the shareholders? Will

villages benefit? Can the corporations turn the sudden capital gains into long-term investments that pay off over time?

McCammon says frankly that the long-term impact of land sales on Native villages is her one lingering concern about the entire billion-dollar restoration effort. "Perhaps we'll find out 20 or 25 years from now," she said.[68]

The Comprehensive Habitat Protection Plan

The Comprehensive Habitat Protection Plan, approved November 30, 1993, included a schema for identifying and selecting properties. To determine landowner interest, letters were mailed to 90 landowners of large parcels in the spill region. Thirty-two nominations were received identifying 12 major landowners, 11 of which were Native corporations. The 12th was the Kodiak Island Borough, which owned most of Shuyak Island.

The Restoration Office identified 81 large parcels of different habitat qualities and types belonging to the 12 landowners. Experts on 14 species, intertidal and subtidal ecosystems, archaeology, subsistence, recreation, and designated wilderness areas then evaluated each of the 81 parcels, ranking the habitat as high-, medium-, or low-quality for each natural resource or human service injured by the spill. More than 850,000 acres were evaluated and then ranked in this manner.[69]

After a public comment period, the Trustee Council adopted the ranking and directed the executive director to put together a list of parcels to be targeted and a plan for conducting appraisals and negotiations.

The 17 sites subsequently selected as priorities by the Trustee Council totaled about 240,000 acres, but even as they were approving the priority list, trustees were cautioning that they couldn't afford to buy all of that acreage. Sandor warned members of the public not to get their hopes up because the cost of land, especially land with marketable timber, was just too high.[70] During the previous two years, trustees often repeated that phrase. Cole said it. Barton said it. McVee said it. It was a strongly ingrained belief preceding the settlement itself that $1 billion would not buy even the timber rights in Prince William Sound, much less the targeted land and timber throughout the entire spill region.

Before the first attempted settlement with Exxon failed, an official with Eyak Corporation had estimated its timber holdings to be worth $250 million and that represented only one-tenth of the timber in the sound. "If they wanted to buy every stick available in the area, a billion dollars doesn't come close. They wouldn't have enough money," the official said.[71]

During a September 14, 1992 Trustee Council meeting, the Habitat Protection Work Group reinforced that belief. The group identified 33,000 acres in Prince William Sound that were already being logged or had permits in place for logging. The timber rights on those acres were valued at $10,000 to $40,000 an acre, with an estimated average of $20,000 an acre. This caused Cole to suggest that a habitat

protection program would bankrupt the Trustee Council in one deal. Acquiring 33,000 acres would cost $660 million, he said, which was all the money the Trustee Council had for all restoration activities.[72] This, of course, was absurd considering the council had already been approached by landowners with substantial timber holdings who were willing to sell for about $1,000 an acre.[73]

Sandor's repeated concern about the ability to bankroll a major habitat protection effort was evidence that this long-held view had sunk deeply into the psyches of at least some trustees. The council had already concluded the Kachemak Bay acquisition at $924 an acre and the Seal Bay acquisition at $938 an acre, and should have had some idea that their fears were misplaced. In the end, the Trustee Council would acquire almost three times the amount of habitat it had originally targeted in its priority list, including about 95 percent of those priority lands.

Negotiations for several parcels got underway in earnest in 1994, and substantial agreements on important Kodiak parcels were reached by the end of the year.

Kodiak Island

Akhiok-Kaguyak Incorporated. The first was also the biggest in terms of acreage protected. In November 1994, an agreement was reached with Akhiok-Kaguyak, Incorporated (AKI) to protect 115,973 acres within the Kodiak National Wildlife Refuge on the southern part of Kodiak Island. This acquisition not only demonstrated the potential of the Trustee Council program to protect sweeping expanses of quality habitat, but it also was the first time the council accepted conservation easements as part of the package. More than one-third of the package, 42,463 acres, were protected through conservation easements.

The Trustee Council acquired the property for its habitat value, especially for sockeye salmon, pink salmon, pigeon guillemots, black oystercatchers, bald eagles, river otters, and several injured species that use the intertidal areas. Environmental organizations and outdoor recreation groups, however, were jubilant over the deal largely because of its unparalleled habitat for another species, the Kodiak brown bear. These groups had been working in concert to preserve these lands since long before the oil spill.

Kodiak National Wildlife Refuge was established in 1941 by President Franklin D. Roosevelt, who set aside the 2 million acres at the urging of sportsmen and conservation groups who felt the brown bear needed special protection. But in the shadow of ANCSA, the refuge became a patchwork of its former self. More than 470,000 acres within the refuge, usually the productive shoreline areas and riverways, were selected by three Native corporations. The land is virtually treeless and offers little in commodities, but it had two resources worth exploiting, salmon and brown bears. The brown bears were literally one of a kind, having adapted to life

on Kodiak Island to become the largest land carnivore on earth. A large male can reach upwards of 1,500 pounds during the fall as it fattens up for hibernation.

The promise of ANCSA, to provide land resources and economic development opportunities for local Native communities, rang especially hollow on Kodiak Island. Last-minute language added to the bill included restrictions requiring that Native land within the Kodiak refuge be managed by the U.S. Fish and Wildlife Service and that any development would have to be consistent with refuge rules. This left Native corporations with few options and refuge managers without full control of the refuge.

The one opportunity remaining for Native landowners was tourism. Lodges began springing up to support sport fishing, bear viewing, and hunting on Native land. The hunts were closely regulated, but the increase in tourists also meant more bear encounters and a substantial increase in bears killed to protect life and property. The Native corporations had long expressed a willingness to return the land to the refuge in exchange for other lands in the state or for a cash settlement, but despite repeated attempts, no deal was ever formalized. The Trustee Council changed all of that in rapid fashion.

Old Harbor Native Corporation. Simultaneous with the AKI acquisition was an offer to Old Harbor Native Corporation for 31,609 acres on the eastern shores of Kodiak Island, also within the Kodiak refuge. Approximately 183 miles of coast line and 13 salmon streams were included in the package. Most of the acreage was sold outright, although 3,000 acres surrounding the village of Old Harbor was retained by the corporation and conservation easements were placed on it.

As part of the protection package, Old Harbor Native Corporation agreed to create a private refuge to protect an additional 65,000 acres on Sitkalidak Island, which is located just off shore in front of the village.[74] (AKI and Old Harbor were partners in the Seal Bay Timber Company, which previously had sold 41,549 acres on Afognak Island.)

Koniag Incorporated. One month after the Old Harbor acquisition, an agreement was reached with Koniag, Inc., for surface title to 59,674 acres of prime habitat on the west side of Kodiak Island. Negotiators at the time couldn't reach agreement on other valuable Koniag lands, so the parties agreed to a temporary conservation easement that expired at the end of 2001. In this way, an additional 55,402 acres, including two world-class salmon rivers, were protected. Altogether, this habitat protection package included 41 miles of shoreline and 11 salmon rivers.

The council stated at the time that its intention was to permanently protect the area covered by the temporary conservation easement. It set aside $16.5 million for that purpose as negotiations continued. The temporary easement covered the watersheds for the Sturgeon and Karluk rivers, both major salmon producers and considered among the best sportfishing rivers in the world. That agreement was

later extended through 2011, with the Trustee Council providing an offer to set aside $30 million in an escrow-type account for possible future sale. The Koniag board of directors will have the option of selling the land in 2011 for that amount plus interest, or extending the conservation easement an additional 10 years. The Trustee Council's offer to purchase will expire at that time.

In a matter of a few months, the AKI, Old Harbor, and Koniag acquisitions combined to return 274,000 acres to the Kodiak National Wildlife Refuge.

Afognak Island

Afognak Joint Venture. The Trustee Council missed its best opportunity to acquire prime Afognak Island timber and would eventually be forced to pay for that mistake. Afognak Joint Venture, a coalition of several small Native corporations with substantial holdings on Afognak Island, was among the first landowners to contact the Trustee Council to express interest in selling its land. It went so far as to print a colorful brochure promoting its property and lobbied members of the Legislature about the "little known jewel" north of Kodiak Island. More than 100 years ago, President Benjamin Harris proclaimed the island as Afognak Forest and Fish Culture Reserve, one of the first wildlife reserves in the nation. It later became part of the Chugach National Forest and the island was later selected, almost in its entirety, by Native corporations interested in its prime forest and logging potential. During the early 1990s, an estimated 50-60 million board feet of timber was cut from the land each year.

Timber prices were high and AJV had the best timber to be found outside of Southeast Alaska. When the joint venture realized that the Trustee Council was in no hurry to buy and protect land, it chose to refocus on its logging operations. Negotiations began as the virgin timber was being felled and shipped to Asian markets. It would take more than five years to bring a deal to closing. Discussions and negotiations proved difficult for one primary reason: the cost of buying the land was more than the Council could afford. As Molly McCammon once explained, "These trees are diamond-studded and gold-plated."[75] At the same time, Alaska environmental groups were strongly focused on Afognak Island for the same reason. A similar forest of old-growth trees could not be found anywhere else in Alaska.

In November 1997, an agreement was reached to protect 41,750 acres on northern Afognak Island for $74.1 million or $1,775 an acre. It was easily the Trustee Council's single largest expenditure, yet one of its smaller protection packages in terms of acreage. It was also a bittersweet agreement. Paul's and Laura lakes, ranked number one in the entire spill region for its habitat, could not be protected to the degree that everyone had hoped. The cost was simply too high. The east side of the lakes was acquired and protected, but the west side contained only

easements which preserved a 200-foot buffer between the lake and the timber operations. In addition, negotiators worked out an agreement that allowed for selective cutting of timber in some protected areas to help hold down the package price. The timber selection would be done cooperatively with state managers to ensure that the integrity of the habitat would be kept intact. In this way, the council protected more habitat, but bought fewer trees.

Ironically, in 1992 AJV had offered to sell all of its 125,000 acres on northern Afognak Island starting with an asking price of $113.5 million or $908 per acre.[76] The Trustee Council was not prepared, nor did it appear to be interested in, entertaining such an offer at the time.

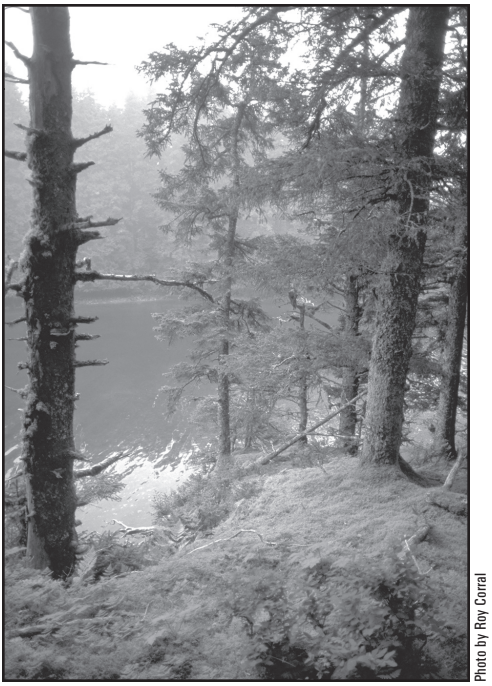


Photo by Roy Corral

Paul's Lake on Afognak Island was ranked the number one habitat in the entire spill region.

Shuyak Island

Kodiak Island Borough. Shuyak Island, at the far northern reach of the Kodiak Archipelago, was acquired by the Trustee Council in December 1994, becoming the fourth major transaction in just over one year. This time, the seller was not a Native corporation trying to make a profit from its lands, but the Kodiak Island Borough hoping to alleviate the tax burden on its citizens. The council paid $42 million for 26,665 acres and extracted a commitment from the borough that $6 million of that would be invested into the expansion of Kodiak's Fishery Industrial Technology Center.

Shuyak Island is heavily treed with old growth Sitka spruce, much like Afognak Island, but it has a quality Afognak does not. The entire island has remained intact, mostly untouched by the chainsaw, and includes calm, protected waters on its western side, dotted by islands. It is ideal for sportfishing and sea kayaking, as well as for many species recovering from the oil spill. It was the intent of the Trustee Council that this land be managed by the state to ensure public access, promote recreation, and preserve and protect injured resources in perpetuity. With this acquisition, the state was able to nearly quadruple the size of Shuyak Island State Park in 1998. The park encompasses the entire island, with the exception

of 77 acres owned by the federal government as a site for aviation navigation equipment and a few small privately owned inholdings.

Prince William Sound

Despite the recent success with acquisitions at Kachemak Bay State Park and throughout the Kodiak Archipelago, advocates of the habitat protection program were still very uncomfortable with the progress. No one complained about the earlier acquisitions, but they were quick to point out that the spill occurred in Prince William Sound. Seven years after the spill, timber operations were still underway in the sound and little had been done to protect that habitat. Just as it did on Kodiak Island, all that changed in rapid domino fashion.

Chenega Corporation. The first major acquisition in the sound occurred in May, 1996, when the Trustee Council agreed to pay a total of $34 million for 59,520 acres belonging to Chenega Corporation. The federal government, which would manage most of the land as part of the Chugach National Forest, provided $10 million of that amount. This acquisition was strongly symbolic because the Chenega area in western Prince William Sound was the region most affected by the spill. This is where the oil first came ashore and sat a foot or more thick on the beaches. The damage to the resources was greater there than anywhere else and protection of that habitat for the recovery of those resources seemed to have greater weight symbolically. The package also included two parcels, Eshamy Bay and Jackpot Bay, that were among the highest ranked parcels in Prince William Sound.

The Chenega package included 37,236 acres purchased outright and 22,284 acres in conservation easements. Of the land acquired in fee, 16,268 acres went to the state government for its marine park system. In total, about 190 miles of shoreline and 45 salmon streams were protected in this package.

In reaching this agreement, negotiators stretched the boundaries and principles of habitat protection in three significant ways. First, it included 3,300 acres of conservation easements that did not allow public access. Second, the corporation retained rights over several miles of shoreline to allow shareholders to exclusively use that land for homes, fish camps, or other purposes. Third, several 10-acre sites were set aside for future commercial use, allowing the corporation to build small lodges or other economic development that would be compatible with the surrounding protected lands. This evolution in the habitat program were discussed more thoroughly earlier in this chapter.

Tatitlek Corporation. The land within sight of the grounding of the *Exxon Valdez* was protected after the Council and Tatitlek Corporation reached an agreement in June 1997. This included Bligh Island, just three miles east of Bligh Reef, ground zero of the 450 mile-long spill. The Trustee Council agreed to the purchase of 69,814 acres from Tatitlek Corporation for a total of $34.55 million. The federal government again provided $10 million of that from the federal criminal fund.

This acquisition protected approximately 212 coastal miles and more than 50 salmon streams.

Two of the parcels, Bligh Island and Two Moon Bay, were respectively the third and fourth highest ranked parcels in the sound. Conservation easements and timber-only easements made up more than half of the package. Like the Chenega package, Tatitlek Corporation retained land for shareholder use and sites for future economic development compatible with the surrounding lands. Tatitlek also retained exclusive access to Bligh Island, due to the island's proximity to the village of Tatitlek and its importance for subsistence and historical uses. The Tatitlek package was acquired below appraised value, due to significant logging in some bays and the lack of public access to Bligh Island. The Trustee Council was criticized for buying logged-over land, but it took the long-term view that decades from now, the habitat values will return.

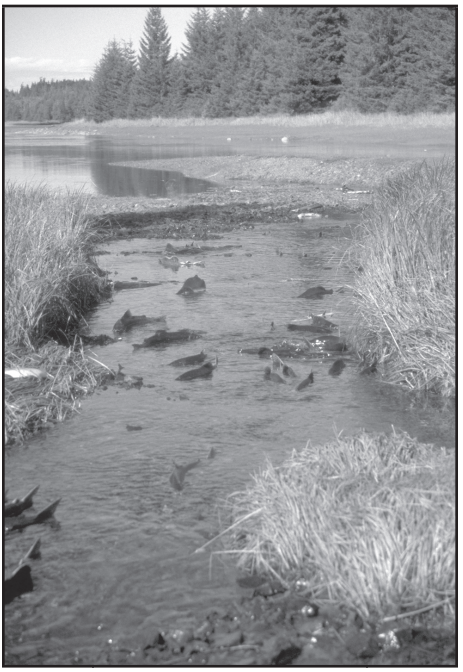


Photo by Kevin Hartwell

Canoe Passage, added to the state's marine park system, was on of more than 80 salmon streams protected in the acquisition from Eyak Corporation.

Eyak Corporation. The failed attempt to acquire and protect the eastern portion of Prince William Sound was resurrected in two phases. In January 1995, the Council provided $3.45 million to purchase from Eyak Corporation the timber rights on 2,052 acres along Orca Narrows. This area, slated to be logged, was visible from Cordova.

Several attempts to resurrect negotiations on the larger protection package met with failure. Eyak Corporation agreed to try again in 1997, this time using experienced Washington, D.C., attorney Roy Jones to negotiate for them. The hired negotiator not only had experience negotiating other land deals with the Trustee Council, but he also served to buffer the caustic relationship between the council and Eyak's board of directors.

"We knew from experience," said Eyak's Nancy Barnes, "that if we attempted to try it (negotiate) ourselves, it was easy to become insulted or hurt or just plain angry sometimes, or walk out, or simply not have the time or inclination or experience to chase down the hundreds of issues that kept coming up."[77]

Photo by Roy Corral

The largest waterfall in Kenai Fjords National Park was named Kvasnikoff Falls after English Bay Corporation Chairman Bobby Kvasnikoff, who died shortly before the deal to protect the land was finalized.

In July 1997, Eyak Corporation and the Trustee Council reached an agreement to purchase an additional 75,425 acres, including the watershed of Eyak Lake, adjacent to the community of Cordova. The package also protected Sheep Bay, ranked number one in Prince William Sound for its habitat value. The Council agreed to pay $45 million for the package, which included outright title to 55,357 acres, conservation easements on 6,667 acres, and timber-only easements on 13,401 acres. Like the other Prince William Sound transactions, the sellers retained small sites for shareholder use and compatible economic development.

Kenai Fjords National Park

English Bay Corporation. The habitat protection effort with perhaps the largest amount of public interest nationwide was the unification of Kenai Fjords National Park. During land selection following ANCSA, two Native corporations selected lands within the Kenai Fjords area, which would later be designated a national park. Its status as one of the most popular national parks in Alaska, gave the Kenai Fjords protection effort a national lens, resulting in a substantial letter-writing campaign supporting the acquisition. The effort bore fruit in February 1997 when the council authorized the outright purchase of 32,537 acres from English Bay Corporation. Most of that land was within the park, but about 3,000 acres were part of the Alaska Maritime National Wildlife Refuge, an accumulation of island refuges stretching more than a thousand miles from Alaska's Inside Passage to the far Aleutian Islands. The Trustee Council provided $14.13 million for the acquisition. The federal government provided another $1.24 million to acquire subsistence rights on most, but not all, of the lands being sold by English Bay. This represents the only transaction in which subsistence rights were part of the sale and this was done outside of the Council's habitat protection program. This issue was discussed in greater detail earlier in this chapter.

Port Graham Corporation continues to own considerable inholdings within the national park, but had been uninterested in selling the land until early 2003, when it decided to consider the sale of conservation easements.

Small Parcel Program

Running concurrent with the Large Parcel Program was a second habitat protection effort that had a different focus and operated under different guidelines. The Small Parcel Program was created under the comprehensive plan to take into account the strategic habitat value of small plots, usually residential or recreational lots found on rivers, along coves, bays, and estuaries, or at the mouths of rivers where lodges are often built.

Small parcels were roughly defined as land under 1,000 acres in size, but that was not always the case. Twice the Trustee Council made offers under the Small Parcel guidelines for properties in excess of 1,000 acres.[78] By March 2003, the

Small Parcel program was responsible for acquiring 101 parcels totaling 8,065 acres at a cost of $20.7 million. Purchase agreements have been signed on an additional 977 acres at a cost of $1.2 million.[79]

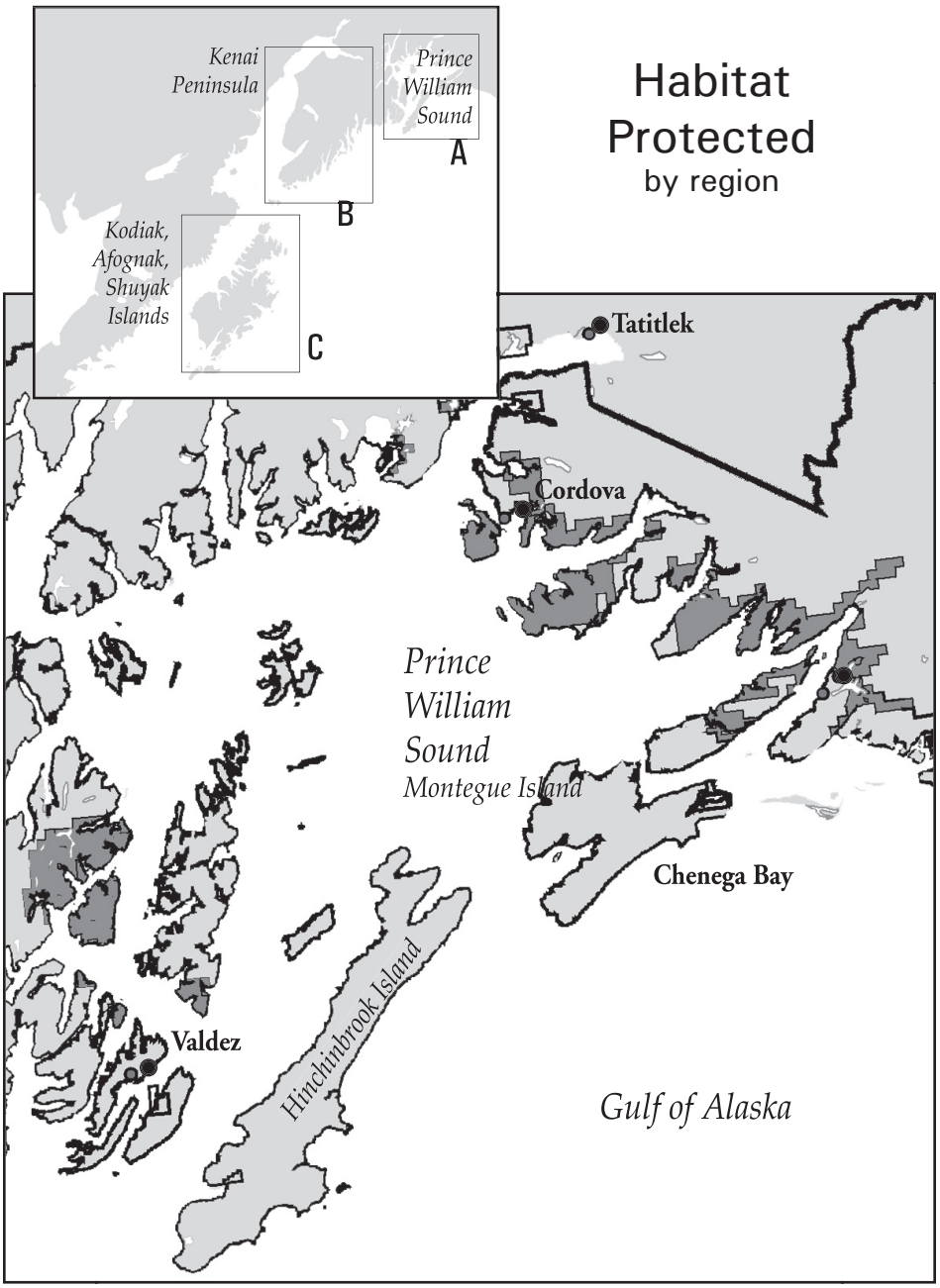
The philosophy of the Large Parcel Program was to configure parcels to create boundaries around entire ecosystem-level units, such as watersheds, in order to protect large areas of linked habitat. Small parcels are generally too small to encompass entire ecosystems so boundaries are determined by land ownership. Whenever possible, the Trustee Council has attempted to bundle small parcel acquisitions to increase the overall protection or improve management of the parcels. This was done with several 10-acre parcels within Kodiak National Wildlife Refuge and several lots on the Kenai River.

The Small Parcel program developed somewhat ambiguously and with little discussion by the Trustee Council. It was the final step in a three-step approach to habitat protection that emerged very early in the Council's existence. The first step was to deal with large parcels under imminent threat of development. Step two was creation of a comprehensive approach to large parcels. The Small Parcel program did not begin to take shape until after the first two steps were completed or well under way. Support for the concept was shaky and the public, including environmental organizations and the Public Advisory Group, supported it only with substantial caveats. Money being poured into small parcels was considered a threat to the success of the Large Parcel program. Critics complained that small parcels would not provide as much bang for the buck as large parcels. The cost would be substantially higher per acre to acquire residential or recreational property and the restoration benefits of 20 public acres surrounded by highly-developed properties could hardly compare to the benefit of thousands of contiguous acres usually surrounded by parkland, national forest, or national refuge. It did, however, make sense to fill in the gaps, wherever possible, by acquiring small private inholdings within large blocks of federal or state land. It was with this understanding that trustees and the general public provided their lukewarm support for the concept of small parcels.

The trustees, in fact, did not initially decide to move forward with small parcels. They left the decision on whether to investigate the potential of a small parcel program or whether to drop the idea (at least for the time being) completely in the hands of the executive director.[80] Ayers came back in January 1994 with a recommendation to proceed.

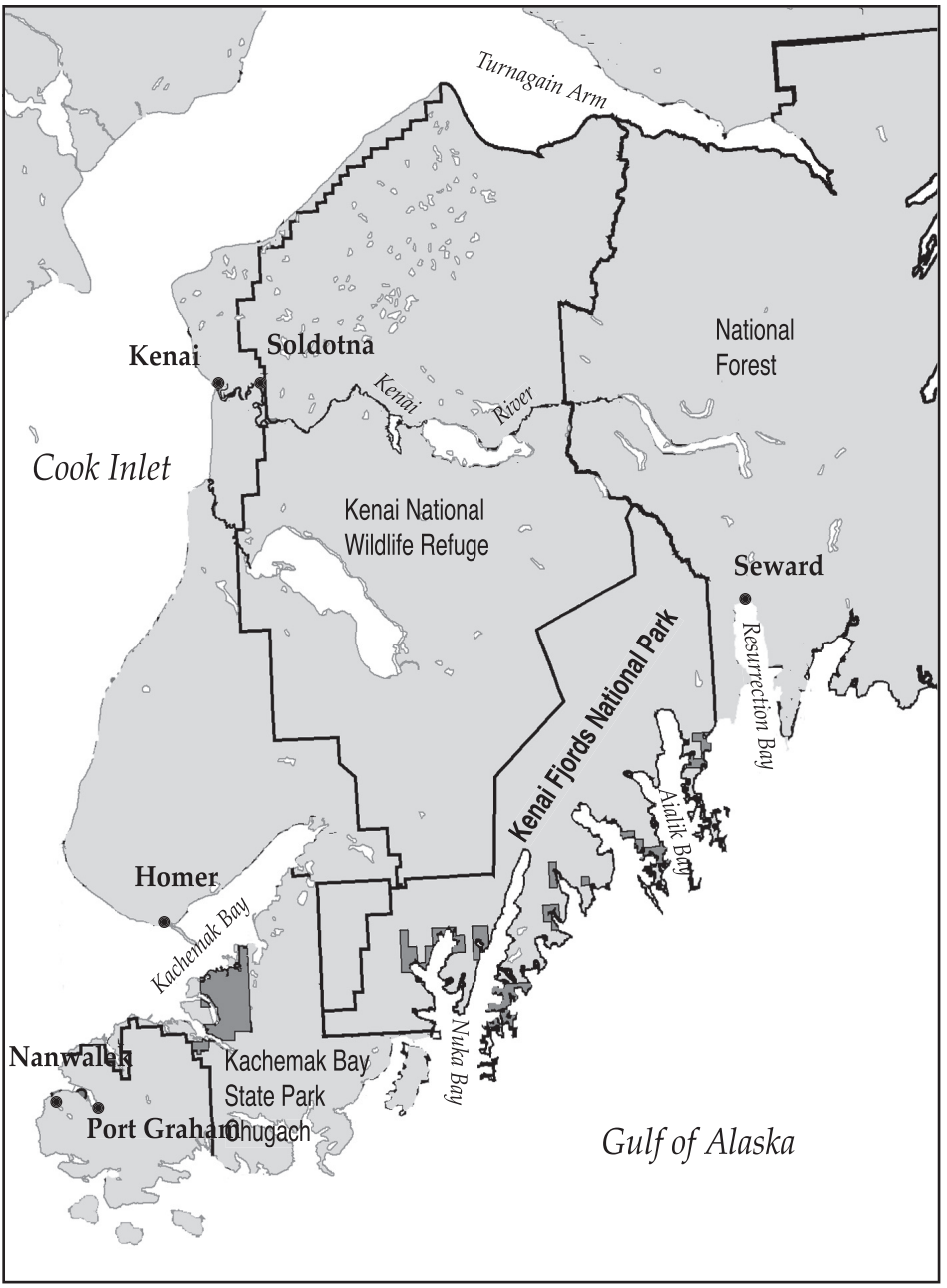
But Trustees Sandor and Tillery (as well as the Public Advisory Group) were clearly on record voicing strong reservations about the program, Sandor because he did not want to reduce the amount of land in private ownership and Tillery because he did not see enough public support for the program.[81]

When it authorized the establishment of the Small Parcel program as part of a much larger resolution concerning large parcels, trustees said they approved the



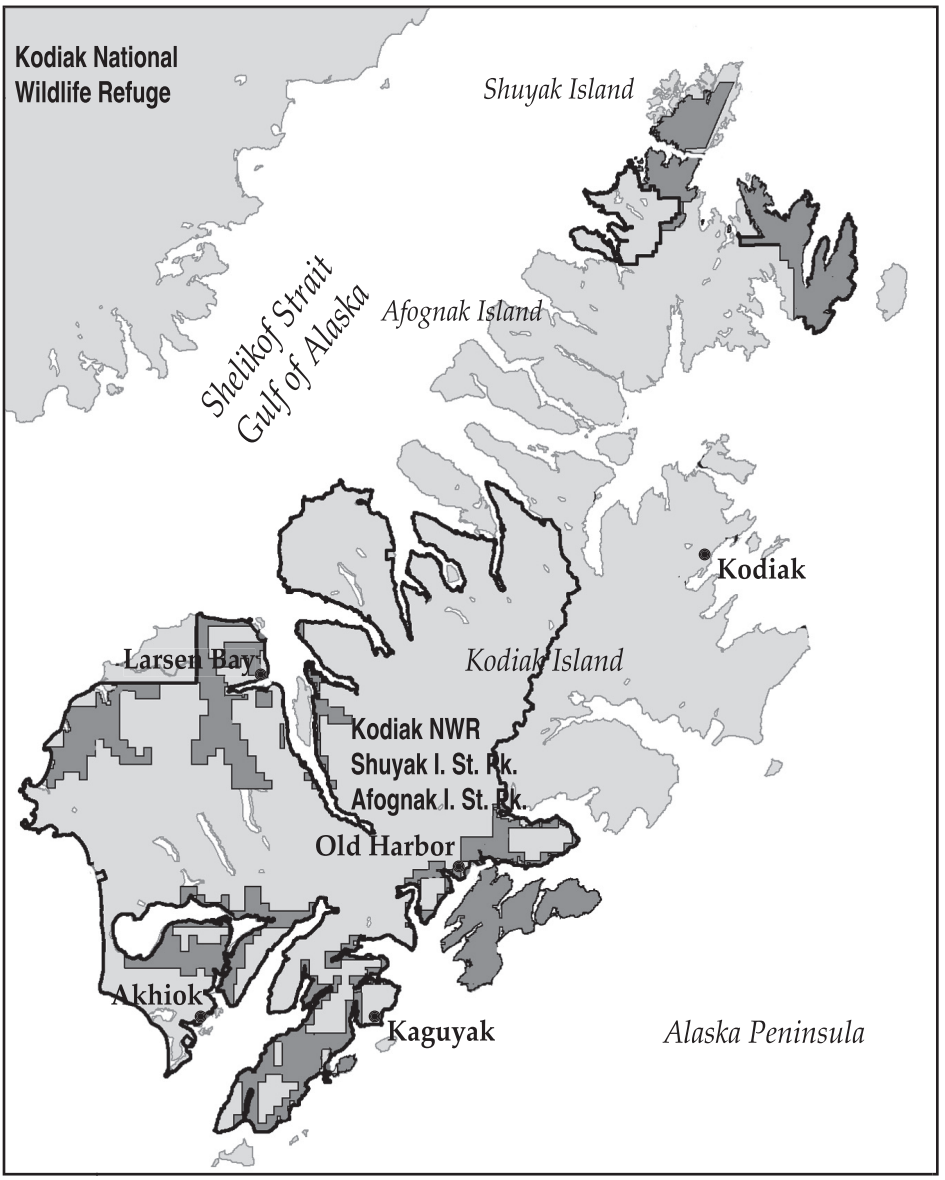
A - Prince William Sound

	Acquired in fee	Conservation easements	Total acres protected
Chenega Corporation (Western PWS)	37,236	22,284	59,520
Tatitlek Corporation (Northcentral PWS)	32,284	37,530	69,814
Eyak Corporation (Eastern PWS)	55,357	20,068	75,425



B - Kenai Peninsula

	Acquired in fee	Conservation easements	Total acres protected
English Bay Corporation (Kenai Fjords Nat'l Park)	32,537	0	32,537
Seldovia Native Association (Kachemak Bay St. Park)	23,800	0	23,800
Kenai & Moose rivers (small parcels)	4,212	0	4,212



C - Kodiak Archipelago

		Acquired in fee	Conservation easements	Total acres protected
Afognak Joint Venture (Afognak Island)	41,350	400	41,750	
Akhiok-Kaguyak Corp. (S. Kodiak Island)	76,211	42,463	115,973	
Koniag, Incorporated (W. Kodiak Island)	59,674	55,402	115,076	
Old Harbor Corporation (E. Kodiak Island)	28,609	3,000	31,609	
Seal Bay Timber Company (Afognak Island)	41,549	0	41,549	
Kodiak Island Borough (Shuyak Island)	26,665	0	26,665	

concept, but that did not necessarily mean they would approve any acquisitions. They said they would reserve judgement on the value of the program until after parcels were identified, evaluated, and ranked.

This rather conservative beginning did not foreshadow the extensive and strongly supported program that eventually developed. In early 1994, the Trustee Council announced that it was seeking nominations from landowners, resource agencies, and the public of parcels to be considered for protection. The general public was discouraged from nominating properties without the consent of the landowner, but nevertheless, many publicly-nominated properties were received. As a result, nearly 50 percent of the nominations did not meet the threshold criteria, usually because the landowner was not interested in selling.

The small parcel threshold criteria were similar to the criteria established for the Large Parcel program, with one noticeable difference. The willing seller had to acknowledge that he/she understood that the governments could "purchase the parcel or property rights only at or below fair market value." There would be no negotiating to acquire these parcels.

Of the 262 nominations originally received, only 133 survived the test of the threshold criteria. Each of the surviving parcels was then ranked for linkage to injured resources/services, the potential for protection when considering the use of adjacent properties, and the benefit to management of public lands. Only 6 of the original 133 properties were ranked high under the scoring system. Fifteen properties were ranked as moderate and 112 or 84 percent of the properties were considered low-value.[82]

Public gets behind small parcels

Two significant changes occurred that quickly led to strong public and trustee support of the Small Parcel program. The first was the accumulated list of nominated parcels. The list itself had a way of galvanizing public support and that had a way of boosting trustee interest in the program. There was something on the list for everyone, impacting every community. It began to be seen as a community-oriented restoration effort, with city councils from throughout the region passing resolutions for purchase of local properties. The potential of the program to assist communities with tourism and recreational development became known. At the same time, popular local properties could be saved from development that might conflict with tourism and negatively impact injured resources.

The second boost to the Small Parcel program was the 1994 election of Tony Knowles as governor of Alaska, and the subsequent selection of Jim Ayers as his chief of staff. Knowles and Ayers both strongly supported the program . Knowles publicly announced that he wanted to increase the number of salmon entering the popular Kenai River and at the same time protect the riverbank from the trampling inherent with sport fishing. Commercial fishing groups angrily refuted the idea, accusing the governor of talking out of both sides of his mouth. It's impossible,

they said, to increase fishing on the river and at the same time protect the river from degradation. But, Knowles unveiled a plan that relied strongly on Trustee Council funds and state criminal funds to invest many millions of dollars to buy land, build more manageable visitor facilities, and, at the same time, restore eroded riverbank on both public and private lands.

Throughout the life of the program, the Kenai River has been its main beneficiary. As of March 2003, the Trustee Council has protected 1,855 acres along the Kenai River and its watershed, including about nine miles of river bank. Another 3,254 acres have been protected along the Moose River, a major sockeye salmon producer that feeds into the Kenai River.[83] In addition, the Trustee Council has provided nearly $2 million to restore riverbank habitat that was degraded from trampling. Other parcels were acquired through the state criminal fund, which also provided millions of dollars for light-penetrating gratewalks, trails, parking lots, boat landings, bathroom facilities, and revegetation of the river bank.[84]

The trustees recognized that its small parcel ranking system did not adequately take into account the strong desire of the public to protect certain properties or make some properties available for recreation or for other special uses. It also did not capture the true restoration value of the land, if for instance, it was very valuable for only one injured resource or service, but had little value for others. They approved a category called Parcels Meriting Special Consideration that opened a door for more strategic use of program funds to acquire properties that otherwise would not qualify under the ranking system. The trustees never defined what "meriting special consideration" meant and, instead, dealt with the unique characteristics of these properties one at a time. To qualify, in addition to meeting threshold requirements, properties usually had to have a political component, meaning they had to have either strong backing by an agency, a community, or the general public. For example, a suitably located lot on the Kenai River was acquired so that the Alaska State Park System could provide boat access, parking, and toilet facilities. A weir site on a remote river was acquired to maintain access for counting salmon returning to that river. Lots on the Homer Spit were acquired and turned over to the City of Homer to be managed as a local preserve.

It's important to note that the Small Parcel Program was frequently more about "acquisition" than pure "protection." Although those terms are used interchangeably in the Large Parcel Program, it is more appropriate to differentiate the two when referring to the Small Parcel Program.

It is not always appropriate to say a small parcel was "protected" once it was purchased. In fact, several acquisitions were really about development of the property rather than protection, usually for the benefit of tourism and recreation. The priority was restoration of human uses as well as restoration of natural resources. Although the property itself might be developed as a campground or boat launch or fishing site, the improved management served the larger purpose of protecting

the resources. For example, one of the busiest and most visible fishing sites on the Kenai River, a 2-acre plot located just under the Sterling Highway bridge in Soldotna, was purchased at the appraised value of $750,000 (the highest per-acre purchase in the restoration program). This area was developed with a riverfront boardwalk that allowed several dozen people to fish along the bank at the same time without trampling the vegetation. The priority was not only restoration of the river, but also restoration of recreation and tourism as an injured service. Such developments always had protective elements to them, in this case by improving management of the river, controlling tourism use, and protecting the riverbank vegetation.

A popular Seward beach front along Resurrection Bay was saved from residential development, but was quickly developed by the Alaska Division of Parks and Outdoor Recreation to provide parking, interpretive signage, and visitor facilities. This ensured continued public use and access to the beach and intertidal pools, which was a popular destination for school children bussed all the way from Anchorage and the Matanuska-Susitna Valley. Other small parcel acquisitions provided facilities for fisheries technicians to count salmon at weir sites or hosted visitor cabins rented out to hikers, boaters, and kayakers. The vast majority of the acreage acquired under the Small Parcel program, however, has been left alone to provide habitat for injured resources.

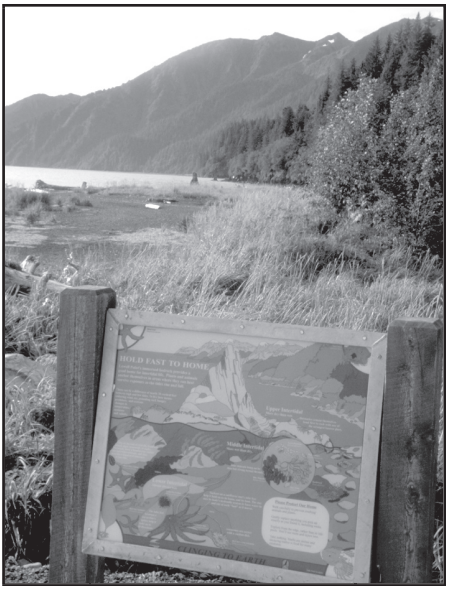


Photo by Joe Hunt

Lowell Point, in Seward, was purchased and protected from residential development, but the popular beach was quickly developed with parking, signage, and bathrooms for tourism.

Footnotes - Chapter Four
Protecting Habitat

1. "The concept (of buying and protecting lands) is broadly supported by timber owners, land owners, commercial fishermen, the tourism and recreation industries and cities like Cordova and Homer. They've been frustrated with trustees who seem to be ideologically opposed to using settlement money for this purpose." Activist Rick Steiner, quoted in the Anchorage Daily News, April 1, 1992, *Bill would buy land, oil leases*, by David Whitney.

2. Anchorage Daily News editorial, March 29, 1994*, Kodiak buyback: A good use for the oil spill settlement.*

3. The Voice of the Times is an editorial leftover of the defunct Anchorage Times, which was purchased and closed by the Anchorage Daily News in June 1992. The sale of the newspaper contained a contractual promise by the Daily News that for 10 years it would provide one-half of a page daily for editorial opinions supplied by the former publisher of the Anchorage Times.

4. Voice of the Times editorial, January 31, 1992, *Nincompoop idea: Paying not to cut trees*. Also, Voice of the Times editorial, December 7, 1993, *Land grab alternative*.

5. Miller attempted but failed to pass legislation forcing the federal trustees to spend the majority of settlement funds on habitat protection.

6. Murkowski, chairman of the Senate Natural Resources Committee, refused to provide a Congressional fix that would allow the Trustee Council to invest tens of millions of dollars outside the federal investment system, unless the Council agreed that the interest earnings would not be spent on buying land. This stalemate lasted for three years, costing the Trustees about $20 million in lost interest income.

7. Twice in 1998, the Alaska Legislative Budget and Audit Committee refused to approve Trustee Council expenditures for parcels. Legislative approval was necessary because the parcels would be purchased by the Alaska Department of Natural Resources. The first refusal concerned a set of properties in the City of Homer that would be managed by the city as parks. The second parcel was the $70 million purchase of 41,000 acres on northern Afognak Island.

8. Governor Knowles relied on little-used gubernatorial powers known as "the 45 day rule" that allowed the state to purchase properties using program receipts, even though the acquisition was not approved by the Legislative Budget and Audit Committee.

9. Exxon Valdez Oil Spill Trustee Council 2001 Status Report, Page 15.

10. The Trustee Council decided March 1, 1999 to use its $170 million Restoration Reserve for a long term research and monitoring program as well as habitat protection. The split called for $55 million to go toward habitat protection, but the cost of a permanent protection package for the Karluk River (Koniag, Inc.) on Kodiak Island would come from that amount, leaving about $25 million for a long-term habitat fund.

11. Trustee Council meeting transcript, April 27, 1992. Phipps quotes Cole as part of Phipps' testimony before the Council.

12. Trustee Council meeting transcript, April 27, 1992.

13. Trustee Council meeting transcript, April 27, 1992.

14. Anchorage Daily News, May 28, 1996, *Spill land bill likely to top appraisals*, by Natalie Phillips.

15. The Daily News focused on the negotiating success of Cole, noting that after 30 months in office, he had negotiated $1.3 billion worth of oil royalty and tax settlements. This equaled $1.5 million per day in office and was about four times the pace of his two predecessors. Anchorage Daily News, May 16, 1993, *The Deal Maker*, by Ralph Thomas.

16. Those close to Cole during the first Trustee Council year say that his commitment to habitat was an evolutionary one. Cole maintains that protection of habitat was always part of his priority for the settlement fund, although he was unsure how much could be accomplished with the money. He tells the story of a cabinet meeting in which he asked other Hickel Administration commissioners whether they supported clearcuts. Every one of them thought clearcuts were acceptable, part of the cost of business. But, when it came to Hickel, the governor said they were an eyesore and should be avoided if possible. Cole said he knew then that he did not have much support in the administration, but at least he had it where it counted the most. Personal communication, February 18, 2001.

17. Trustee Council meeting transcript, February 16, 1993.

18. *Restoration Planning Following the Exxon Valdez Oil Spill, Proceedings of the Public Symposium*, Restoration Planning Work Group, Pg. 11.

19. Trustee Council meeting transcript, April 27, 1992.

20. Williams, R., L. Calvin, C. Coutant, M. Erho, J. Lichtowich, W. Liss, W. McCannaha, P. Mundy, J. Stanford, R. Whitney. 1996. *Return to the River: Restoration of Salmonid Fishes in the Columbia River Ecosystem.* Northwest Power Planning Council. Oregon. 522 pgs.

21. Legacy of an Oil Spill: 10 Years After Exxon Valdez, also known as *Exxon Valdez Oil Spill Trustee Council 1999 Status Report*, Page 35.

22. Exxon Valdez Oil Spill Symposium, March 1994, video tape.

23. State of Alaska website. www.state.ak.us The top five Alaska industries do not include subsistence, whose economic importance is often overlooked. The value of wild food and other subsistence uses are estimated to be worth hundreds of millions of dollars.

24. *Alaska Blue Book*, 1993-94, Alaska Division of State Libraries, Archives & Museums.

25. Alaska Native Claims Settlement Act, PL92-203, December 18, 1971, 85 Stat. 688.

26. Associated Press, as printed in the Anchorage Daily News, June 22, 1992, *Natives hold trees hostage: Corporations want governments to buy timber land or see it clear-cut*, by John Enders.

27. Trustee Council meeting transcripts, January 31, 1994.

28. *Natural Resources Restoration: Use of the Exxon Valdez Oil Spill Settlement Funds*, a Briefing Report to the Chairman, Committee on Natural Resources, House of Representatives; August 1993, General Accounting Office (GAO/RCED-93-206BR). This GAO report is discussed in detail in Chapter Three.

29. The Trustee Council contracted with The Nature Conservancy for two projects in Fiscal Year 1993 totaling $86,200.

30. Trustee Council transcript, December 11, 1992.

31. Trustee Council transcript, December 11, 1992.

32. The Alyeska settlement was filed with the U.S. District Court in Anchorage on November 25, 1992. It specifically provided a) $14.5 million for construction of oil spill response facilities at Tatitlek and Chenega Bay; b) $6 million for construction of a road from Cordova to Shepard Point for access to an oil spill response facility; c) $7.5 million for acquisition of land within Kachemak Bay State Park; and d) $200,000 for the purchase and installation of communication equipment for the Valdez Emergency Operations Center.

33. As part of a bill that determined how the state's portion of the criminal fund would be used, the Alaska Legislature provided $7 million for land within Kachemak Bay State Park, HCS CSSB 183(FIN).

34. Ironically, most of the trees acquired for protection in 1993 were killed by an infestation of spruce bark beetles over the next several years. Sandor wanted trustees to consider a possible beetle infestation at the time of the sale. Trustees, however, took the long-term perspective, choosing to protect the property regardless of the potential for natural change.

35. Trustee Council transcript, May 13, 1993.

36. Anchorage Daily News, May 14, 1993, *Spill-money trustees to buy Afognak land: $38.7 million deal stops logging at Seal Bay*, by Natalie Phillips.

37. Trustee Council transcript, November 30, 1993.

38. Christopher Carr, *A study of the Exxon Valdez Oil Spill Trustee Council*, Public Trust Seminar, Boalt Hall School of Law, University of California, March 7, 1994.

39. Voice of the Times editorial, *Resurrect no net loss*, May 19, 1993.

40. Voice of the Times editorial, *"Champion of parks,"* November 2, 1993.

41. Anchorage Daily News, July 29, 1993, *Cordova protests clear-cutting*, by Nicole Wong; July 31, 1993, *Eyak halts rain forest harvesting*, by Natalie Phillips; August 10, 1993, *Eyak rejects $41 million land offer*, by Nicole Wong; September 22, 1993, *Rejection ends Eyak land talks, Council declines offer*, by Natalie Phillips.

42. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, A Report to the Nation, public presentation, March 23, 1999, video tape.

43. On March 24, 1993, on the four-year anniversary of the oil spill, Ron Brown, Secretary of Commerce in the new Clinton Administration, announced that at least $25 million of the federal portion of the criminal settlement would be used for habitat protection. In actuality, more than $47 million of the federal criminal settlement was used for habitat protection.

44. Personal Communication, Marty Rutherford, February 22, 2001.

45. The original village of Chenega, located on the southern shore of Chenega Island, was abandoned after tsunamis generated by the 1964 earthquake obliterated every home and killed one-third of the village's 75 residents. The new village of Chenega Bay was located on Evans Island. Ironically, the Good Friday earthquake was followed 25 years later by the Good Friday oil spill. *Exxon Valdez* oil came ashore in the vicinity of Chenega Bay three days later, exactly 25 years to the day after the disastrous tsunami.

46. Those national parks in Alaska created by the Alaska National Interest Lands Conservation Act (ANILCA), allow subsistence hunting by Alaska Natives. This right was specifically protected by Congress. Therefore, the Department of the Interior had to pay English Bay shareholders to give up that right. Trustee Council Resolution, November 3, 1994.

47. The original threshold criteria to qualify a parcel for acquisition required that "(t)he seller acknowledges that the governments can purchase the parcel or property rights only at or below fair market value." *Comprehensive Habitat Protection Process; Large Parcel Evaluation and Ranking; Volume 1*, November 30, 1993, Habitat Protection Work Group, Pg. 5.

48. The Trustee Council was originally told by agency lawyers that the federal government could not pay more than appraised market value for land. In fact, the relevant federal statutes on this matter say that the government cannot pay less than the appraised value. The government, it seems, cannot pay less, but does not want to pay more – for obvious reasons. The government can pay above appraised value with good reason and Congressional review and consent. Due to the unique circumstances involving the use of restoration funds to acquire Native lands, the Washington Policy Group authorized spending above fair market value for habitat. All such federal acquisitions were presented to Congress, which could have actually killed the deals before they were finalized, but there appeared to be little or no opposition.

49. *Exxon Valdez Oil Spill Restoration Plan*, *Exxon Valdez* Oil Spill Trustee Council, November 1994, Pg. 23.

50. The Brown Bear Trust, a national lobbying effort headquartered in the Washington, D.C. area, was formed to promote the buyback of Native lands within the Kodiak National Wildlife Refuge and on Afognak Island. The Trust includes groups as varied as the Sierra Club, Izaak Walton League, and the National Rifle Association, as well as the Native corporations that owned the land.

51. Nancy Barnes, president of Eyak Corporation, *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, A Report to the Nation, public presentation, March 23, 1999, video tape.

52. Anchorage Daily News, October 22, 1995, *The Price of Pricelessness*, by Natalie Phillips.

53. Personal Communication, Jim Ayers, February 23-24, 2001.

54. Anchorage Daily News, October 22, 1995, *The Price of Pricelessness*, by Natalie Phillips.

55. The buyback of Calista Corporation lands was led by Alaska Congressman Don Young, starting in 1994. The approved legislation called for Calista Corporation, based in Bethel, to receive $39.4 million in government bonds and surplus federal property (eight times the appraised value) in exchange for title to 218,585 acres inside the Yukon Delta National Wildlife Refuge.

56. Anchorage Daily News editorial, November 3, 1995, *A bit pricey: Kodiak land worthwhile, but expensive.*

57. *Kodiak buyback: A good use for the oil spill settlement*, Anchorage Daily News editorial, March 29, 1994.

58. Personal Communication, Molly McCammon, April 4, 2001.

59. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, A Report to the Nation, public presentation, March 23, 1999, video tape

60. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, A Report to the Nation, public presentation, March 23, 1999, video tape.

61. Murkowski's request that an evaluation be conducted of the Secretary of the Interior's role in land purchases was not accepted by the GAO. Auditors looked more at the Trustee Council's programs and policies, along with an evaluation of habitat acquisitions and appraisals. The GAO audit, released in August 1998, generally lauded the Trustee Council for its overall restoration program and the improvements made since its 1993 audit.

62. Personal Communication, Molly McCammon.

63. Personal Communication, Walt Ebell, May 21, 2002.

64. Anchorage Daily News, November 3, 1997, *Cash windfall divides Natives*, by Natalie Phillips.

65. Anchorage Daily News, August 25, 2002, *Akhiok shareholders each to get $200,000: Native corporation cashed out most of a trust account,* By Paula Dobbyn.

66. Babbitt Press Release, May 19, 1997, *Secretary Babbitt announces major land protection agreement for Kenai Fjords National Park*.

67. Alaska statutes, Sec. 10.06.570, *Sale of assets not in regular course of business*.

68. Personal Communication, Molly McCammon, April 4, 2001.

69. The ranking of parcels in the Large Parcel program can be found in Appendices G and H. *Comprehensive Habitat Protection Process; Large Parcel Evaluation and Ranking; Volume 1*, November 30, 1993, Habitat Protection Work Group, Pg. 4-10.

70. Trustee Council meeting transcript, November 30, 1993.

71. Anchorage Times, March 17, 1991, *Exxon spill funds won't support timber buyout, officials say*, by Joe Hunt.

72. Trustee Council meeting transcript, September 14, 1992.

73. A member of the public attending the meeting stood up, interrupted the meeting, and pointed out that the discussion was "absurd" based on previous offers to sell by timber-holding Native corporations.

74. Sitkalidak Island, as of this writing, has not been protected as a private refuge. Old Harbor Native Corporation is negotiating for further compensation in return for placing the acreage into some sort of conservation easement.

75. Associated Press, as it appeared in the Anchorage Daily News, April 3, 1998, *Trustees approve $70 million for Afognak Island land*, by Rosanne Pagano.

76. Kim Sundberg, a member of the Habitat Protection Work Group, referenced this proposal by AJV during a habitat discussion with the Council. Trustee Council meeting transcript, September 14, 1992.

77. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, A Report to the Nation, public presentation, March 23, 1999, video tape

78. The Trustee Council was involved in a purchase/trade of 3,000 acres of Kenai Native Association land on the Kenai and Moose rivers. It also made an unsuccessful offer to acquire 1,028 acres at Termination Point on Kodiak Island.

79. *Small Parcel Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

80. Trustee Council meeting transcripts, November 30, 1993.

81. Trustee Council meeting transcripts, August 23, 1994.

82. *The Comprehensive Habitat Protection Process: Small parcel Evaluation and Ranking – Volume III*, *Exxon Valdez* Oil Spill Trustee Council, February 1995.

83. 2002 Status Report, *Exxon Valdez* Oil Spill Trustee Council.

84. *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council, Pg. 16.

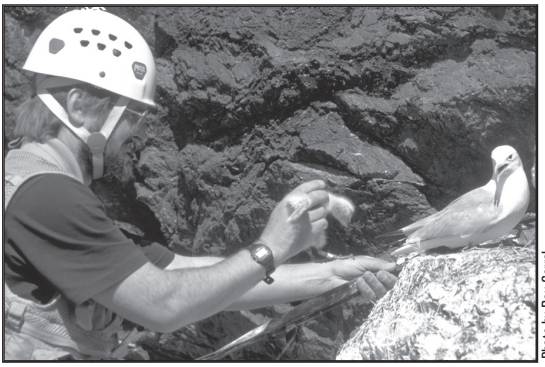


Photo by Roy Corral

Chapter Five

Restoration Science: A legacy of process

Introduction

For many insiders managing the Trustee Council programs and many others watching the process unfold from the outside, the Research, Monitoring, and General Restoration program carries the most hope for long-term restoration of the spill region and, at the same time, the least explanation as to what exactly is being accomplished.

It's easy for anyone to look at the habitat protection programs and immediately grasp the magnitude of the accomplishments. It can be described in acres protected, miles of shoreline acquired, salmon rivers saved, refuges and parks made whole again. One might look at a map or float along the shore or look up at a towering Sitka spruce and be in awe of the successful effort to protect the spill region. Although the research and monitoring program is equally impressive, it is not as easily understood. Acquiring new knowledge is a slow-moving process, often with fuzzy results that may or may not clear with time. Acquiring habitat, by comparison, takes place (at least symbolically) when a half-dozen trustees sign an agreement, usually followed by a barrage of media attention.

Chief Scientist Bob Spies likes to say that knowledge transformed into tools can be as permanent a form of protection as conservation easements. Habitat protection, he points out, is a restoration tool that ends mostly at the water's edge. It does little to restore or protect a species that spends most or all of its life cycle at sea. A well-structured science program, on the other hand, will provide

data and new tools that allow resource managers to make better, more informed decisions. In this way all injured resources benefit.[1]

The science program has provided significant new tools for management of fisheries and marine mammals. It has changed the way scientists view the potential impacts of weathered oil in the environment. And it has provided insights into the complicated interactions between living and non-living forces within an ecosystem, from climate to phytoplankton to killer whales.

It's important to understand that the post-spill scientific effort was an evolving process that seemed to build on itself. It was a mesh of policy and accomplishments, of conflicts and progress, until a system emerged that seemed to click with scientists, managers, and stakeholders alike. Trustees struggled with policy issues in the board rooms at the same time that scientists conducted groundbreaking work in the field. This chapter focuses primarily on policy struggles, but those struggles were not without significant rewards. A brief explanation of scientific accomplishments is included as an addendum to this chapter.

Many scientists and managers taking part in the science program believe its lasting legacy may not be so much what was accomplished, but how it was done. Peer review. Competitive proposals. The dissolution of agency territoriality. An adaptive management cycle. Ecosystem studies. Public participation. All of it coordinated by an independent office answering to a multi-agency trusteeship that must move with unanimity. There is no government entity comparable.

Breaking down well-established barriers and introducing universities and private research firms into the mix has resulted in new lines of communication and new ways of thinking. Researchers of different disciplines and different employers are now talking to each other about similar interests. Agencies are looking beyond the parochial confines of their missions to achieve broader goals of restoration.

"The process must be considered among the most important accomplishments," said Andy Gunther, who served as Spies' deputy. "Science decision-making was yanked out of the closet and into the open air, and we showed that such a process can produce high quality work."[2]

Central to the scientific efforts, as it is with the entire restoration program, is the question of oil spill injury and recovery. The science program, at its core, is charged with identifying the degree of injury and measuring the rate of recovery of many species, mostly those that have an economic value and are in the public eye. Research efforts are, in many ways, tied to an official list of injured resources which drives the restoration program. In theory, when recovery goals for those resources are met, restoration is complete and the voluminous book on the *Exxon Valdez* oil spill can finally be closed. Yet, scientists will be the first to admit that the decision about which species should officially be listed as injured and how recovery should be measured is driven not just by science, but also by public

policy. Not all scientists are comfortable with "the list," although it is generally accepted as the best way to communicate progress and problems to the public in its most simple terms.

Nature does the job

The Restoration Plan, as it turned out, was more about passive reparation for the injured ecosystem than hands-on fixes and environmental manipulation. Restoration in any active sense would prove to be elusive. The Trustee Council would learn early in its existence that there was very little it could do to "restore to their pre-spill condition any natural resource injured, lost, or destroyed"[3] as a result of the oil spill. This was a job that would best be left up to nature.

Although trustees generally understood the difficulty of conducting any direct or active restoration, they seemed to have experienced a collective epiphany of sorts during a September 21, 1992 meeting. They had asked Spies to evaluate each of the 56 projects proposed for funding during the 1993 work season and Spies presented both written and oral reports.

The trustees had already heard that the Restoration Team collected 1,227 ideas for funding during the 1993 Fiscal Year. Those were culled down to 427 specific and distinctive project proposals.[4] After applying a set of criteria to determine appropriateness of the proposals, fewer than 100 were left. Eventually, the Restoration Team passed onto the Trustee Council the top 56 proposals incorporated into a draft work plan. The independent chief scientist reviewed the proposals and came up with a simple scoring system for discussion purposes only.

He rated each project from 1 to 4, with "1" being the highest score. A "1" meant that the project would contribute directly to the restoration of injured species with a high probability of success. A "2" meant the project might help in restoration of the injured species through management actions or a better understanding of the nature of the injury, or that it documented the course of recovery. Projects designated "3" had a low probability of contributing to recovery and "4s" were inappropriate for funding because they did not contribute to the recovery of injured resources. He also designated projects with an "E" if they were meant to enhance natural resources, but were unrelated to the recovery of injured resources.

Before Spies could give his oral presentation, trustees began peppering him with questions. They all had the same thing on their minds. Why, they asked, was there not a single project with a "1" designation? Out of 56 projects, culled from 1,227 original ideas, there was not a single project that would "contribute directly to the restoration of injured species with a high probability of success."

"It's kind of a philosophical point," Spies responded, " . . . that nature is doing most of the work . . ."[5]

"I think that we all recognize that natural recovery is a very potent tool in this process and that many times we're really working kind of around the edges

of nature here," he said. "Nature's really doing most of the job, and I try to make that point in how I've approached this whole package."

The trustees were "uneasy" with Spies' assessment of the restoration potential, but they were also attentive. Under questioning, Spies argued that direct restoration actions were very limited. "I think there are things that we can do in terms of regulating harvest and protecting habitat and other sorts of management actions that could assist nature in its recovery," Spies said.

Trustee Steve Pennoyer, who served as chair of the meeting, summed up the day's revelation. "So you haven't ruled out restoration," he told Spies, "but I think you have maybe put a factor in front of the Trustee Council, that we're going to have to deal with the question of equivalent services, resources, and enhancement at some point – a policy standpoint – because we're not going to plant so much beach grass that we're going to restore beaches . . . in a very meaningful way."

The Trustee Council's research and monitoring efforts, therefore, like its habitat programs and its general restoration projects, are not directly connected to restoration at all, at least not in an active sense. Instead, they are designed in an overall plan to assist nature in restoring the environment, protect the region from further injury, improve resource management decisions, and enhance the services of commercial fishing, recreation, tourism, and subsistence.

Archaeology is a strong case in point. Nothing can ever be done to restore the damage to archaeological sites. Looted artifacts will never be returned and damaged archaeological sites can never be returned to pre-spill conditions. Direct restoration of this spill-related damage is not an option. Yet, museums and exhibit cases can be built to display artifacts recovered from those sites. Repositories can be established to properly care for and restore artifacts. Village programs can be founded to watch over and protect uncovered archaeological digs. Indirect restoration can go a long way toward healing the wounds of the Alaska Native community that was injured and insulted by the desecration of these ancestral sites.

Under Spies' simple scoring system, each of the archaeology projects would receive an "E" designation, for the "enhancement" of resources and human services. The term "enhancement" does not appear anywhere in CERCLA or NRDA regulations. It is, however, part of the foundation of the Exxon settlement and the Governments' Memorandum of Agreement.[6] "Enhancing" was inserted into the trilogy of "restoring, replacing, or acquiring the equivalent of" at the insistence of Governor Wally Hickel, who believed it would open the door to better address the restoration of human services. Environmentalists and politicians seized on the word as another reason to reject the first settlement agreement. They saw it as a poorly disguised attempt to use the money to build capital improvement projects or economic projects for communities.

Focusing in on "restoration"

If restoration is the ultimate measuring stick for success of the science program, then it will likely be decades before a final analysis can be made of its effectiveness. Restoration does not adhere to a clear definition that can be followed strictly. Professional groups have organized – complete with dedicated journals – to analyze, understand, and define the word.

Rather than use the NRDA definition of restoration, the Trustee Council must interpret the definition found in the Governments' Memorandum of Agreement, which dictates how the civil settlement can be spent.

It's both confusing and bothersome that in the MOA, "restoration" includes "restoration" and "restore" is defined by the word "restore." Like two mirrors facing each other, a word defined by that same word can reflect itself without end and without leading to a conclusive definition. It opens the door for advocates to promote tourist attractions and hatchery bailouts as "economic restoration;" or teachers to seek funds for "restoration education" in the schools, libraries, and museums; or spill-wary residents to advocate spending the money on prevention as a form of restoration-before-the-fact. It forced the Trustee Council and attorneys to continually make that judgement as to what applied and what didn't. And, for many years it kept the public frustrated, many unable to understand what was and what was not appropriate for restoration funding.

In CERCLA, restoration refers to "actions undertaken to return an injured resource to its baseline condition, as measured in terms of the injured resource's physical, chemical, or biological properties or the services it provides." The regulations specify that restoration falls into three categories: direct restoration, replacement, and acquisition of equivalent resources. [7]

When CERCLA was adapted in the MOA, restoration was defined similar to the regulations, except it says that to restore means "any action that endeavors to *restore* to their prespill condition" and so on. In addition, the MOA said that restoration fell into five categories: injury assessment, *restoration*, replacement, enhancement, and acquisition of equivalent resources. Significantly, it no longer refers to "direct restoration" and adds "enhancement" and "assessment" as categories.

As Spies pointed out, there were very few opportunities for direct restoration or replacement following the *Exxon Valdez* spill. When the MOA was drafted by federal and state attorneys, it is likely they were already aware that the CERCLA categories of direct restoration, replacement, and acquisition of equivalent resources were too limiting for a spill the size and scope of the *Exxon Valdez*. The terminology chosen may result in some confusion, but it also allowed significant steps to be taken that may otherwise have been thwarted under a more strict definition of the word.

It has been noted occasionally that a good description – although, not a

definition – of restoration under the Trustee Council was that restoration could routinely be found at the point where science and politics met. It was not a fixed point, but one which constantly moved up and down a scale of need and desire. Rather than science being the sole driver of public policy, the science program often responded to political and public pressures. This does not mean that the science itself was tainted by politics, but it does mean that the program adapted itself to fit the desires of the public as much as it responded to the population dynamics of nature. This proved to be an interesting and often useful marriage, with stakeholders playing significant roles in scientific planning and communities originating ideas for projects funded through the annual work plan.

In most cases, this mix of desire and need has resulted in an improved and useful scientific program. Pressure from the commercial fishing communities, for example, resulted in the first ecosystem study and greatly broadened the scope of restoration science. Likewise, Alaska Natives fought for more subsistence and community help (see Chapter 6), eventually receiving funds for projects once considered on the cusp of restoration. Certainly, as will be seen later in this chapter, the building of the Alaska SeaLife Center, the single costliest item under the science program, was due more to political rather than scientific persuasion. Also, as will be seen later in this chapter, the central questions surrounding recovery – how clean is clean, how do policymakers determine when recovery is underway or complete – rose to a point of public debate that, for the most part, helped scientists, managers, and stakeholders better understand the complexity of the issues involved.

Agency conflicts of interest

The early decision to utilize trustee agencies rather than create an independent office meant that the entire restoration program was created and steered by the same agencies that received most of the funding. There was no watchdog, other than the trustees themselves and, later, members of the Public Advisory Group, to ensure that research projects were necessary and that spending levels were appropriate. In the beginning the agencies were doling out restoration money to themselves with little in terms of policy to guide them. There is little evidence in the public record that indicated this self-regulating system was abused, but there is plenty of evidence that the public (and even the trustees themselves) did not trust the system and perceived that agencies were siphoning off restoration funds to pad their budgets.

In its first public report to the Trustee Council, the Public Advisory Group asked for an independent review of the science program, based on the appearance that agencies were being "double funded." When asked what this was based on, PAG Vice Chair Donna Fischer said the group had no specifics to offer, just a general feeling that the Trustee Council was paying employees who were already funded by agencies.[8]

Meshing six agencies into a Restoration Team with a half-dozen work groups meant that most of those agency employees were working full time for the restoration program, yet were paid by their agencies. Restoration funds were transferred to the agencies to cover those salaries. The same was true for agency scientists doing restoration work. Funds were transferred to the agency to cover salaries, overhead, travel, equipment, and any other expenses associated with the study. The appearance of "double dipping" and, in fact, the public expectation that these funds would be abused, was a predictable outcome of this agency-dominated process.[9]

As noted in earlier chapters, the Trustee Council tried to make a statement that it would be a tough watchdog over the agency scientists and administrators when it met to approve projects for the 1992 field season. The council rejected $30 million in proposed studies and asked Spies, the only non-agency scientist overseeing the restoration effort, to review the proposals and provide his recommendations. The trustees were in agreement that the pricetag for the year's research was too high, but it was Charlie Cole, the only trustee who was not in charge of a research agency, who led the charge. He predicted that such a budget would lead to public criticism that government agencies were "ripping off settlement funds."[10]

"If you look at these budgets and where the money is being spent, every one is a government agency," Cole said.

He did not have to wait long to be proven right. The following day, the two Anchorage newspapers were full of such criticism, even though the trustees rejected the spending plan. The Anchorage Daily News editorialized that the proposed budget was "just a bureaucrats way of grabbing money for ongoing operations" and that agencies were "go(ing) overboard on the studies and giv(ing) short shrift to (environmental) healing."[11]

Particularly galling to the trustees was that the '92 Work Plan involved 31 damage assessment studies and only seven new restoration projects. They felt that it was time to end the damage assessment phase and enter into a new era in which restoration rather than litigation was the ultimate goal. With that in mind, the chief scientist returned with a recommendation to close out most of the damage assessment studies and place almost everything else on the shelf for one year.

"We've been gathering data at a rate faster than we can analyze it . . .," Spies told the council.[12]

Spies then recommended that the science program slow down, take the following year to wrap up damage assessment studies, and figure out a monitoring program that makes sense for the resources. "(H)opefully, we'll be able to proceed in a little bit more studied and deliberate fashion," he said.

Spies' report dramatically changed the role of chief scientist from a passive advisor to the Restoration Team into a much more active player reporting directly to the Trustee Council. This was made possible only because the chief scientist

was an outsider with no political power or political connections, according to Andy Gunther, who worked side-by-side with Spies over the years as his deputy. Spies' independence led to faith in his objectivity about the direction of the science program. As Spies' influence with the Trustee Council grew, so did the animosity between the chief scientist and several agency scientists and planners. Spies clearly showed he had power over budgeting matters and this created a friction with some that exists to this day.[13]

During the following year, the trustees addressed three substantial issues, each founded in the desire for an effective science program that had the confidence of the public and the respect of the scientific community. To achieve this they had to 1) stop funding agencies for projects that should be part of that agency's normal duties, 2) create a system that invites non-agency scientists to submit proposals and compete for funding, and 3) create a core group of independent peer reviewers who not only reviewed proposals, but helped set the overall direction of the science program.

Normal agency management

The trustees were very aware that there had to be a clear line between funding restoration which benefited injured resources, and normal agency management, which also benefited injured resources. If the restoration fund paid for agency duties that normally would be covered by state or federal funding, then the worst fears of the public would be realized. The civil settlement would become nothing more than a subsidy for state and federal agencies that were continually fighting budget cutbacks.

Was it the normal job of the Alaska Department of Fish and Game to monitor pink salmon stocks in Prince William Sound, for example? Would the U.S. Department of the Interior routinely monitor populations of common murres had the spill never occurred? Certainly monitoring of killer whales would normally be funded through the National Marine Fisheries Service, but how often and to what extent?

The funding of normal agency management quickly became a hot issue with the Trustee Council. It resulted in what became one of the prime policy statements in the Restoration Plan.

"Government agencies will be funded only for restoration projects that they would not have conducted had the spill not occurred."[14, 15]

Despite the clarity of the statement, the effectiveness of the policy has been less than clear. The General Accounting Office report released in August 1993 criticized the council for not adhering to this policy.[16] It cited two specific projects as examples of restoration funding that should have been carried out under the normal agency programs. When the GAO again audited the restoration program in 1998, auditors reiterated their concerns and pointed to the same two projects to

prove their point. What the GAO saw as questionable, the Trustee Council saw as legitimate and over a five-year span, neither group had changed its mind.

Members of the public frequently had similar criticisms and the PAG formally asked the Trustee Council to develop a definition of "normal agency management" so that everyone could recognize that line before it was crossed. Interior Trustee Deborah Williams said that line was "fuzzy" and noted that the public perceived the trustee agencies to be "feathering our nests." Department of Law Trustee Craig Tillery argued that funding normal agency management was not just unethical, but also illegal under the provisions of the settlement.[17]

The Restoration Plan says "(t)o determine whether work would have been conducted had the spill not occurred, the Trustee Council will consider agency authorities and the historic level of agency activity."[18] Despite work sessions involving agency personnel, representatives from the PAG, the independent restoration staff, and chief scientist, no better definition was ever forthcoming – at least not one everyone could agree on.

"There's no way to avoid making a judgement call, which still has a substantial subjective element to it," Science Coordinator Stan Senner reported back to the trustees. "(A)gencies have mandates but don't necessarily have funds to carry out those mandates. Thus, defining what is 'normal' and what is not with respect to the oil spill just simply is not a clear-cut decision."[19]

Improving scientific competition

Early in the development of the science program, the Trustee Council also recognized that the scope of the research needed to be broadened to include projects conducted by non-agency scientists. A competitive scientific process would improve the restoration effort and provide another way the council could insulate itself from accusations of agency favoritism. If independent researchers could put together a more cost-effective package or a better methodology for study, the reasoning went, then they should receive the funding instead of a trustee agency.

This proved more difficult than anticipated. When dealing with agency proposals, the Restoration Team often meshed two or more ideas into one project, thereby saving money, time, and resources. The communal nature of the proposals was worked out within or between agencies. But when private proposals were added to the mix, the transformation of two or more proposals into one project became an issue of a proprietary nature. Private proposers were not happy about their ideas being "stolen" and added to a project carried out by an agency. Individual scientists argued that proposals should be given proprietary treatment, but the Restoration Team refused such guarantees. In fact, private proposers were warned that their ideas might get stripped and used elsewhere.[20] This was not only unfair and perhaps unethical, they argued, it was also self-defeating because it discouraged non-agency scientists from submitting proposals.

While proposals for the 1993 field season were being reviewed by the Restoration Team, Spies wrote a letter that urged the Trustee Council to address this issue. He told the trustees that during years of litigation-sensitive damage assessment studies, many qualified investigators were unable to participate in the process.

"It seems to me, now that the litigation has been settled and we have moved into restoration, that there is an opportunity to potentially increase the quality of some aspects of the work we do through costs and increased public participation. This change would also greatly benefit the agencies as the competition would insure that the greatest emphasis would be placed on competence and quality of the natural resource work being done. Open competition would also greatly encourage the timely completion of reports and publications, which have not received the attention they deserve in many instances." [21]

Weeks later, when the Restoration Team presented its recommendations for funding during the 1993 field season, co-chair Jerome Montegue addressed the issue. He noted that 50 projects were recommended for funding and that they represented a conglomeration of 110 agency ideas and 31 private ideas. "A lot of these ideas are combined," he said, "and there's some projects that are all agency and some originated from an agency and a public idea, and so on and so forth." [22] Nevertheless, about one third of the work plan money would be spent outside the agencies, he said.[23] He was not clear, despite a direct question from Pennoyer, whether outside researchers would get one-third of the money or if he was referring to boat charters and other research support that would be handled by private enterprise.

After an independent office was set up to manage the restoration program, executive directors Ayers and McCammon shopped around for a mechanism for getting money to the private sector. They found the best such avenue through the National Oceanic and Atmospheric Administration. As part of its annual solicitation for proposals, the Trustee Council now issues a Broad Agency Announcement (BAA), inviting private organizations, non-profit groups, and universities from outside Alaska to submit research and monitoring proposals through NOAA. Non-agency proposers can then contract through NOAA to receive funding for restoration projects. The Restoration Office eventually gained new authority, as a federal-state cooperative, to issue contracts directly to private proposers. This new authority allowed the council's annual "Invitation for Proposals" to meet the competition requirements of state procurement laws.

Audits have shown that the slice of the annual budget going to private contractors increased every year from 7.6 percent in 1992 to a high of 51.5 percent in 1998.[24]

Independent peer review

The third and, perhaps, most important step in establishing a strong science

program was also addressed in Spies' letter. "To encourage participation by highly qualified individuals and firms, independent review of the proposals is essential," the chief scientist wrote. "Presently, the Restoration Team is voting on which proposals will be recommended to the Trustee Council. The members of the Restoration Team are representing agencies that themselves have proposed projects, and are clearly not without real and perceived conflicts of interest. Several independent investigators have indicated to me they are skeptical about the outcome of the process."

Peer review has always been considered an essential element of the pre-settlement and post-settlement science programs.[25] But, it was constantly debated how peer reviewers should be used. During the litigation phase, peer reviewers saw only bits and pieces of the damage assessment work depending on their expertise. They had little to do with planning an overall ecosystem effort or reviewing proposals prior to funding.

After the Exxon settlement, the litigation-based cloak of secrecy was lifted. At that point, the research program became an open book for scientists of different disciplines to review together and make recommendations. This enabled peer reviewers to get more involved in a broader, more ecosystem-wide review. But, the process had its limitations. Peer reviewers in August of 1992 had only three days to review projects forwarded to them by the Restoration Team and they only saw those proposals that the Restoration Team wanted them to see.

The inadequate peer review was one more piece of evidence that convinced the trustees that reliance on agencies funding themselves was not going to work if the public and the political and scientific communities were going to have confidence in the process. During the debate on the 1993 Work Plan, Cole provided this inevitable conclusion: "I think we need in the public process a mechanism to satisfy ourselves and the public . . . that this selection of projects . . . is not solely driven, unduly driven by agency personnel." [26]

The hiring of an executive director and an independent staff effectively resolved this issue, but even then, Jim Ayers added important steps to boost confidence in the process. Instead of a laundry list of peer reviewers, each seeing only those projects that were related to his or her area of expertise, Spies put together a smaller core review team that gathered together each spring in Anchorage to review all proposals. In this way, reviewers expanded their narrow views of the restoration program to see the *big picture* and envision how a coordinated science program should be structured and carried out.

It is the core review team, not agencies, which looks at the entire breadth of proposals and make the first cut, considering the quality of the proposals, ability of the proposers, funding limits, and the restoration needs for that year. This improves the overall direction of the science program.

When a draft work plan is presented to the Trustee Council, it includes a brief

written statement by the executive director as to her recommendations based on peer review, staff input, and PAG and public input. Side by side with the executive director's comments is a separate recommendation provided by the chief scientist, based on his expertise and that of the core review team. The juxtaposition of the two recommendations, whether they concur or not, goes a long way toward eliminating speculation that agency trading is taking place.

The Injured Resources list

Those species that are considered injured by the oil spill are presented in a matter-of-fact style in a list of injured resources and services. The list itself is mostly a communications tool, designed to show the public in one quick glance which species suffered the most injury and are the focus of the restoration program. It is backed up, however, by years of NRDA and restoration studies, and is accompanied by a written explanation of the known injury, how the resource has improved (or suffered) over time, and specific objectives for recovery.

When the Trustee Council seeks proposals for research and monitoring projects, it asks specifically how each project helps one or more of the listed injured resources recover. When a tract of land is acquired for protection, the move is justified primarily by how it improves the chance for specific species, other resources, and the designated human services to recover. The list is a driving force for the entire restoration program. It is expected that over time, each resource on the list will move from the categories of "not recovering" to "recovering" to "recovered" and in doing so, restoration will be complete.

It provides a linear picture of recovery in a neat little package. But, nature is rarely so accommodating. The obstacles on the path to recovery are many, and understanding them relies on research, monitoring, and interpretation. The list itself is as much a creation of policy and politics as it is the end product of scientific research. Scientists, resource managers, and the public have learned to accept the list, but not without substantial reservations. It is disliked by many, either for what it includes or what it leaves out.

"It starts with a bias because it includes only those species that were studied," says Charles "Pete" Peterson, an ecologist with the University of North Carolina and a long-time core reviewer of restoration science.[27] This goes back to the criticism of NRDA studies, which focused on the more charismatic apex species rather than the largely unseen fish, invertebrates, plankton and other species forming the base of the food pyramid. He suggested that two forage fish, capelin and sand lance, should each be listed, along with scoters and goldeneye ducks, which feed off invertebrates along the shore. The forage fish were left off the list because they were never studied, he said. But, the ducks had a known injury (several hundred were found dead) and studies on chronic injuries were inconclusive.

Limiting the size of the list, Peterson asserted, effectively narrowed the number

of avenues in which money could be spent on research. This, he argued, favored the government agencies, which wanted to focus on those species within their management scope.

At the same time, the list includes species or resources that cause many to shake their heads, either in disagreement or confusion. Dolly Varden and cutthroat trout, anadromous fish that live in freshwater streams and occasionally venture out into saltwater to feed, were each included despite no known mortality and no known population decline. Researchers did detect reduced growth rates in fish from oiled streams although they did not detect a population loss because of it. Geographic and, possibly, genetic variation could play roles in the different growth rates, leaving many (including Exxon) to wonder why these fish made the list.

Rockfish are on the list even though so little is known about this long-lived bottom feeder that the original extent of injury and any possible recovery objective remains unknown 13 years after the spill. The listing was based on the necropsies of a small number of fish, which determined that oil was the cause of death. It was also thought that the closure of salmon fisheries during the summer of 1989 increased the fishing pressure on rockfish. One Alaska Department of Fish and Game researcher told me: "We really thought rockfish were injured, but we couldn't prove it. We all felt they were injured but didn't know how, how many, and to what degree." Nevertheless, rockfish made the list.[28]

Many species with similar unknowns, such as sea lions, black-legged kittiwakes, glaucous-winged gulls, scoters, goldeneyes, and some shorebirds were left off the list.

Designated wilderness areas made the injured resources list even though they aren't technically resources at all, but political designations. A designated wilderness provides the greatest protection Congress can offer our most cherished lands. Although roads and trails and improvements can be built inside public parks and, to a greater degree, public forests and refuges, wilderness areas generally are meant to stay wild with no human intervention. The oil spill violated that principle first by drenching some beaches in oil and then through the relatively intense cleanup effort that followed. Still, it is not a resource. If designated wilderness is on the list, then why not national parks or state parks? After all, the oil spill violated the sanctity of those areas as well.

Wilderness as an injured resource was included in this agency-run restoration system because the National Park Service insisted on it, said former science coordinator and restoration planning chair Stan Senner.[29] Senner wrote much of the 1992 Restoration Framework, which was the first listing of injuries in a Trustee Council document. He took most of his information directly from the Summary of Injury filed in federal court in conjunction with the settlement with Exxon. Wilderness is mentioned in the Framework under the context of "passive use" as an injured human service, but not as an injured resource. By the time the Draft

Restoration Plan was published in November 1993, it had made the jump to an independently listed injured resource.

If the injured resource list had been formed under the czar system that evolved under an independent executive director and chief scientist, Senner says he has no doubt that the list would have been smaller. On the other hand, he said, "I think if the public had its way there probably would be a lot more on that list."

And the public might very well be right, Senner added. The list, as noted in the Restoration Plan, is not intended to be fully inclusive of all the injured resources. In a perfect scientific world, which provided baseline data for all species and unlimited funding to determine actual injury, Senner said he wouldn't be surprised if 50 species or more would have shown sufficient injury to be listed.

Recovery and objectives

Recovery of the injured ecosystem is most often stated in conceptual terms. Under one popular definition, repeated in the Restoration Plan, recovery will be achieved when the injured ecosystem is returned to the condition that would have existed had the oil spill never occurred. Another often-stated goal, taken directly from NRDA regulations, is to return the injured ecosystem to its baseline or pre-spill condition. The first recovery goal is looking forward, the second looking back. Neither one is, by itself, defensible.

Cole once referred to these concepts of restoration as "mission impossible" and the Trustee Council agreed amongst themselves that such endpoints would be unrecognizable, impossible to measure, and therefore, unachievable.[30] Without sufficient baseline data it is impossible to ascertain the pre-spill condition of Prince William Sound. And without a crystal ball, it is only guesswork what conditions would have prevailed had the spill never occurred.

An ecosystem is dynamic – always evolving – and natural change continues in the midst of a human-caused trauma such as an oil spill. It blurs the picture. One point often overlooked is that the effects of the spill are "added to and interact with" the effects of natural change.[31] Species that were experiencing declines before the spill are likely to continue losing population after the spill. Yet, scientists are expected to determine to what degree the decline was exacerbated, if at all, due to the oil spill. These questions complicate the injury assessment of harbor seals, marbled murrelets, pigeon guillemots, and other species thought to be in decline prior to the spill. Likewise, a species suffering a natural die-off may be less resilient and have a more difficult time bouncing back due to earlier oil spill mortalities or chronic impacts. Common murres and Pacific herring both suffered post-spill population collapses. The lack of understanding how human-caused injuries mesh with natural or cyclical declines means that standards for recovery cannot be based solely on pre-spill numbers or speculative population projections.

In an effort to address this, the Trustee Council settled on an overly simplistic

programmatic restoration goal – recovery of all injured resources and services – which, by itself, would be unmanageable. But, it is backed up by measurable objectives for most of the injured species, allowing recovery to be gauged through scientific observations. Each injured resource was given its own measuring stick, keeping in mind the depth of injury and the available pre-spill data on that species. Most of these recovery objectives included indicators that would show that recovery was progressing.[32]

Population. Whenever possible, recovery objectives are rather straight-forward, relying usually on population levels. Bald eagles, for example, had a simple recovery objective, to return population and productivity to pre-spill levels. There was enough pre-spill data to set the standard and routine monitoring allowed researchers to evaluate their progress toward this goal. The bald eagle, with an oil spill death toll estimated at 250, became the first of the injured resources to be declared "recovered" in 1996.

When prespill populations are unknown, the objective calls for comparing populations in oiled areas to that of unoiled areas. Clams, intertidal communities and subtidal communities use such objectives.

Other resources using population levels as the primary recovery objective are black oystercatchers, common loons, all three species of cormorants, harlequin ducks (in part), killer whales, and sea otters (in part).

Productivity and population trends. Evaluating the recovery of the common murre is somewhat more problematic. Nearly three-quarters of the 36,000 bird carcasses found after the spill were common and thick-billed murres, most of them from the Barren Islands at the mouth of Cook Inlet. Poor baseline data and a suspected pre-spill decline of these cliff-dwellers made recovery objectives less straight forward. In addition to population, the objective focused on "reproductive timing and success" to determine recovery.

In January 1998, the most exciting news circulating through the annual Restoration Workshop sponsored by the Trustee Council, was that common murres had made a robust comeback. Spies spoke hopefully that common murres would be, perhaps, the second species to meet its criteria for recovery. But, in one of those natural perturbations that "add to and interact with" oil spill injuries, common murres suffered a setback that same year when a strong *El Nino* disrupted weather patterns in the northern Pacific. Nesting failed dismally and the carcasses of many murres washed up on shore throughout the spill region. As a result of this setback, common murres remained listed as "recovering" until that species finally met objectives and was declard recovered in 2002.

Increasing or stable population trends are also the main recovery objectives for harbor seals, marbled murrelets, Pacific herring, pink salmon (in part) and pigeon guillemots.

Impacts of oil exposure. Some recovery objectives are specific to oil exposure.

River otters became the second species to be deemed recovered in 1999 because they no longer showed any signs of hydrocarbon exposure or other stresses when comparing oiled areas to non-oiled areas. Harlequin ducks, sea otters, and pink salmon have similar aspects to their recovery goals. Mussels will be considered recovered when concentrations of oil in mussels and in the sediments beneath mussel beds reach background levels and do not contaminate predators. Sediments and designated wilderness areas will have recovered when there are no longer residues of *Exxon Valdez* oil on shorelines.

Objectives unknown. Other species have no recovery objective at all. There is so little scientific information about rockfish and Kittlitz's murrelets that no recovery objective could be identified.

Recovery of salmon

Determining appropriate recovery objectives has not always been easy or without controversy. The two injured salmon species – pinks and sockeyes – have very specific recovery objectives, complicated by the fact that evaluations must be based partly on the return of adults to affected rivers and streams. For pinks, it requires a two-year cycle in both even and odd years to evaluate the number of returning adults. Sockeye require a five-year cycle to determine success.

When the Trustee Council updated the injured resources and services list in 1999, Spies and Senner, based on input from research scientists and peer reviewers, recommended that pink salmon be elevated to the "recovered" listing, although they said such a move was "clearly a judgement call."[33] Likewise, they recommended that sockeye salmon remain on the "recovering" list, even though it could also be argued that these salmon had, in fact, recovered. Neither salmon species had technically passed the test of time, based on the published recovery objectives. However, in both cases, they felt the recovery objectives may be too stringent, making recovery overly difficult or impossible to achieve.

Most sockeye salmon return to their streams of origin five years after they hatch as larvae, but they can return as early as three years or as late as seven years. This meant that in 1999, all of the adults from the 1993-1995 brood years had not yet returned, although all indications were pointing toward full recovery. "(W)e have difficulty in pointing to anything going on in the Kenai system and at Red and Akalura lakes[34] that would point to any lingering effect of the oil spill," Senner told trustees. "Certainly we think a 'recovering' category is appropriate, but one could argue that recovery has been achieved and it's simply a judgement that can be made."

To be considered recovered, pink salmon had to have growth and survival rates within normal bounds and no statistically significant differences in egg mortalities in oiled and unoiled streams. These criterion had to be sustained for two years each of odd- and even-year runs in Prince William Sound. Senner explained that

oil impacts were detected through the 1994 season, but that no impacts were found in the odd years 1995 and 1997 and during the even year of 1996. Surprisingly, in 1998, the final year required to meet the recovery objectives, some abnormalities were detected in some oiled streams. Scientists had no concrete explanation for this sudden reappearance of egg mortalities in oiled streams. They theorized that it could have been the result of a particularly strong winter storm that released some previously entrenched oil back into the streams. Senner said that such storm-induced releases of oil are likely to continue for many years, but would affect relatively few of the 1,200 salmon streams in Prince William Sound.

"The problem we now have is even if there is some weathered oil in some patches that occasionally, in some years, are exposed in the intertidal spawning areas, causing some impact on pink salmon, our sense is that the duration and scale and number of these events is so limited that the impact on a population level is simply going to be negligible," he said.

"Strictly speaking, that recovery objective had not been met because we only had three consecutive years of no differences in egg mortality, not four," he added. "But, we felt . . . when you stepped back from the specific recovery objective and looked at the larger sort of population level, we felt an argument was to be made for declaring the species recovered."

"This may be a situation where we had a recovery objective that was so specific that, in fact, it could never be achieved."

It's important to remember that the Trustee Council was to vote on this update in February, 1999, just six weeks before the 10th anniversary of the oil spill. Worldwide media attention was already mounting and much of it was focused on the continuing financial troubles of the Cordova fishing fleet and the irascible battle between 18,000 private plaintiffs and Exxon over the $5 billion jury award.[35] It was not in the interests of private plaintiffs to have sockeye or pink salmon upgraded to recovered just as they were trying to put media pressure on Exxon to pay up over injuries to those species and their livelihoods.

With such political considerations in the background, the Trustee Council took safe harbor in the established recovery objectives. Trustees were not willing to upgrade the status of any species in which recovery objectives were not met. They did, however, upgrade the status of Pacific herring from "not recovering" to "recovering," even over the objections of some Prince William Sound residents. Two years of small commercial harvests of herring in Prince William Sound, after three years in which populations were so low that commercial harvests were cancelled, made it hard to argue that some recovery wasn't underway. Just two months after this upgrade in status, the Pacific herring population in Prince William Sound again collapsed and commercial harvests were again cancelled. (See pages 207-209 for more on Pacific herring.)

The 2002 Update of Injured Resources

Three years later, Spies revisited the list of injured resources and recommended sweeping changes, including the designation of pink salmon and killer whales to the plateau of "recovered."

Under Spies' plan, released in April 2002, the "recovered list" would have swelled from two species to nine, with black oystercatchers, common murres, pink salmon, killer whales, subtidal communities, sockeye salmon, and archaeological resources all reaching the ultimate designation. He also recommended that harlequin ducks be moved up and designated wilderness moved over to the "recovering" list.[36]

Predictably, the recommendations placed the Trustee Council, once again, in the position of determining policy from a mix of scientific and public arguments over what defines recovery. Public opposition to Spies' report was not overwhelming, but it was well represented, with a mix of environmental organizations, Prince William Sound residents and users, and research scientists arguing against one or more of his recommendations.

Topping the controversy was the leap made by killer whales from the lowest rung of "not recovering" to the highest designation of "recovered," even though the population had increased by only one member over the previous three years. Among the many critics of the proposed change was Craig Matkin, the mammalogist who has been studying the AB pod of killer whales for 20 years. Matkin told the Trustee Council that designating killer whales as recovered gives the public the message that oil spill injuries have been overcome, when in fact, there has been only minor progress in terms of population growth.[37]

The injury to killer whales, also known as orcas, can be an emotional one for many observers of Prince William Sound. Prior to the spill, the AB pod, a well-studied family-like group of 36 killer whales, was commonly seen by kayakers and other boaters in the sound. Six days after the spill, scientists witnessed the pod swimming through oil slicks. When it was next seen, seven whales were missing, including three adult females and four juveniles. The following year, six more whales from the pod disappeared and were presumed dead, including four more juveniles and an adult female who left a calf . Three more orphaned calves would die in subsequent years. The injury is considered circumstantial, since no carcasses were found and, therefore, no necropsies were conducted to determine the cause of death. Yet, the preponderance of evidence points toward oil spill injury.[38]

Spies, it should be noted, has always been skeptical about claims that oil is responsible for the disappearance of 13 killer whales. "I have never found the evidence that killer whales were negatively affected by the spill very compelling," he told trustees in a written memo. "No one has ever been able to put forth a convincing argument on how whales in 1989 could be dosed with enough fresh

oil to kill seven members of the AB pod, let alone an additional six individuals in 1990 when there was virtually no floating oil."[39] Spies consistently expressed this scientific skepticism during the early days of the Trustee Council, but accepted the listing of killer whales as a policy decision and an appropriate precautionary measure.

At the time of Spies' elevation of killer whales to "recovered," the AB pod was back up to 26 members – hardly a "return to prespill conditions," as most everyone, including Matkin, expected. But, Spies was following a new recovery objective for killer whales that was established during the previous update of injured resources in 1999. At that time, the council lowered the standard for recovery of the AB pod. Instead of returning to its prespill population of 36 members, the AB pod would be considered recovered "when the number of individuals in the pod is stable or increasing." The text of the recovery update in 1999 said: "If the calves born since 1992 survive and if additional calves are added to the pod over the next two or more years, the requirements for recovery will have been satisfied."[40] Based on this criteria, Spies' recommendation is unarguably correct. The real argument from Matkin and the rest of the public, however, turned on whether the new objective was fair. Matkin had signed off on the change of objectives in 1999, but in 2002 said he had no memory of the change and strongly disagreed with it. Several people testified and wrote letters saying that the objective was wrong and sent the wrong message to the public and to Exxon that the AB pod is back to normal. Many residents of the sound testified that they rarely see the pod anymore.[41]

The trustees did not appear to be hesitant with this issue. They too seemed surprised at the low level required for recovery and voted to return the killer whale to its original recovery objective. Based on the stability of the pod, however, trustees did move killer whales to "recovering" status.

Although killer whales dominated the debate, the public had other disagreements with Spies' report. Many expressed dismay that Pacific herring were not downgraded to "not recovering," considering the collapse in the population since the 1999 update. Others, including the principal investigator on harlequin duck research, thought that moving that species up on the list was premature. And many argued that wild pink salmon and black oystercatchers should not be upgraded to recovered because some salmon streams and shoreline remained oiled.

After months of public testimony and comment, the Trustee Council adopted Spies recommendations, but with four exceptions. Harlequin ducks remained as not recovering. Killer whales were upgraded, but only to the recovering category. Pacific herring was downgraded to not recovering. And subtidal communities were moved laterally to recovery unknown. Although Spies did not recommend the downgrade of herring, he told the council that such a move would be justified.[42]

Subtidal communities, which represents the plants and animals (but not the

sediments) below the lowest tide level, was moved to the recovery unknown category due to a lack of clear information about its status. The council made the move despite Spies' discomfort. He cautioned that scientific clarity was rare when it came to the status of injured resources and, therefore, scientific judgement comes into play. Most of the injured resources could be placed in the recovery unknown category, he said, "because there's questions about every one of these sorts of things. There's judgement brought to bear on every one of them." [43]

In a memo responding to issues brought up in public testimony, Spies cautioned the Trustee Council about the risks of requiring too much scientific evidence before upgrading species along the recovery line. "Many of the comments from the public express a wish not to change resource status unless there is incontrovertible evidence of recovery and no remaining doubt," he wrote. "At the other end of the spectrum, continuing to list a species as injured in the absence of a reasonable body of evidence runs the risk of a potential loss of credibility with the scientific community and other members of the public."[44]

In public testimony, several members of the public recommended that many species be moved into the "recovery unknown" category because, in truth, recovery never will be known. Trustees, like almost everyone else, expressed interest in creating a better system with more precise categories. McCammon reminded them, however, that previous such efforts have not resulted in any better system.

The recovery line

Movement of injured resources along the recovery line was itself controversial, mostly because the categorization was so simplistic that people were wary of it. The categories start with "not recovering," meaning little or no progress was being made toward established objectives. On the opposite end of the spectrum was the "recovered" category, meaning objectives had been achieved. Both categories require little explanation. But, the big space in the middle known as "recovering" carries with it a great breadth of interpretation. Pacific herring, for instance, may have just inched into the "recovering" category while sockeye salmon were a judgement call away from being "recovered." That single category contains resources expected to remain there for decades and others that may be on the verge of full recovery from the effects of the spill.

Designation as "recovering" may give the false impression that recovery is well underway for that resource when, in fact, it may have barely begun. Many people were concerned that being upgraded to "recovering" would mean fewer research and monitoring projects would be funded to assist a species toward full recovery.

Mary McBurney, a member of the Public Advisory Group representing aquaculture, put it best when she questioned the upgrade of Pacific herring in 1999. "It's a much lower threshold for the herring fishery to suddenly be bumped off

Resources and Services Injured by the Spill

Updated August 2002

Photo by Kathy Frost

Harbor seal

Not Recovering

Species are showing little or no clear improvement since spill injuries occurred.

Common loon
Cormorants (3 spp.)
Harbor seal
Harlequin duck
Pacific herring
Pigeon guillemot

Photo by Craig Matkin

Killer whale

Recovering

Substantive progress is being made toward recovery objective. The amount of progress and time needed to achieve recovery vary depending on the resource.

Clams
Designated Wilderness Areas
Intertidal communities
Killer whale (AB pod)
Marbled murrelet
Mussels
Sea otter
Sediment

Photo courtesy State of Alaska

Sockeye salmon

Recovered

Recovery objectives have been met.

Archaeological resources
Bald eagle
Black oystercatcher
Common murre
Pink salmon
River otter
Sockeye salmon

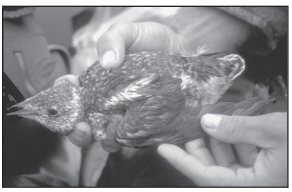


Photo by Gus van Vliet

Kittlitz's Murrelet

Recovery Unknown

Limited data on life history or extent of injury; current research inconclusive or not complete.

Cutthroat trout
Dolly Varden
Kittlitz's murrelet
Rockfish
Subtidal communities

Photo by Roy Corral

Recreation/Tourism

Human Services

Human services that depend on natural resources were also injured by the oil spill. These services are each considered to be recovering until the resources on which they depend are fully recovered.

Recreation & tourism
Commercial fishing
Passive uses
Subsistence

Figure 5.1. -- See also, Appendix E

the 'more critical we're going to pay more attention to it list' to the 'it's getting better so now we can go on to other things list,' " she told the council.[45]

At the same meeting, PAG member Chris Beck, representing the public-at-large, put the problem in a more public context. "I do think that the categories that these are placed in and the ways those are explained are incredibly important," he said. "There's going to be this one window at the 10-year anniversary, the world is going to lean in and ask the question of the group 'okay, what happened from the spill?' People aren't going to understand or want to hear about the subtleties, they're going to basically say in their minds 'ah, recovered, recovering' and be done with it and be on to the next subject on the nightly news. So the categories that are used, the way they're explained, the possibility we need more categories of different labels I think needs the closest, most thoughtful scrutiny it can get because people are going to not care about some of the nuances we talked about today. That one word (recovering), I think, is misleading given everything I heard today."

Beck was right. The list has become a scorecard, a way of reducing the long-term impacts from the spill down to one sentence. As any teacher can attest, the grades of A, B, C, D, and F are a poor means of measuring one's education. Likewise, the recovery list barely provides a hint of the true status of recovery for many species.

Despite attempts to clarify the definition of recovering, the world-wide media pretty much ignored the category altogether. Three weeks later, after McCammon and Senner presented the updated injured resources list to a standing-room only crowd of reporters at the National Press Club in Washington, D.C., news reports focused on the two of 28 injured resources considered recovered and the eight species designated as "not recovering" 10 years after the spill. The "recovering" resources were barely mentioned.

Opposition and scientific criticism

Just as some individuals, groups, and media were ideologically and politically opposed to the habitat protection program, the science program also had its detractors. They fell into two categories: those from outside the scientific community (usually proponents of habitat protection) who felt research was a poor use of the money and did little to contribute to restoration; and those who supported science, but felt the trustee program was poorly conceived, biased in interpreting results, and politically motivated.

An Alaska-based organization called the Coastal Coalition, which favored habitat protection over science, attempted over the years to discredit the *Exxon Valdez* research efforts, arguing that the Trustee Council was wasting tens of millions of dollars "harass(ing) the patients" in an effort to understand the "20 different ways oil kills a seal's brain." Such information might fill bookshelves and provide enlightened discussion among Ph.Ds, the group would argue, but it

did little if anything to restore the injured environment. "This sort of research in lieu of action is unconscionable," wrote co-founder David Grimes in an Anchorage newspaper.[46] "This science, if it's any good, will only tell us two things we already know: prevent oil spills and protect habitat."

And to add insult to this waste of restoration funds, they argued that researchers were doing more harm than good to the many animals that were captured, satellite-tagged, and tracked, some dying in the process and all of them undergoing stress perhaps comparable to the spill itself. Some of these arguments were based on an animal-rights perspective, but most were more ideologically centered on the definition of restoration and the proper use of settlement funds. The Coastal Coalition's other co-founder, Rick Steiner,[47] consistently called for a National Academy of Sciences review of the Trustee Council program. The trustees responded that they welcomed a review, but they would not pay hundreds of thousands of dollars to initiate one. The science program already had peer review on the level of the National Academy of Sciences, they said. Peer reviewers, after years of participation in the science program, were too close to the subject and were no longer objective about the program, Steiner countered.

The science program has never had the sort of review Steiner advocated. The General Accounting Office audited the restoration program twice and the National Research Council in Washington, D.C., had been involved in reviewing plans for a long-term research and monitoring program. Other environmental organizations closely following the restoration effort disagreed with Steiner's call for a review or an oversight authority. Such an idea would have been welcomed during the first few years when little appeared to be getting done, environmental groups told the Anchorage Daily News, but by 1995 policies and procedures were in place and progress was clearly being made on all fronts.[48]

Exxon's perspective

Criticism from within the scientific community came mostly from Exxon or from scientists who had contracted with Exxon. Exxon scientists challenged Trustee Council scientists in almost every finding involving either injury or recovery. This debate is both fundamental and philosophical. Exxon scientists often argued that poor methodology and misinterpretation of data led Trustee Council scientists to consistently find injury where none existed. Government scientists countered that Exxon tended to design studies in such a way that no injury would be found or that results would be inconclusive.

Such difference of opinion is grounded in the scientific principle of discussion, comparison, and debate. But, the Exxon and Trustee Council science programs also diverge onto two distinct philosophical paths. Exxon looks primarily at the overall health of large populations while the Trustee Council considers local populations as part of its criteria for recovery.

From its perspective, Exxon long ago declared the sound "recovered" because the population injuries of 1989 have been overwhelmed by regional population growth.[49] The populations of sea otters and killer whales region-wide, for example, are larger than they were in 1989. To the Trustee Council, however, neither species has recovered. The recovery objectives for killer whales, for instance, focuses specifically on the population of the AB pods. For sea otters to be recovered, the population in the heavily-oiled portions of Knight Island in western Prince William Sound must return to normal levels with no detectable chronic effects from the oil.

Critics of recovery based on localized impacts argue that it paints a picture of injury that simply is not true. They point out that the general public does not distinguish between sea otters surrounding Knight Island and those throughout the entire sound. Therefore to declare that sea otters remain injured, especially considering that natural variability will regularly create depressed localized populations, is neither fair nor accurate. More important to Exxon, perhaps, is that scientifically speaking the company does not believe injury continues, locally or regionally. To Exxon scientists, the evidence is simply not there to support such a conclusion.

Exxon's unwillingness to recognize localized impacts from the spill, however, has often been criticized as callous to the people who live in Prince William Sound. The national populace may not appreciate the difference between AB pod and other killer whales throughout the region, but frequent users of the sound who were used to seeing this group are well aware of the loss.

In a statement widely released around the 10th anniversary of the oil spill,[50] Exxon said: "It is Exxon's position – and that of many independent scientists – that there are no species in trouble due to the spill."

No one, of course, has ever claimed that the oil spill catapulted species into threatened status. The Trustee Council is adamant, however, that for some species, chronic, non-lethal spill-related problems persist a decade or more after the spill and that some localized populations have been slow to rebound from spill mortalities.

During the media-crazed months surrounding the 10th anniversary of the spill, the Trustee Council and Exxon each seemed to have their mantras. The council pointed out that 10 years after the spill only two of 28 resources had officially "recovered" and eight species were not bouncing back at all from their injuries. Exxon's line: that recovery is complete and the sound is "healthy, robust, and thriving."

The Exxon statement went on to say:

> "We believe the definition of recovery being used by the Trustees is misleading because it is not a practical or accurate measure. Recovery

> of the Prince William Sound ecosystem cannot be measured and defined by the recovery of the few species the trustees are investigating. (The ecosystem) is populated by thousands of other species that were not impacted by the spill, or were impacted but recovered quickly.
>
> "*Recovery means a healthy biological community has been reestablished and that the plants and animals characteristic of that community are present and are functioning normally. (italics added)* This definition works because it is not dependent on pre-spill versus post-spill measurements; it recognizes that nature changes all the time, a concept that scientists call 'natural variability.'
>
> "Any definition that uses as an absolute standard the return to pre-spill conditions just isn't realistic."

The definition of recovery in the April 1992 Restoration Framework appears to mirror Exxon's interpretation of recovery. That document states that *"full ecological recovery will be achieved when the pre-spill flora and fauna are again present, healthy and productive, and there is a full complement of age classes."* It goes on to say that *"a fully recovered ecosystem is one which provides the same functions and services as were provided by the pre-spill, uninjured ecosystem."* It's a broad definition without attempt to quantify population levels.

By the time the Restoration Plan was published two years later, the Trustee Council narrowed its definition to say that plants and animals had to be "present at former or pre-spill abundances" and there must be a full complement of age classes "at the level that would have been present had the spill not occurred."

Advocacy science

John Wiens, a professor of biology at Colorado State University who conducted seabird research for Exxon, warned that litigation surrounding the oil spill "creates pressures for scientists to take sides, thereby amplifying advocacy and lessening scientific credibility."

He made the comment in a paper written for BioScience[51] and was clearly referring to government and Trustee Council researchers as advocates rather than objective observers. "(C)ommon sense tells us that an accident as big as the *Exxon Valdez* spill must have major long-lasting effects," he wrote. "What is considered common sense, however, is often guided by preconceptions and emotions, which can lead easily to advocacy of a particular conclusion whether or not there is supporting evidence."

"When an environmental accident creates a potential conflict between science and environmental advocacy," he added, "science may suffer."

This is precisely the sort of scientific spin that makes Trustee Council peer reviewers take to their soap boxes. Wiens made no mention of "corporate advo-

cacy" in his article. If Wiens would like to make a case about the Trustee Council as environmental advocates, peer reviewers point out,[52] then at least he has the opportunity to study every decision made, from the first planning efforts to the final scientific conclusions. All of it is open to scrutiny. Anyone can look at the evolution of a particular Trustee Council project and learn how it came about, study the methodology used, read the field notes of researchers, see how the data were analyzed and how conclusions were drawn. Exxon has, in fact, done this, filing Freedom of Information Act requests for copies of every field note and planning document for some trustee projects.

While government research is done in the open and belongs to the public, Exxon has no comparable avenue for public scrutiny of its science. Exxon studies are selected and planned behind closed doors. While every field notebook in government work is subject to scrutiny, Exxon only has to release information it sees fit to release.

"There is no record that allows you to evaluate why Exxon did what it did," said Andy Gunther.

Gunther, Spies, and core reviewer Peterson look at Exxon-sponsored research with the same suspicion that Exxon scientists have for government research. Peterson argues that Exxon research is designed to be inconclusive or ambiguous. "They like the noise," he said, referring to the statistical uncertainty found in almost all biological research.[53]

Spies challenged the notion of agency bias, noting the historical trend of corporations to avoid conclusive research. (Tobacco companies come to mind.) Government agencies, he argues, are charged with protecting resources and will tend to be conservative in favor of those resources when interpreting results of research. Corporations are charged with protecting stockholders. "So who should have the burden of proof here," he asks. "I contend it should be on the users and abusers."[54]

"Exxon contends that every level of information has to be there or something is not provable," Spies said. "The lack of complete information doesn't mean you can't make judgements and come to consensus."

Early in the scientific program, while agencies were still running the restoration effort and no core review group existed, Spies was sympathetic to the concerns described by Wiens. In a letter to Trustee Pennoyer in April 1993, Spies warned that "within the oil spill 'culture' the more radical views of damage have not been challenged as often as they should have. . ." He went on to add: "Exxon will likely seize on the wilder claims to discredit the trustees' studies and overall efforts." Spies' solution to this problem was to develop a core review team to oversee the program, and require annual and final reports with carefully drawn conclusions.[55]

To illustrate Spies' concern about making overextended claims, one only

needs to look to the seabird death toll. Everyone knew that 36,000 bird carcasses were found, but damage assessment required that scientists determine how many oil-coated carcasses were missed. Various studies were done and government researchers rode up and down on the scale of possibility, concluding that between 100,000 and 645,000 birds actually died. The "best estimate" mortality study supported by Spies and the Trustee Council is 250,000 birds killed by the oil.

Exxon and its contract scientists regularly dispute such numbers, but do not offer any estimates of their own. Wiens wrote: "The only things that are certain are that approximately 30,000 oiled carcasses were retrieved and that this number represents some unknown fraction of the total number of birds killed by the spill."

Note the lower carcass figure that Wiens uses. Exxon has maintained that the number of oil spill deaths were not much more – and perhaps even less – than the number of carcasses found. It wasn't clear, for example, that oil was the cause of death for many of the birds and other animals found. And, in the case of killer whales, no carcasses were found to support a claim that oil took up to 13 animals from the AB pod.

Exxon contractors, including Wiens, have criticized the broad and seemingly growing estimates of bird mortality as evidence of government bias. This was the central point used by Wiens in defending his theory that environmental advocacy influenced government studies. Other Exxon contractors, Dee Boersma and Julia Parrish, of the University of Washington, have pointed out that the higher estimates of bird mortality would have killed the entire common murre population two times over.[56] When extrapolated for common murres, which made up three-quarters of the carcasses found, the higher estimate is nearly twice as high as the government's pre-spill population estimate of nesting common murres in the spill's path, they pointed out.

This type of criticism casts considerable doubt on the official estimates, but it fails to adequately present the government's argument. The spill occurred during a period of spring migration and many of the dead birds could be from outside the spill region that happened to be passing through the wrong place at the wrong time. In addition, the pre-spill population estimates were of the nesting birds in the Barren Islands. It did not include the many juvenile or non-nesting birds, which live mostly in large rafts on the water.

Contrasting studies

Clashes between Exxon and the Trustee Council almost always center around issues of oil's damage to – and its persistence in – the environment. Exxon has voiced no complaints about general ecosystem studies, habitat protection, subsistence projects, or research into resource management improvements. However, when research centers on the toxicity of oil, its long-term impact on nearby wildlife, and

the amount remaining on beaches through the years, Exxon consistently balks and often counters with studies of its own showing little or no lingering impacts.

In the years following the spill, an observer would have to conclude that Exxon and government scientists were studying two different oil spills.

In 1993, Exxon and the Trustee Council each held dueling scientific symposiums. Both published proceedings from the symposiums that offered opposite conclusions. Exxon's showcase, an Atlanta symposium sponsored by the American Society for Testing and Materials, described a spill zone that had bounced back from its first year devastation, with no species showing lingering oil-related problems, a small amount of oil on the beaches, and remaining oil in a non-toxic state.

Government officials participated in the symposium mostly through heated press conferences that charged Exxon with skewing the data to fit its needs. Two months earlier, those same government researchers presented findings that showed that herring hatched out as mutants with twisted spines, harlequin ducks quit reproducing, and oil on the beaches remained unweathered and highly toxic.

Although these results were released after the settlement was reached between Exxon and the federal and state governments, much of the research each side reported was conducted during the litigation phase of the spill. Exxon also would be facing a potential multi-billion dollar lawsuit from private plaintiffs the following year. Litigation certainly played a key role in the way each side approached its oil spill research. D. Michael Fry, a research physiologist at the University of California-Davis who conducted spill research for the government, was quoted during the Exxon symposium, saying "(S)tudies are driven by attorneys for both sides." He said that the government was hired to prove that damage persists and Exxon scientists were hired to prove that it doesn't.[57]

Spies seemed to agree. "You're always going to get different stories," Spies said at the time. "The resource people are going to paint a black picture; Exxon will paint a white picture."[58]

Dueling studies served to daze the public, leading the Anchorage Daily News to editorialize: "Now we're really confused about Prince William Sound." The editorial went on to say "scientists on both sides came out looking less like neutral scientists and more like witnesses in a lawsuit."[59]

A look at how the two conferences were presented provides another insight into the scientific approach of each side. Exxon video-taped the government's conference and then used selective and out-of-context quotes to support their press briefing materials. During the Exxon conference, videotaping was forbidden and uniformed guards were stationed at the doors to enforce the rule. Comparison of the two conferences illustrates the agenda differences of the government and Exxon. The government presentations have always been an open book (at least post-settlement), whereas Exxon has gone to great lengths to manage press and public perceptions.

Stepping over the boundary of scientific disagreement

Some things don't change over time. During a Trustee Council workshop held in January 2002, the first day was dedicated to continuing injury and a new and thorough study of the remaining oil on the beach. The beach study would result several days later with an accusation tantamount to fraud, levied by an Exxon consultant. And that was followed with a demand by the Trustee Council for a retraction and a request that the National Academy of Sciences review the allegations.

The continuing injury portion of the workshop was remarkable for its lack of connection to the oil spill. Experts in fish, marine mammals, and birds each got up to outline what was known about injured species nearly 13 years after the spill. As time passed on, any connection to the spill has grown more and more faint and, certainly, more difficult to pinpoint and prove. The fisheries talk made no connection between ongoing troubles with herring or wild pink salmon or sockeye salmon and lingering oil. The marine mammals expert clearly stated that there is no continuing connection to the decline in harbor seals. The bird experts were much more interested in climatic shifts than any oil-related problems as a continuing problem for seabird populations. The only two exceptions to this otherwise clean slate were continuing concerns to localized populations of harlequin ducks and sea otters. Both species, through chemical analysis, show evidence of some sort of exposure to hydrocarbons. Both species are not doing well in the heavily-oiled study areas when compared to non-oiled areas. And both species feed on invertebrates, such as mussels, which still have pockets of oil surrounding them.

It was clear from the day's reports that the potential for oil to continue causing chronic physiological problems is growing smaller by the year, isolated to a few species at specific locations and, likely, unprovable.

The explosive presentation of the day came from Jeffrey Short, a research chemist with the National Marine Fisheries Service's Auke Bay Laboratory. Short was in charge of the most thorough study of remaining oil on the beach since 1993. His methodology was submitted to and approved by national experts prior to the beginning of the field research. Short and his crew surveyed 7.7 kilometers of beach, digging 7,000 test pits at locations chosen randomly within formerly heavy or moderately oiled areas. When they found oil, they would dig additional pits in the vicinity to determine the size of the remaining oil deposit. In all, they dug about 9,000 pits, sometimes in soft beach sand, but more often than not in areas of stacked boulders. It was a lot of work, backed up by a crew of laborers hired from the nearby villages of Tatitlek and Chenega Bay.

Of 91 beaches surveyed, Short found oil on 53 of them, sometimes just sheen, sometimes thick oil that showed very little weathering. After evaluating the data, Short concluded that approximately 10,000 gallons of oil remained on the beaches 12 years after the spill, covering about 26 acres, and that it was disappearing at

a rate of about 26 percent per year. This was startling because it was about twice the amount estimated on the beaches in 1993 and considerably more than Exxon would recognize. Perhaps even more important, Short described a substantial amount of the oil as "still fresh," meaning that it hadn't changed much chemically from 1989.[60] Exxon scientists routinely describe the remaining oil as inert and chemically harmless to the environment.

Two weeks later, in point-counterpoint columns appearing in the Anchorage Daily News, Short explained the significance of his findings. It might explain why sea otters in the Northern Knight Island area, where pockets of oil can still be found, are not recovering when sea otters elsewhere have, he said. And he concluded: "Although the sound is much cleaner now than it was in the early '90s, it remains substantially more polluted than it was in 1988 because of lingering oil from the *Exxon Valdez*. Exxon continues to portray the sound as more polluted from other sources apart from the *Exxon Valdez* oil spill, but their claims are riddled with inconsistencies."[61]

The counterpoint was provided by David Page, an Exxon contractor and a professor of chemistry and biochemistry at Bowdoin College. Page wrote that he shadowed Short during his summer surveys and "found no evidence that he dug 7,000 pits on 91 locations." He said that he found clear evidence of Short's activity at 33 sites and was able to map only 875 pits. "Had thousands been dug, we would have located several more," he wrote.[62]

Page also said that the locations of the pits "demonstrate that they were chosen subjectively, with the greatest concentrations of pits in areas showing oil residue. . . It indicates a strong bias in the Short study and raises questions about the scientific validity of its conclusions." Page, however, did more than question the science. His statements appeared to have crossed the line, taking the acrimonious relationship between Exxon and government scientists from the accepted arena of disagreement into new territory – accusation of scientific fraud.

The accusation resulted in an immediate rebuttal. A letter to the editor, signed by Spies, executive director McCammon, and Dr. Jim Balsiger, Alaska administrator for the National Marine Fisheries Service and a trustee, said the work was done exactly as reported by Short. "News reporters, support vessel crews, a government archaeologist, residents of Tatitlek and Chenega, and other participating scientists could bear witness to the work," they wrote. "Notebooks with raw data, including daily entries of holes dug and oil found, provide corroborating evidence."[63]

They called on Page to join Short in submitting his data to the National Academy of Sciences for evaluation. If unwilling to do so, they said Page should write a retraction. Short responded to the accusation by saying that Page did not begin shadowing his study until his surveys were 75 percent complete.[64] Page added that he stands by his observations and experiences and that Short's conclusions "will not stand the test of rigorous and unbiased scrutiny."[66]

The National Academy of Sciences and the Society of Environmental Toxicology and Chemistry both turned down requests to review the study because they do not investigate allegations of research misconduct. Instead, an independent group of scientists from the National Marine Fisheries Service (with no connection to Short or the Auke Bay Laboratory) was impaneled to conduct the review.

Although they found some minor discrepencies, the four-member panel concluded that Short's work was "rigorous, well designed and executed" and that records were well-maintained. If anything, the report said, the study was designed in such a way as to underestimate the remaining oil on the beaches.[65]

The panel's report prompted the Anchorage Daily News to editorialize that it was reasonable for Page to disagree with Short's conclusions. "But, it's not reasonable to impugn the scientific integrity of Mr. Short's work."[67]

A history of animosity

This is not the first time that Short and Page have confronted each other. Page is the lead author of an Exxon-funded study that looked into the origin of hydrocarbons in Prince William Sound. Short effectively debated and debunked Page's theory that spilled oil was not the chief source of hydrocarbon in the western portion of the sound. Such a theory would offer Exxon a biochemical alibi against charges that *Exxon Valdez* oil was continuing to expose animals to harm.

Continuing hydrocarbon exposure to species such as river otters, sea otters, and harlequin ducks was widely assumed to be coming from spilled *Exxon Valdez* oil. Exxon contractors, however, argued at a science symposium[68] that there has always been oil in the Prince William Sound area, not from human-caused spills, but from natural seeps in the Cape Yakataga area in the Gulf of Alaska, just outside of the sound.[69] The seep was releasing an estimated 2,500 – 8,400 barrels of oil per year into the sea, Page argued.

Short countered that the seep was "pathetically small," more likely to be measured in teaspoons rather than barrels. The hydrocarbon background that dominated the Prince William Sound region came from the Bering River coal bed, he said, a well known vein of several thousand tons of coal that has left local beaches black with coal dust. This is an important distinction. Coal would not impact animals in the same way that oil would because hydrocarbons in coal cannot enter the food chain. Therefore, coal could not cause the continuing hydrocarbon exposure seen in some species in Prince William Sound.[70]

The Exxon contractors said they didn't consider the coal bed because they hadn't known about it. Still, they stuck to their original conclusion, showing a graph of the hydrocarbon "fingerprints" that accurately matched that from the oil seep. After studying the graph, Short discovered that some points on the graph didn't match the original data and other points were omitted or mislabeled. When Short reworked the graph, he argued that it reversed its meaning and supported

his conclusions. The Exxon scientists admitted there were errors in the graph, but did not back down from their original conclusions. This coal vs. oil seep debate continues. At the very least, Short succeeded in casting serious doubt over the Exxon study.[71]

Oil impacts on Pacific herring and pink salmon

Another significant contribution by Short and his colleagues at the Auke Bay Laboratory near Juneau, is also disputed, not just by Exxon but throughout the oil industry. The Auke Bay researchers have fundamentally changed the way people think about weathered oil in the environment. It has long been held that oil, a natural substance, changes chemically once it is exposed to weathering. It has been argued that the more hazardous elements of spilled oil quickly evaporate, leaving behind the less toxic components considered as harmless as pavement. It may remain on a beach for many years, but it's not supposed to be strongly toxic and a lasting threat to the environment.

Researchers at the Auke Bay lab challenged this notion. They were trying to understand why pink salmon eggs were occasionally dying in significant numbers in streams exposed to weathered oil. Chemists simulated the natural conditions in the laboratory by exposing eggs and fry to seawater percolated through gravel tainted with one-year-old weathered oil. The eggs, they found, hatched prematurely, and fry had an abnormally high number of birth defects. The government researchers repeated the test three times using North Slope crude oil and had similar results each time. They concluded that toxic components of weathered oil continued to be bioavailable to salmon and herring eggs, and caused adverse effects at levels as low as four parts per billion for salmon eggs, which is below state water quality standards,[72] and one part per billion for herring eggs. The significance of this finding could go well beyond the spill region, when considering it calls into question possible impacts of runoff from oil-based pavements and residual oiling from leaky car and boat engines into nearby streams.[73]

Taking an ecosystem approach to research and monitoring

Even before the settlement with Exxon, it was understood that restoration would take an ecosystem approach. As early as the August 1990 Progress Report, the Restoration Planning Work Group published a set of objectives that included: "incorporate an 'ecosystem approach' to restoration." It specified that where appropriate, restoration efforts should "broadly focus on recovery of ecosystems, rather than on individual components."[74] Yet, to establish injury, studies conducted during the damage assessment phase were necessarily species-specific.

Despite discussions among trustees and Restoration Team members favoring a science program that worked on an ecosystem level, the transition from the monitoring of species to the study of inter-species relationships and their physical

environments did not occur until after the uprising of Prince William Sound commercial fishermen in August 1993. (This protest is discussed in detail in Chapter Three.) The result was the six-year, $21 million Sound Ecosystem Assessment study and a renewed commitment by the Trustee Council to develop an ecosystem approach as the mainstay of its science program.

Shortly after establishing an independent office, Ayers and McCammon made development of an ecosystem-based science program one of their top priorities. In January 1994, they convened a meeting of staff, peer reviewers, the chief scientist, agency researchers and managers, commercial fishermen, Public Advisory Group members, and experts on ecosystem research. At issue was how to manage such an ecosystem-based science program, what policies would guide decisions, and what goals and objectives should be set.

When Spies addressed the Trustee Council later that month, he told Trustees that the research and monitoring effort was "switching paradigms."[75]

"Most of the work up to this stage. . . has been evaluation of resource abundance for the purpose of damage assessment," he said. "We're moving now into an era of . . . trying to understand these injured species. If we're going to do something for them, we have to understand what limits them, so we have to put them within some sort of ecological context to understand how habitat, feeding predation, competition and all of those ecological processes are acting on these injured resources."

At the same meeting, ecologist Glenn Juday, of the University of Alaska Fairbanks, gave a presentation on the dynamics of both living and non-living forces that make up an ecosystem. Marine ecosystems interact and it's important to capture that interaction in any scientific study, he emphasized. "There's a giant ping-pong game going on out there," Juday said. He went on to explain what ecosystem studies should entail:

> "Everybody knows and is familiar with studies that focus on an individual organism, or numbers of them in populations, or groups of different species all together in communities. You've got to go up one step further in concept to reach the ecosystem level, the level of incorporating all of the interacting community of life with its physical environment. In addition to stepping up (one level) in concept, it's inevitable that this work has to be done on a bigger spatial scale and over longer periods of time. . . It's (also) absolutely vital to incorporate some consideration of energy. Energy is the currency of an ecosystem, literally, and it's accounted for by carbon compounds that are fixed. So, you'll start hearing about how things are doing, not just in terms of the population counts of the individual organism, but accounting for things like productivity and amount of energy obtained.

> (I)t's virtually impossible to do really meaningful ecosystem level work without incorporating the longer term, the larger time scale, and the interaction of all of these elements. To be successful, I would propose that any ecosystem-based investigation and activity in restoration have these characteristics: that it be concerned with the full range of natural diversity, that it be set up to represent a comprehensive response surface, that it (look) . . . at the performance of species in the ecosystem in different phases and varieties of the environments that they occur in. Of course, a commitment (must be made to). . . long term monitoring, and whatever monitoring program is set up should have these characteristics: It should be flexible, that is it can adapt to unexpected findings; it should be sensitive, that is it should be able to tell if it's a real change or not, and not just noise in the data; it should have standards of high quality so that unanticipated applications can be made with confidence from the data. Finally, (an ecosystem study) is based on testable hypotheses and the . . . integration of all of the above into a model that might have application in this particular case.

Juday was followed by Torie Baker, a commercial fisher from Cordova who discussed the positive experience of bringing together scientists of different disciplines, working directly with local residents, to draft an ecosystem study that met the needs of commercial fishing interests. Dr. Ted Cooney, the principal investigator leading the SEA studies, then explained the main elements of the program.

It was a meeting carefully orchestrated from beginning to end to introduce a new ecosystem stage in the science program. When all the presentations were done, the Trustee Council enthusiastically voted to support the multi-year SEA program with a first year funding level of $5.6 million. More important, perhaps, was that each member had expressed a solid desire for more SEA-like ecosystem studies. The ecosystem approach had gone from passive discussions and verbiage in the Draft Restoration Plan to action with momentum for more.[76]

Adaptive management and the annual work plan

When Ayers arrived, he quickly recognized the frustrations felt by all parties – trustees, Restoration Team members, and principal investigators – with the process that created the annual work plan. In addition to the perceived and real conflicts of interest, the process continually overwhelmed everyone involved. The trustees faced their first work plan in 1992 just two months after coming into existence. The field season was just months away and the planning and funding of the projects were way behind schedule. The 1992 project information filled three large three-ring binders and included the detail of every proposal down to

the cost of office equipment. Trustees were expected to go through the barely-organized volume of material and discuss each proposed project. And amazingly, they did.

Just six months later, as the Restoration Team attempted to get ahead in the process, the Council debated the 1993 Work Plan. The annual financial cycle had been based on the oil spill, which occurred in March. The fiscal year, therefore, began in March. The 1993 plan was an abbreviated version, funding studies for just seven months to allow the Trustee Council to switch to the federal fiscal year.

Although the material was better organized, Trustees again had volumes of detail to sift through and again, final approval came late in the season. They asked for a more streamlined presentation for the 1994 Work Plan and got one using an outline format organized by resource. Largely due to the abbreviated fiscal year, the plan again was developed and approved late in the year. The Draft 1994 Work Plan was presented for public comment on November 30, two months after the fiscal year began.

Ayers understood that in order to create a stable science program, the work plan process had to be dependable, with rigid timelines; predictable, allowing researchers to plan for future proposals; adaptable to changing conditions; and easily absorbed by the public and the Trustee Council. In addition, it had to be above reproach in order to gain the trust of the public and the scientific community. Such a process would be central to development of an ecosystem approach and the overall science program.

As part of the ecosystem presentation orchestrated at the January 31, 1994 Trustee Council meeting, Ayers introduced the concept of "adaptive management," a plan establishing a cycle of decision and review leading to an annual work plan.[77] The adaptive management cycle would become an important focus of the final Restoration Plan and the management backbone of the research, monitoring, and general restoration programs.

The adaptive management cycle begins with a solid review of research conducted and results of studies to date.

January – A three-day workshop is held each January bringing together researchers, peer reviewers, Trustee Council and Public Advisory Group members, and the public. Presentations, written abstracts, and poster sessions allow scientists of different disciplines to see each other's results. It gives seabird specialists a chance to hear from fisheries experts and biologists studying harbor seals to learn what they all have in common. Discussions amongst the group helps everyone involved digest the research to date and focus on future needs. Independent peer reviewers and restoration staff, afterwards, review ongoing science projects, in consultation with principal investigators, to determine what research holes need to be filled and what monitoring efforts should take place in the coming year. This is where science management "adapts" to new information and new needs.

Reviewers set direction for the science effort after reviewing results from previous studies.

February-April – Based on the January workshop and review, an invitation for proposals is issued in mid-February, placing a deadline of mid-April for submission of proposals.

May-June – The review board, chief scientist, and staff then meet to analyze each proposal, considering the ideas, timeframe, methodology, budget, personnel, and equipment. The review board's recommendations are used by the chief scientist and executive director in making their separate recommendations to the Trustee Council. Whereas the chief scientist restricts his comments to the scientific merit of the proposal, the executive director approaches her recommendations more broadly, considering legal, community, and human service aspects. A Draft Work Plan is issued in mid-June, followed by a 30-day comment period.

July-October – The Draft Work Plan is reviewed by the PAG and the agency liaisons on the Restoration Work Force, as well as any member of the public requesting a copy. The Trustee Council makes its decisions, usually including deferrals and changes to proposals, in August and December. The Work Plan is implemented at the start of the federal fiscal year, October 1.

November-January – Meanwhile, annual and final project reports trickle in and are peer reviewed. The scientific workshop, open to the public, is again held in January and the entire cycle starts anew.

During the seven work plans funded in which the adaptive management cycle has been in place, the annual process of organizing, funding, implementing, and reviewing each plan has worked exceedingly well. It has allowed the program to be stable, predictable, and flexible. Submittals for the 1999 Work Plan totaled a record 134 proposals, even though funding levels had decreased from previous years.[78]

With the publication of the Draft Restoration Plan in November 1993, it also became possible to incorporate multi-year projects into the annual work plan. Before then, funding of projects was from year-to-year. Researchers who felt their studies should take a multi-year approach had no guarantee of funding and had to plan accordingly. After the Draft Restoration Plan was adopted, including a budget of $192 million to $222 million for 11 years worth of work plans, the Trustee Council could predict spending levels for future years. A two- or three-year project could be guaranteed funding as long as annual review established that the project remained necessary and was meeting its objectives. As a result, future invitations for proposals could be issued with specific projects and specific principal investigators already spelled out. By 1999, for example, a work plan budget of $9 million was projected with $7 million of that already set aside for specific multi-year projects. New proposals were limited to the remaining $2 million in the budget.

General restoration

It is easier to describe what general restoration isn't rather than what it is. The Restoration Plan says that general restoration includes all activities that are not otherwise covered under habitat protection, monitoring and research, public information, science management, or administration. It is the safety net of the restoration plan, catching all qualifying projects that slip between the cracks of the other categories.

This category is particularly important to the human residents and users of the spill region. It provides amenities that support the human services, including construction of facilities, informational signs, archaeological exhibits, and enhancement of the resources on which people depend. Whereas the rationale behind research and monitoring can be confusing to most residents of the spill region, who may feel only a vague connection to its benefits, many of the general restoration projects are easy to understand, with immediate and direct benefits.

The stocking of chinook (king) salmon in Chenega Bay, for example, provided a direct subsistence benefit to the people who live there. Similarly, salmon stocking and stream enhancement programs were conducted at Tatitlek, Port Graham, and Nanwalek. Commercial users of salmon received a direct benefit from the improvement of a fish ladder at Little Waterfall Creek on Afognak Island and the expansion of spawning channels at Port Dick Creek on the lower Kenai Peninsula.

Each of the examples above illustrates a form of environmental manipulation. General restoration also focuses on management of human uses. The restoration of trampled banks along the Kenai River is a hybrid of those two forms of general restoration, benefiting sockeye salmon, other fish, and the services of commercial fishing and tourism/recreation. As Alaska's most accessible and productive salmon system, the Kenai River has attracted hundreds of thousands of sport fishing enthusiasts each year. Most of them fish for sockeye, chinook, or coho salmon from the shore, trampling the vegetation and eroding the banks in the process. The loss of vegetation means that the fast-moving river moves even faster and tiny salmon fry have no place to protect themselves from the current and predators. The Trustee Council invested more than $2 million to replant and reconstruct the riverbanks and at the same time, develop a system of trails, ladders, and light-penetrating gratewalks allowing anglers to get in and out of the river without touching the banks. Informational signs help educate tourists about the problem. The state invested another $3 million to this cause from its portion of the criminal settlement with Exxon.

A third goal of general restoration is to reduce chronic sources of pollution entering a marine environment already stressed by the oil spill. Remote communities, most of them with harbors packed with commercial fishing and recreational boats, often had inadequate facilities for disposing of used oil and other hazardous

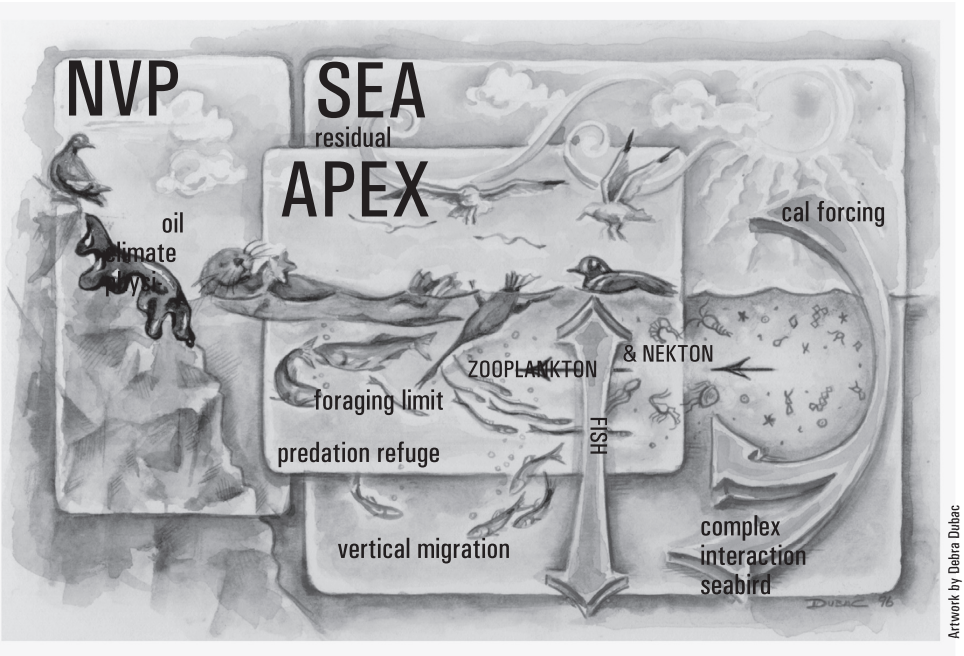


Figure 5.2. This artwork, originally diagrammed by Bob Spies, illustrates how the Trustee Council's three major ecosystem projects work together to provide a broad picture of Prince William Sound. The Sound Ecosystem Assessment (SEA) project was the first and largest, funded with $22 million over seven years to study the factors influencing the production of pink salmon and pacific herring. One year later, plans were developed for the Alaska Predator Ecosystem Experiment (APEX), an 8-year $10.8 million study of forage fish and the predators that feed on them. At the same time, the 6-year $6.5 million Nearshore Vertebrate Predator (NVP) project got underway, investigating what factors, including oil, limit the ability of injured birds and mammals in the intertidal areas to recover. More information on these studies can be found on Pages 204-214.

wastes. Three projects, involving more than $5 million, developed waste management plans for Prince William Sound, lower Kenai Peninsula, and Kodiak Island, including facilities necessary to properly store or dispose of these wastes.

Alaska SeaLife Center

The Alaska SeaLife Center is a marine research and interpretive center along Resurrection Bay in Seward, boasting the finest cold water supply east of Norway, the largest marine bird aquariums in the world, and the best-equipped marine research laboratory north of California. It's based largely on the Woods Hole model, in which research is the primary activity, rather than the Sea World model, which was developed mostly as a marine showcase and tourist attraction. Yet, it is marketed as both a state-of-the-art marine research laboratory and a must-see destination for the hundreds of thousands of tourists who travel to the Kenai Peninsula every summer.

Instead of trained seals and killer whales jumping through hoops, it is the research that is on display. Scientists are part of the living attraction.

Of the hundreds of projects funded under the science program, none was more costly or more controversial than the SeaLife Center. When Gov. Wally Hickel insisted on adding the word "enhancement" to the trilogy of "restore, replace, or acquire the equivalent of," he supposedly had the Alaska SeaLife Center in mind. When he shook hands with Secretary of the Interior Bruce Babbitt on a conceptual restoration plan, the SeaLife Center was Hickel's pearl. There would not have been a deal without it.

The SeaLife Center is the monolith representing the Trustee Council in concrete and glass. To many, the decision to build the SeaLife Center is one of the council's finest moments, vastly improving the ability of researchers to work in the field and in the laboratory while at the same time educating the public about marine ecosystems. To an equal number of detractors, the SeaLife Center symbolizes the worst of politics, funneling money away from other causes to build an economic development project for the City of Seward.

While the Trustee Council was politically tied to building the SeaLife Center, it was at the same time legally bound to use settlement funds solely for restoration purposes. The link between restoration and the SeaLife Center had to be clear. This resulted in a transformation of this 30-year-old idea from a tourist-based aquarium promoting research to a science-based laboratory aiding tourism.

The argument for such a laboratory was sound. A better research facility for the Fairbanks-based University of Alaska was sorely needed. The university's Institute for Marine Sciences in Seward was small and poorly equipped to handle the kinds of research being conducted in the Gulf of Alaska, even in the absence of the oil spill restoration effort. The idea was not to duplicate the abilities of other labs in the state – primarily the Prince William Sound Science Center in Cordova, the National Marine Fisheries Service's Auke Bay Laboratory, and the multi-agency Fisheries Research Center in Kodiak – but to fill in the gaps left by those facilities. To make this point, scientists came before the Trustee Council and described project after project being conducted in Alaska in which much of the lab work had to be shipped to laboratories in the Lower 48 and Canada. In addition, Alaska had no place suitable for the rehabilitation of injured marine life. None of the other labs had the facilities or the expertise necessary to house animals and nurse them to health. The SeaLife Center, therefore, was to be a tool for long-term monitoring and research in the spill region and to provide rehab services for marine mammals and birds.

Even for those skeptics who accepted this link to restoration and rehabilitation, there were more questions. Why Seward? Could the other labs in the state be improved rather than build a new facility? Could the SeaLife Center sustain itself financially? To the skeptics, the SeaLife Center was too grand, the cost too

high, and the connection to tourism suspect. To some, it became known as the "whale jail,"[79] in reference to Sea World theatrics, even though it has no facilities for holding or rehabilitating whales. The Alaska Coastal Coalition, a post-spill group advocating for more habitat protection, called the SeaLife Center "a tourism facility masquerading as a research facility."[80]

The Public Advisory Group supported the SeaLife Center, but on a split vote and with the recognition that it was relying on "four leaps of faith:" that additional fundraising would be successful; researchers would actually use the facility; tourists would support it ("build it and they will come"); and that the facility would remain more research oriented and not drift away from its main purpose toward tourism.[81]

In February, 1994, the Trustee Council provided $25.9 million (later upped to $26.2 million) to fund the laboratory portion of the building. The remainder of the $55 million construction cost, including the space for exhibits and large aquariums, would have to come from elsewhere.[82]

Although the council shunned paying for any tourism-related amenities, it in effect made the tourism side possible by funding much of the shared infrastructure. To promote the concept of mixing tourism with science, backers of the idea argued that profits from the turnstiles and concessions would be used to subsidize the research. As long as the facility could make a profit from tourism, a portion of that money would be used to provide up to 60 percent of the costs of research in the SeaLife Center labs. Many skeptics considered this promise to be a carrot the Trustee Council would never get to chew.

Projections developed by the SeaLife Center's proponents showed that an estimated 262,000 tourists and Alaskans would visit the center each year. At that rate, income would be sufficient to provide a healthy subsidy for research. This economic feasibility study, however, proved to be an exercise in positive thinking. In reality, about 193,000 visitors toured the site in its first year and the numbers have gone down since then to about half of the original projection.[83]

Not only would there be no subsidy for restoration science, the SeaLife Center's board of directors found itself struggling to keep its doors open. Fundraising did not keep up with projections and the SeaLife Center had to commit $150,000 a month to pay off $17.5 million in revenue bonds sold to finish the construction. The center re-organized and reduced staff. Four executive directors came and went in less than three years. In an effort to save money, the board of directors considered eliminating its program to rehabilitate injured animals, but backed off that idea when it realized that was one of the promised benefits to the Trustee Council, a key link to restoration, and an attractive asset for fundraising.

Meanwhile, the research side of the facility was proving worthwhile for restoration work as well as other studies being conducted in the Gulf of Alaska. Its first years were dominated by oil spill research, but that eventually gave way

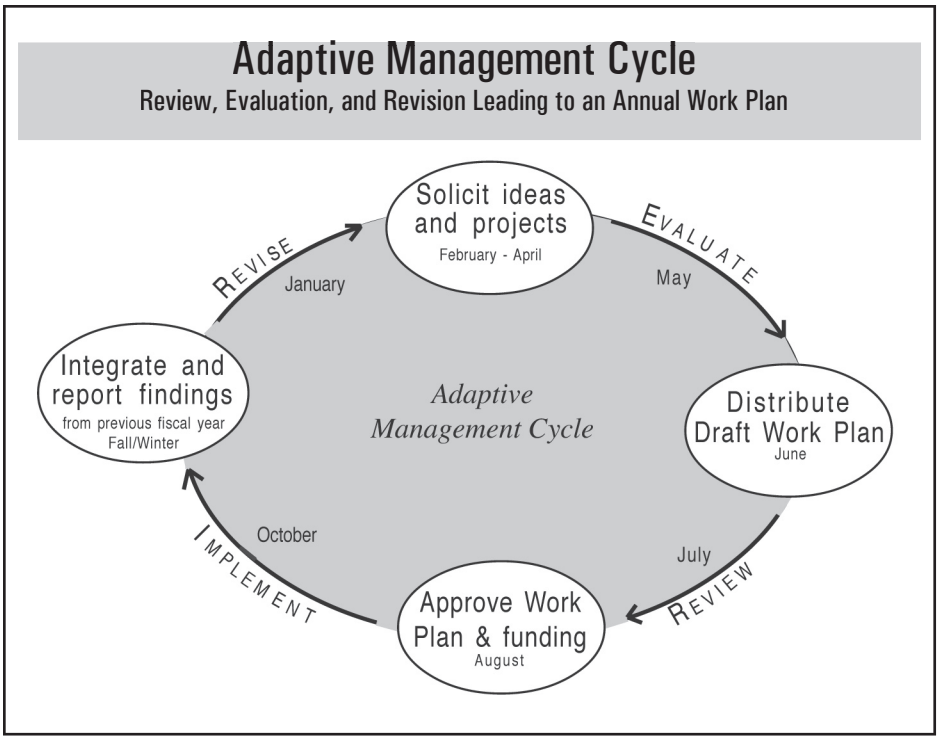


Figure 5.3. The Trustee Council uses a management cycle that allows the science program to adapt to new information from recent studies or to new pressing needs. The annual work plan is developed after evaluation by a core review team of current data. This management cycle allows the science program to be stable, predictable, and flexible.

to several long-term federal studies that, with a little Congressional assistance, helped the SeaLife Center get out of its financial jam.

When the Steller sea lion was placed on the "threatened list" in the late1990s, the billion-dollar offshore pollock fleet in Alaska also felt threatened. The big factory trawlers share the same waters and the same prey as the sea lion. To head off a potential collision between the pollock fishery and the Endangered Species Act, Congress allocated millions of dollars for research in the gulf and in western Alaska. As part of that allocation, and due to the positioning of Alaska Senator Ted Stevens as Chairman of the Senate Appropriations Committee, the SeaLife Center received the funds to pay off $14 million in revenue bonds as well as a guarantee that sea lion research would keep the laboratories busy and in the black for many years.

"I wasn't happy about being asked to bail it out," Stevens told the Anchorage Daily News. "But I was happy that it was there when we needed it to go into this new phase of basic (sea lion) research."[84]

With its new federal funding, the SeaLife Center has evolved from a laboratory-for-rent to a non-profit research agency, with several scientists on payroll to study sea lions and the factors affecting their growth and survival. In addition to the restoration science being conducted there, the laboratory is now well-positioned to play a key role, for decades to come, in our overall understanding of the northern Gulf of Alaska.

Chapter 5 Addendum

Science for the money

Conducting damage assessment required that the science net be cast over the entire spill region while focusing on a broad range of species and other natural resources.[85] It was necessarily expensive. The pre-settlement trustees spent approximately $100 million over three years in an effort to answer two questions: what was injured by the spill and how bad were the injuries.

The chief benefit of the damage assessment phase was that it provided scientists, resource managers, and the public with a sense of where things stood. Phil Mundy, a fisheries expert, peer reviewer, and science coordinator for the restoration effort, has a theory concerning oil spill injury and management of natural resources. He believes that in the first years following the spill, when there was so much misinformation, lack of information, and speculation about the injury to natural resources, that managers lost the nerve to manage. Resource managers tend to err on the side of caution, and with so much unknown about the injury to some species, managers were either very conservative in harvest levels or froze harvests altogether. One of the biggest benefits of damage assessment studies was to restore a sense of confidence in population projections so that managers could set harvest levels accordingly, he said.[86]

The other practical effect of damage assessment – besides leading to a court settlement – was to lay a foundation for restoration. By the end of the assessment phase, the Trustee Council and researchers had a reasonable idea of population levels and chronic or sublethal injuries to most species being studied.

After the settlement, trustees narrowed the scope of research both geographically and biologically, focusing mostly on 23 injured natural resources (later expanded to 28) and, usually, at specific locations within the spill region. After averaging $33 million a year during three years of damage assessment, the Trustee Council science program became more structured, averaging less than $11 million a year.[87]

What did the public get for this money? Has the knowledge gained been worth the cost? Has it led to better management tools, better decisions, and ultimately, a better environment for injured resources to recover from their injuries?

To answer these questions meaningfully, with enough natural history, scientific theory, project detail, methodology, and human context to allow the reader to draw his or her own conclusions, would require another book. There is no short answer. Nevertheless, the following is a sketch of some of the results from hundreds of studies funded, and what they mean to the people of Prince William Sound, lower Cook Inlet, the Kodiak Archipelago, and the Alaska Peninsula.

Tools for fisheries

Photo courtesy State of Alaska

Approximately 40 percent of research funds went to sockeye salmon, pink salmon and Pacific herring.

Salmon is the fuel that runs the economic engine of Southcentral Alaska and it is the symbol and substance of a way of life for almost everyone in the spill region, whether it's pursued for subsistence, recreation, or a commercial living. It's no surprise that 40 percent of the research funds went to sockeye salmon, pink salmon, and Pacific herring,[88] the three injured species most closely related to human use of the region. Research into these commercial species has also provided the most insight and the greatest promise for useful management tools, prompting Mundy to estimate that 10 years of research boosted knowledge of these fisheries by at least 50 years.[89]

Kenai River sockeye genetics

New research into the genetics of sockeye salmon in the Kenai and Russian rivers has made the all-important leap from new knowledge sitting on the researcher's bookshelf to useful application aiding the decisions of fisheries managers. The new tool was first put to use in the summer of 1998.

The confluence of the Russian and Kenai rivers illustrates the paradox of Alaska sport fishing. It is where fish congregate in large numbers and therefore, where tourists and residents alike gather in large numbers. When you see a postcard showing hundreds of people fishing shoulder to shoulder along a naked riverbank, chances are it is the Kenai River just downstream from the mouth of the Russian River. The popularity of this circus-like fishery is the result of a massive and usually dependable run of salmon through a river that's adjacent to the road system, making the salmon accessible to 70 percent of the state's residents and nearly all of the summer tourists. To the locals, this chaotic fishery is both an tourism boon and a way to put food in the freezer.

Roughly half of the 200,000-700,000 sockeye salmon entering the Kenai River each year struggle through the fast moving glacial water for about 10 days before hanging a right at the Russian River. In 1998, the return of sockeye salmon to the Kenai River was significantly lower than expected. Fisheries managers reduced the catch limit on the river and severely restricted commercial fishing in Cook Inlet. In order to reach minimum escapement goals for the Russian River, biologists faced a crucial decision about closing the sport fishery altogether. On a Friday, fisheries managers ordered genetic sampling of the sockeyes entering the Kenai

River. By the following Monday, they had determined that most of those fish entering the Kenai were, in fact, heading for the Russian River and minimum goals would be met. The run of salmon was not low, it was late. Fisheries managers were able to make a sound decision to keep that popular fishery open. Without genetic sampling, managers say they would have been forced to close the sport fishery and send the awaiting mass of anglers home.[90]

Although genetic sampling has been used with success, it is not used with regularity. The process is expensive and not routinely part of the fisheries management budget. This illustrates that new knowledge and new management tools can only be useful when employed. And that decision is not only based on need, but also on finances which may be out of the managers' control.

Tiny earbones show hatchery of origin

Fisheries managers in Prince William Sound have always had trouble getting enough wild salmon into the streams while at the same time harvesting all of the hatchery-released salmon.

In rain-soaked Prince William Sound, the mountains often rise directly out of the sea, with very little beach between the lateral ocean and vertical slopes. The rain and snowmelt over the eons has resulted in hundreds of waterfalls that create short streams that get covered twice daily by high tides. Pink salmon have adapted to lay their eggs in the many hundreds of intertidal streams. But in 1989, as the tide covered up freshly deposited eggs, so did spilled oil. Hatchery-produced pink salmon were not so vulnerable, as eggs were protected and fry were generally able to swim under the oil. The injury to pink salmon, therefore, is to the wild salmon.

Wild and hatchery pink salmon usually return to the sound in mixed schools, but separate as they get near their destinations. While the fishing fleet targets mostly hatchery fish, much of the wild stock is left to spawn and propagate. The perennial management problem is: how can one be sure that the wild stock has separated from the hatchery stock so that commercial seining can be done safely. If the fishing fleet unknowingly harvests a school of wild salmon, they could nearly wipe out a wild run to one or more of the hundreds of local streams.

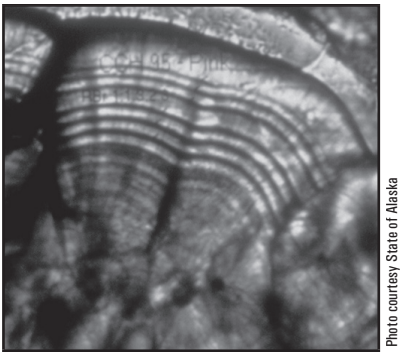


Photo courtesy State of Alaska

The otolith or earbone of a salmon has growth rings similar to that of a tree. By regulating the temperature of the water, hatcheries can mark the otolith of salmon fry to indicate from which hatchery they were released.

To combat this, hatcheries have for years painstakingly placed microscopic coded wire tags in the snouts of three-inch

salmon fry. They might tag as many as 1 million fry before releasing their brood of 500 million salmon. This means that when millions of those hatchery salmon return as two-pound adults 16 months later, managers must conduct test fisheries in order to find the 1-in-500 hatchery fish that is tagged. This requires sampling of 1,000 fish in hopes of finding a single coded-wire tag. If they find tags within a school of fish, it is assumed to be harvestable. If not, the ethic of erring on the side of caution means that the run will likely be protected and fishing will be limited.[91]

Otolith marking changed all that in a big way. The otolith (earbone) of a pink salmon is about the size of a grain of rice, yet, for hatchery salmon, it carries information in the form of growth rings that accurately identifies its hatchery of origin. Researchers in the 1980s learned that the slight warming of hatchery water, under controlled circumstances, places a pattern of rings on the otolith unique to that hatchery. The Trustee Council brought this new method to Prince William Sound by first purchasing boilers for each of the hatcheries and then funding years of studies to compare the old coded-wire tagging process with otolith marking. Fisheries managers can now detect a hatchery school in a matter of minutes with close to 100 percent accuracy. This has allowed the commercial fishing fleet to harvest in specific bays that would otherwise have remained closed to protect returning wild stocks. Otolith marking also provides accurate information about straying of hatchery-raised salmon into streams and it helps identify salmon taken on the high seas as bycatch, providing valuable information about the migration patterns of salmon.[92]

The role of plankton

As part of the Sound Ecosystem Assessment (SEA) project, researchers have learned how the phytoplankton and zooplankton bloom evolves seasonally, making up the base of the food chain. Pink salmon fry emerging from the streams and hatcheries each spring depend on the zooplankton to fatten themselves before beginning their year-long excursion into the open ocean. The bigger the plankton bloom, the more likely the fry will thrive and survive. Not only does it provide an essential food supply, but SEA has learned that plankton also serves to shield salmon fry from predators, usually young pollock. The opportunistic pollock will feed on whatever prey provides the most energy for the least effort, and this often means they prefer the floating plankton over the swimming salmon. When plankton are plentiful, salmon are less likely to be preyed upon.

In order to capitalize on this information, hatchery managers need to release the hundreds of millions of fry during the height of the plankton bloom. This has always been guess work, with little understanding how big the bloom will be or how long it will last. Researchers under the SEA project, learned that zooplankton not only hatch within the sound, but are swept into the sound after hatching in

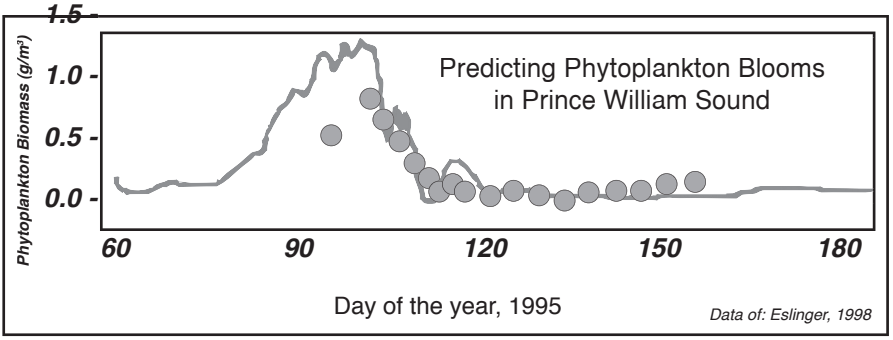


Figure 5.4. Models generated through the Sound Ecosystem Assessment (SEA) project estimated the timing and size of the animal and plant plankton blooms. The gray lines show the models' predictions compared to the actual measurements, represented by gray dots.

the Gulf of Alaska. This means that the sound is not solely dependent on its local conditions for a successful bloom. SEA researchers used this information, along with physical factors such as water temperature, wind, currents, and weather data to build a stunningly accurate model for predicting phytoplankton and zooplankton blooms, including when they start, peak, and end. Based on this projection, hatchery managers can strategically release their brood to optimize the small fry's chances of survival.[93]

Pristane tracks fry feeding success

Related to the plankton smorgasbord are the telltale leftovers from the salmon fry feasting on a common family of zooplankton known as *Neocalanus* copepods. A naturally occurring hydrocarbon found within the copepods may one day help fisheries managers predict the health of the annual return of hatchery salmon to Prince William Sound. The hydrocarbon, known as pristane, passes through the salmon and settles as fecal material on mussel beds. By testing the level of pristane in mussels, researchers believe they can determine whether the pink salmon fry had enough food to improve their chances of survival. A low level of pristane translates into a

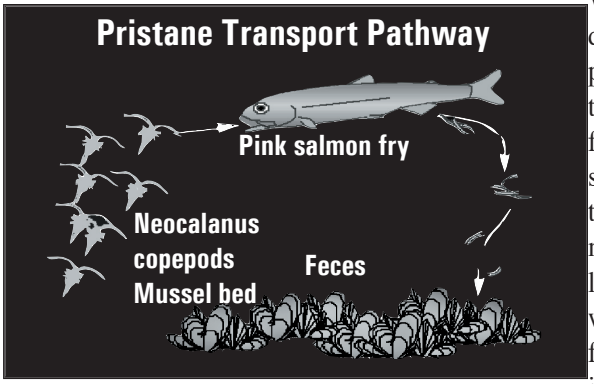


Figure 5.5. Pristane is a naturally-occurring hydrocarbon that may be used to someday help preduct the survival rate of pink salmon fry.

poor feeding year for the fry and a lower percentage of adults returning the following year. This method is in its infancy, but it is hoped that it can someday be a cost-effective method to predict the survival rate of hatchery salmon specific to the hatchery from which they emerged.[94]

Sonar replaces need for commercial catch data

In Cook Inlet, where sockeye salmon gather in July for their run up the Kenai and other rivers, fisheries managers have always depended on the commercial fishing fleet to determine the strength of the run. Computer models use the commercial catch to make an early prediction on how many salmon will be returning. But, when the run is low and the commercial fleet is idled, the only way to determine the run strength is to count them after they enter the river. By then it's too late for commercial harvest. The Trustee Council provided funds to purchase and test a sophisticated sonar system that allows fish counts in the turbid and muddy waters of Cook Inlet. Tests have shown the system to be 50 percent accurate, but consistent, making it a dependable tool for managers. The sonar has proven to be at least as effective as the fishing fleet in keeping managers informed about run strength, so that the key decisions to open a fishery can be made while the fish are still in the inlet.[95]

Cameras could replace counters

The use of remote camera technology could prove a cost-effective way to monitor returns of salmon in remote locations throughout Alaska. Each summer, several dozen seasonal employees for the Alaska Department of Fish and Game, spend weeks camping alongside salmon creeks, most of them accessible only by boat or by air. The employees count salmon for a set amount of time each day in order to extrapolate the count into run strength for that river system. The salmon counts are costly and time consuming, but necessary in order to ensure neither too many nor too few salmon reach the spawning areas. An experiment using remote cameras and time-lapse photography at one salmon river allowed technicians to review 1,100 hours of information in about 42 hours. The camera count documented 85-87 percent of the salmon counted at the weir. With microwave technology, these images could be relayed daily back to a central point where a few technicians could watch over several salmon rivers at a small fraction of the usual cost.[96]

Little Waterfall Creek

To boost the numbers of pink and coho salmon in Kodiak area waters, the Trustee Council funded improvements to a bypass at Little Waterfall Creek on Afognak Island. By upgrading the bypass, more salmon have been able to reach spawning habitat in the upper portions of the creek. Within two years after

completion of the project, the number of salmon using the bypass tripled from 20 percent of the run to 59 percent.[97]

The resurrection of Port Dick Creek

Port Dick Creek, on the southern coast of the Kenai Peninsula, once provided a healthy surplus of chum and pink salmon for the commercial fishing fleet. But five minutes of shaking during the 1964 earthquake filled the spawning areas of two tributaries with debris and severely diminished its capacity to produce salmon.

Biologists within the Alaska Department of Fish and Game had been talking for 20 years about the potential to return the creek to full productivity. Port Dick Creek was directly oiled during the spill and the trustees saw improvements to the creek's spawning beds as an effective way to improve salmon numbers and provide a boost for commercial fishermen at the same time. In 1996, biologists barged heavy equipment to the site, excavated the old creek beds, and returned the creek, as closely as possible, to its pre-earthquake condition. During that first summer, salmon returned to the reconstructed spawning area as if they had come out of their egg sacs there. Spawning results in 1996 were promising. That first year, 572 pinks and 300 chum salmon deposited about 775,000 eggs in the newly excavated stream beds. The following spring, net sampling provided an estimate of 291,000 fry, a solid egg-to-fry survival ratio of 37.5 percent. It's hoped that a harvestable surplus of chums can now be maintained from the newly resurrected creek, but there is concern that the spawning areas will naturally fill back in with sediments during periods of high waterflow.[98]

SEA pink salmon models

Although there are many factors involved in fry survival, SEA has narrowed the field to a subset that can be monitored: light, temperature, fry size at release, fry density and group clustering, plankton bloom timing and abundance, and predator composition and size. These data can be used in a computer model to predict the survival of salmon fry, thereby providing a new tool to predict more accurately the return of adult pink salmon the following year.

SEA has developed models that can now tell us where the plankton is coming from, where the currents will take it, when the bloom will occur and how strong it will be. Predator-prey models predict the survival rate of salmon fry.

This information is important not only when it comes to planning the release of fry from hatcheries and in forecasting the return of those salmon the following year, but also in understanding how salmon survive and grow.[99]

Pacific herring

Herring spawn in early April and the hatched larvae spend months drifting around Prince William Sound. Like the plankton, herring larvae are at the mercy

of the currents until they metamorphose into juvenile fish in August.

Just as they did with pink salmon, SEA researchers focused primarily on the early stages of life as the most critical for herring survival. What were they feeding on? How did they survive the winter when plankton were practically non-existent? Unlike pink salmon, very little was known about the first year of life for Pacific herring. Researchers were pretty much starting from scratch.

The SEA herring team conducted a painstaking series of surveys to map the distribution of the juvenile herring and document their habitat needs. The groundbreaking information they gathered depended on a highly coordinated series of aerial surveys, hydroacoustic surveys, and intensive net sampling efforts.

SEA learned that young herring begin appearing in small bays in late July and August each year and feed on plankton into the fall. However, by late fall their food supply nearly disappears.

It turned out that juvenile herring must survive three or four months with very little food. They fast and preserve their energy, or "cut power and float," as some scientists refer to it. If they fail to store up enough energy for the winter, they may die. The energy reserves of the herring, the severity of the winter, and the bay in which they overwinter all play significant roles in their survival.

Dr. A.J. Paul went to eight different Prince William Sound bays in March and measured the energy reserves of juvenile herring found there. He found that the herring in Simpson, Sheep, and Boulder bays had plenty of reserves to survive the winter. Juvenile herring in Jack and Whale bays were low on reserves and those in Eaglek, Paddy, and Drier bays were near the point of starvation. This information confirmed that a particularly cold or stormy winter could cause starvation in many areas and lead to a poor return as adults.

SEA modelers took this information and built it into a model for herring overwintering survival. The model inputs body protein and energy content measured from a sample of young herring in late fall and, based on expected winter temperatures, estimates the proportion of herring that will survive until spring. This provides another tool for better predicting the survival of a herring year class.[100]

Herring disease

After the collapse of the Prince William Sound herring fishery in 1993, an intensive effort got underway to find the reasons behind the crash. Scientists identified a latent viral infection that manifested as an outbreak of disease and spread throughout the population, but the reasons for the epidemic remain unclear.

It's important to understand the difference between infection and disease. A herring can be infected and transmit the virus without being diseased. For the infection to turn into disease, stresses have to build up so that herring can no longer fight off the disease. For this to occur at a population level, conditions have to be

just right. A high population density combined with low food supplies and the presence of the virus is one scenario that could lead to a population crash, researchers say.

Scientists looked to the commercial fishery to identify triggers for the disease. In particular, they studied the closed pound fishery, because it relies on crowding tons of herring into small cages or pounds so that the fish will spawn on kelp hanging within the pounds. After several days in the pounds, the herring are released back into the environment. Researchers found that virus levels in the pounds increased daily and could be found in the water within one meter of the pounds. Based on laboratory studies, these levels should have been high enough to trigger the disease, yet none of the herring studied died from the virus. The pound study, however, has led to changes in the way herring are corralled and kept with a much stronger emphasis on developing more open pounds.[101]

Photo by Roy Corral

The health of Pacific herring was key to understanding the dynamics of Prince William Sound and the spill region.

One obvious theory for the virus is that some outside stressor, such as an oil spill, triggered the event. After all, the spill occurred just weeks before herring spawning occurred. The spawning took place mostly on untouched shores, but there were several locations where oil mixed with herring and their eggs. Four years later, when those herring hatched in 1989 should have returned to spawn, there was a complete collapse in the population.

The disease continues to be studied intensely. The leading expert in this investigation now says that he believes overpopulation, living above the carrying capacity for the region, was the trigger for the collapse. The previous year, a record 114,000 tons of herring returned to the beaches to spawn. Gary Marty, fisheries pathologist with the University of California at Davis, believes that the stress of that many fish spawning led to the spread of the disease and most of those adults died a short time later.

When the herring fishery collapsed again in 1999, Marty had good data on the level of viral infections to provide clues as to what happened. He knows that the

prevalence of ulcers and virus was high during the 1998 spawning season, leading him to conclude that the herring once again suffered a massive die-off shortly after undergoing the stress of spawning. In the future, infection levels will likely become part of a formula for determining forecasts for the following year.[102]

Impacts of oil in the environment

Oil remains in the Prince William Sound ecosystem and likely will for decades,[103] but to what extent does it continue to impact species that come in contact with it, even in minute amounts? This is not one of the more glamorous questions asked as part of the research and monitoring program. But, it has resulted in a depth of understanding unparalleled in the worldwide history of oil pollution. Several years after the spill, scientists documented evidence of continuing oil exposure to sea otters, river otters, harlequin ducks, blue mussels, and the eggs of pink salmon and Pacific herring.

Nearshore Vertebrate Predator Project

The plants and animals living along the coast took the brunt of the spilled oil as millions of gallons washed up along hundreds of miles of shoreline. Ten years later, some of the more heavily oiled areas were still polluted with tar, asphalt, and unweathered oil either at or just below the surface.[104]

But what about the animals that live there? Of the eight species that remain listed as "not recovering" 13 years after the spill, all use the nearshore environment for nesting, feeding, and resting. Is it oil that is preventing their recovery or are other factors involved, such as food availability, reproductive ability, location, weather, or predation? How long does it take for populations to rebuild to pre-spill levels?

This central question became the basis of the Nearshore Vertebrate Predator project, a six-year $6.5 million effort conducted by the Alaska Biological Science Center of the U.S. Geological Survey in cooperation with scientists from NOAA and the University of Alaska Fairbanks. This team of scientists sought answers to the fundamental question about oil spills: how long does oil persist in the environment and does it continue to impact wildlife?

Researchers narrowed their study to four species injured by the spill: two fish eaters (river otters and pigeon guillemots) and two species that feed on shellfish (sea otters and harlequin ducks). All four species are long-lived and spend most of their time in the nearshore environment.

The risk of oil exposure is greater for animals that eat invertebrates, such as clams and mussels, because they concentrate hydrocarbons. Fish, on the other hand, metabolize hydrocarbons quickly and, thus, don't concentrate them.

The NVP research team split up into groups studying each of the four species. They maintained two research sites, one in an area that was heavily oiled in

1989 and the other in an area that saw very little or no oil. In this way they could compare results from oiled areas to non-oiled areas.

Animals were captured, weighed, measured, aged, and had blood samples taken. Before being released some harlequin ducks and sea otters had transmitters attached to allow researchers to follow their movements and to indicate death should that occur.

The NVP research team concluded in 1999 that continued oil exposure appears to be through a diet of invertebrates and, possibly, by grooming or preening. This can come from mussels left untreated after the oil spill or other intertidal and subtidal invertebrates from the sea floor. Oil on shorelines or in the nearshore water column may also be a source of contamination, getting onto an animal's fur or feathers.

"The collective evidence supports the hypothesis that patchy, persistent oil in the sound is still being sufficiently mobilized some 10 years post-spill to constrain recovery within the nearshore ecosystem," the NVP final report concludes.

"It is apparent that we are no longer studying populations under acute stress, but rather that components of the invertebrate-based nearshore community are still under chronic, but decreasing levels of stress. This stress is observed not at a regional level where both sea otters and harlequin duck populations are stable or growing, but in those areas of the sound most heavily oiled by the 1989 *Exxon Valdez* oil spill and examined under the NVP study."[105]

Winter survival of harlequin ducks down

After banding or placing transmitters on more than 700 harlequin ducks, researchers were able to determine that winter survival for adult females differed significantly when comparing oiled to unoiled areas. Research during the winter of 1995-1996 showed that 94 percent of the females survived in unoiled areas compared to 77 percent survival in oiled areas of Prince William Sound. Over time, in the absence of immigration, this could result in significant reduction of harlequin ducks in western Prince William Sound.[106]

Alaska Predator Ecosystem Experiment

Forage fish and seabirds in the Gulf of Alaska

Common murres, black-legged kittiwakes, harbor seals, and Steller sea lions are examples of apex predators, fish eaters at or near the top of the food chain. Declines in these and other apex populations have occurred in the Gulf of Alaska since the 1970s. At the same time, the gulf has undergone a drastic change in the type and abundance of forage species, such as herring, capelin, sand lance, shrimp, young pollock and juvenile cod.

The Alaska Predator Ecosystem Experiment (APEX) began in 1994 in an effort

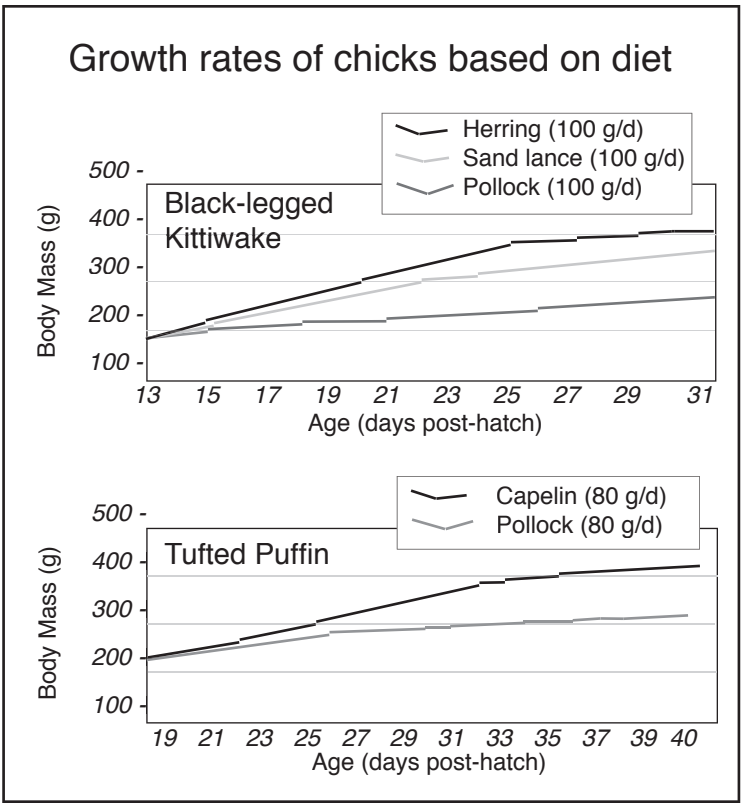


Figure 5.6. The energetics of forage fish play an important role in the growth rate and survival of chicks. In a controlled experiment, black-legged kittiwake chicks fed herring and sand lance grew more than twice as fast (measured by body weight) as chicks fed the same amount of pollock. At the same time, tufted puffins fed fat-rich capelin doubled the growth rate of those fed pollock, a lean fish. A similar experiment conducted separately found that pigeon guillemots (not graphed here) had similar rates of growth, responding strongly to herring compared to pollock.

to determine why some seabird species injured by the oil spill showed no sign of recovery. Such knowledge was seen as essential to undertaking biologically realistic recovery. APEX asked the basic question: How does food availability – the type and abundance of forage fish – limit the ability of seabirds to recover from oil spill injuries?

APEX researchers from NOAA looked back in history for some answers. Small-mesh trawl surveys, conducted annually since 1953, resulted in a strong database with nearly 10,000 individual sampling tows, collected over widely dispersed regions of the Gulf of Alaska. These data illustrate a massive change in the marine ecosystem, beginning in 1978. Warming waters resulted in a shift from an ecosystem dominated by shrimp to one dominated by pollock and cod. Within two years there was a complete reversal in dominance.[107]

Forage fish energetics

If the ecosystem shift forced a change of diet on seabirds, how does that affect egg production and survival of chicks?

APEX researchers measured lipid or fat content of forage fishes to determine how much energy they would provide seabirds that relied on them for the bulk of their diets. Lipid content of seabird prey ranged from 5 percent of dry mass (Pacific tomcod) to 48 percent of dry mass (eulachon, also known as hooligan). Of the fishes most commonly consumed by seabirds, juvenile herring, pre-spawning capelin, and sand lance had the highest energy content.

Controlled laboratory studies were conducted to understand better the nutritional difference between high-lipid and low-lipid fishes in the diets of black-legged kittiwakes. Kittiwakes fed a high proportion of sand lance and herring also had high growth rates and productivity. This compared to much lower growth rates and productivity in birds that consumed mostly pollock or cod. Kittiwake chicks required about 70 percent more pollock and cod to obtain the same growth rates as chicks fed herring and sand lance. A similar study conducted with pigeon guillemots had similar results.

These results show that productivity of kittiwakes and guillemots is strongly linked to the availability of three species of forage fishes: Pacific sand lance, juvenile herring, and capelin. These three species form schools near shore and have high energy densities compared with most other forage fishes, such as juvenile cod and pollock. Recovery of seabird populations injured by the oil spill will likely depend, at least in part, on increases in these key fish stocks. As a result of this information, the North Pacific Fishery Management Council strictly limited forage fish bycatch and prohibited new commercial fisheries on forage fish species.[108]

Halibut provide clues to forage fish availability

The availability of forage fish is both difficult to assess and expensive to measure. In an effort to find a cost-effective means of monitoring forage fish availability, the Trustee Council funded an experiment using halibut stomachs. Halibut sport-fishing guides were trained to collect stomachs from their daily catch and record when and where the halibut were caught. Preliminary results show that the stomach contents appear to correlate with the known schools of forage fish. Halibut caught in areas where seabirds are struggling had been eating mostly crab and shellfish. Halibut from areas with healthy seabird populations were feeding on forage fish. It is too early to know whether this will prove to be a good monitoring method, but researchers say the results are promising.[109]

Modeling

Using detailed data on the movement patterns and foraging behavior of

radio-tagged kittiwakes, coupled with extensive concurrent aerial surveys of fish schools, APEX researchers have developed a computer model designed to mimic the behavior of a foraging kittiwake. This model can be used to simulate the response of a foraging kittiwake to various patterns of food distribution and abundance. The model can then be used to estimate foraging success and ultimately predict the productivity and overall health of the seabird colony.[110]

Marine mammals

Transient killer whales carry contaminants

The orcas of AB pod are considered resident whales, meaning they remain for life as a group, travel within a predictable range, and feed mostly on fish. They stand in contrast to transient whales, which join and leave their transient groups unpredictably, travel more widely through the northern Pacific, and feed almost entirely on marine mammals. A transient group of orcas, known as the AT1 pod, also lost 11 of 22 members shortly after the spill.

Research within the spill region has shown that residents and transients are genetically distinct and that transients carry high levels of contaminants in their blubber. Pesticides, DDT derivatives, benzene, and PCBs (polychloro-byphenyls) found in the blubber of whales have traveled across the ocean from other areas on the globe where they're still used for agriculture and industry. Contaminants are passed along the food chain and, not surprisingly, transients, which eat higher up the food chain, have contaminant levels more than 10 times higher than resident whales.[111]

Harbor seal fatty acid analysis

As part of her research to understand why harbor seals in Prince William Sound were declining, Alaska Department of Fish and Game Biologist Kathy Frost needed to find out what seals were eating, and whether diets differed before and after the decline. When her study began, the only way to get that information was by examining stomach contents or scat. Both were hard to get. To overcome this problem, Frost teamed up with Sara Iverson at Dalhousie University. Iverson had pioneered a new process to analyze the fat in seal blubber.

Working together, Frost and Iverson found that harbor seals "are what they eat." The fatty acid signatures of the blubber can be matched with the fatty acids in herring, pollock, and other prey species to reveal an accurate picture of the seals' diets. Analysis of seal blubber from southeast Prince William Sound, for example, showed that seals at Channel Island were eating more herring, and seals at Stockdale and Port Chalmers ate more pollock. These areas are only five to ten miles apart, yet the seals are apparently eating different prey.

By studying historical data, Frost and Iverson also learned that seal diets were quite different 20 years ago than they are today. Dietary changes may have affected

Photo by Roy Corral

Electronic tracking devices, followed by sattelite, have taught researchers how far harbor seals roam and at what depths they swim in search for food.

the growth and survival of young seals, and caused the decline. "In the beginning, we weren't sure this technique would work," Frost said. "Now it is being used around the world for research on everything from seals to belugas."[112]

Chapter 5 Footnotes

1. Spies repeated this argument several times during the period when the Trustee Council was debating how best to use the Restoration Reserve.
2. Personal communication, Andy Gunther, May 23, 2001.
3. Natural Resource Damage Assessment (NRDA), 43 C.F.R. s11.32(a)(1)(ii).
4. The Trustee Council was given a synopsis of the coming 1993 Work Plan during its July 20, 1992 meeting. Spies gave his presentation about the Work Plan on September 14, 1992.
5. Trustee Council meeting transcripts, September 21, 1992.
6. *Governments' Memorandum of Agreement and Consent Decree*, August 29, 1991.
7. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 107, 42 U.S.C. ss 9601-9675 (1988).
8. Trustee Council meeting transcripts, January 19, 1993.
9. Annual audits, conducted by an independent auditing firm, go over the financial records for a selection of projects. Such audits are not standard for state and federal agencies, but the lack of an auditing system was pointed out by the General Accounting Office during its 1993 review of the restoration program. Annual audits began in 1995. It's also important to note that Charlie Cole, perhaps looking forward to predictable criticism that lawyers were gobbling up restoration monies, decreed early in the process that no state attorneys would be paid or reimbursed from the trust fund. The federal side of the council concurred and throughout the years of restoration spending, the cost of all legal counsel has been absorbed by trustee agencies. No money has gone to pay attorneys, although some travel expenses have been reimbursed.
10. Trustee Council meeting transcripts, February 5, 1992.
11. Anchorage Daily News, February 9, 1992, *Overbooked: Don't spend all spill money on studies.*
12. Trustee Council meeting transcripts, February 27, 1992.
13. Personal communication, Molly McCammon, Bob Spies, Andy Gunther, Stan Senner, various dates.
14. *Exxon Valdez Oil Spill Restoration Plan*, *Exxon Valdez* Oil Spill Trustee Council, November 1994, Pg. 17.
15. Interestingly, a Trustee Council sensitive to this issue included in the Restoration Plan the defensive statement that the above policy "affirms the practice that has been in effect since the beginning of the restoration process." Perhaps this was added due to the contrary public perception that trustees had been subsidizing agency budgets.
16. It should be noted that the GAO criticisms were written more than a year before a final Restoration Plan was completed. Policies concerning funding of normal agency management, however, were already frequently discussed among Trustees and adopted as general working rules for the Restoration Team. A complete discussion of the GAO report and the Trustee Council's response can be found in Chapter 3.
17. Trustee Council meeting transcripts, August 25, 1995.
18. *Exxon Valdez Oil Spill Restoration Plan*, *Exxon Valdez* Oil Spill Trustee Council, November 1994, Pg. 17.
19. Trustee Council meeting transcripts, December 11, 1995.
20. Lisa Rotterman, a marine mammal expert who worked on damage assessment studies, made this point while addressing the Trustee Council during the public comment period. She complained that she and other non-agency researchers were having their ideas stolen. Trustee Council transcript, September 14, 1992.

21. Rotterman read portions of the letter into the record as part of her testimony. Trustee Council transcript, September 14, 1992.

22. Trustee Council meeting transcripts, September 21, 1992.

23. Subsequent audits showed that 13.8 percent of Fiscal Year 1993 funds actually went to private contractors.

24. Restoration office document, "Research, Monitoring and General Restoration Project Funding," prepared for the GAO in 1998, based on annual audits.

25. When reviewing the 1992 Work Plan, the Trustee Council approved a $500,000 placeholder to pay for peer reviewers for the coming year. That compared to $2.2 million budgeted for peer review the previous year under a much wider damage assessment program.

26. Trustee Council meeting transcript, September 14, 1992.

27. Personal communication, Charles Peterson, January 24, 2002.

28. Personal communication, Joe Sullivan, January 24, 2002.

29. Personal communication, Stan Senner, January 23, 2002.

30. Trustee Council meeting transcripts, April 27, 1992.

31. Frank Rue, Commissioner, Alaska Department of Fish and Game, speaking at the "Legacy of an Oil Spill" conference to mark the 10th anniversary of the spill. This is available on video through the Alaska Resources Library and Information Services (ARLIS www.arlis.org).

32. Based on the *Restoration Plan*, November 1993, and subsequent Updates on Injured Resources and Services, September 1996, February 1999, and August 2002. A chart showing how the recovery of species progressed or regressed during each update can be found in Appendix E.

33. Trustee Council meeting transcript, January 22, 1999.

34. Due to a zero tolerance policy concerning oil mixing with commercially caught salmon, most fisheries in the spill region were canceled in 1989. In the case of sockeyes, this meant that too many fish were able to enter the rivers to spawn. Too many fry hatched in the nursery environments of Kenai and Akalura lakes, and resulted in overgrazing the food supply. This is why the sockeye salmon injury is isolated to those two river/lake systems.

35. During the summer of 1994, an Alaska jury awarded 18,000 private plaintiffs in a class action suit against Exxon punitive damages of $5 billion. An appeals court has since reduced the amount to approximately $1.65 billion, but as of this writing no settlement has been reached.

36. *Draft Update on Injured Resources and Services*, Trustee Council, April 10, 2002.

37. Trustee Council meeting transcript, June 14, 2002.

38. Alaska Geographic, *Restoring Alaska: Legacy of an Oil Spill*, Vol. 26, No. 1.

39. Memo to EVOS Trustee Council, July 1, 2002.

40. *Update on Injured Resources and Services*, Trustee Council, March 1999.

41. Trustee Council meeting transcript, June 14, 2002.

42. Memo to EVOS Trustee Council, July 1, 2002.

43. Trustee Council meeting transcript, August 6, 2002.

44. Memo to EVOS Trustee Council, July 1, 2002.

45. Trustee Council meeting transcript, January 22, 1999.

46. Anchorage Press, September 25, 1997, *First do no more harm: Restoration of the Sound begins with habitat conservation*, by David Grimes.

47. Rick Steiner was the most visible activist in the post-spill era. As media from around the world descended upon Prince William Sound after the spill, no one proved more skilled in showing reporters the human side of the spill.

He was a commercial fisherman with a marine science background. He had the combination of intelligence, new ideas, passion, energy, and on-camera presence that made him a favorite among reporters. Steiner was among the first to advocate an early settlement with Exxon, with the money to be split evenly between habitat protection and scientific research. He had made such a proposal to Wally Hickel within days of Hickel's surprise election as governor. Steiner, however, advocated a $2 billion settlement, hoping to reserve at least $1 billion for his primary objective, to save the forests of Prince William Sound. When the final restoration fund turned out to be less than $1 billion, Steiner maintained his focus on the treed horizon. He felt the Trustee Council could no longer afford the luxury of research when it had so little to spend on habitat protection, a tool he considered more effective in the long-term restoration of the spill region. He worked effectively with Congress and with reporters to keep pressure on the Trustee Council to acquire land and timber rights in Prince William Sound.

48. Anchorage Daily News, April 1, 1995, *Trustees waste time, money, coalition says: Group calls for investigation*, by Natalie Phillips.

49. At an American Society for Testing and Materials symposium in Atlanta, Georgia, Exxon and government scientists debated the lasting effects of the oil spill. Although Exxon wasn't claiming complete recovery at the time, most of the Exxon reports stressed the substantial improvements in Prince William Sound. Anchorage Daily News, April 17, 1993, *Oil spill report is rosy: Exxon scientist says shore life increased*, by David Whitney. Also, *Exxon Valdez Oil Spill: Fate and Effects in Alaskan Waters*, ASTM STP 1219, American Society for Testing and Materials, 1995.

50. ExxonMobil website and Alaska Geographic, Vol. 26, No.1, *Restoring Alaska: Legacy of an Oil Spill.*

51. BioScience Vol. 46 No. 8, *Oil, Seabirds, and Science: The effects of the Exxon Valdez oil spill*, pp 587-597, by John Wiens.

52. Personal communication, Andy Gunther, Bob Spies, Charles (Pete) Peterson, George Rose, May 23, 2001.

53. Personal communication, Charles Peterson, January 24, 2002.

54. Personal communication, Bob Spies, January 22, 2002.

55. Letter to Steve Pennoyer, from Bob Spies, April 21, 1993.

56. American Scientist, March-April 1995, *Muddy Waters*, by Julia K. Parrish and P. Dee Boersma.

57. Anchorage Daily News, April, 30, 1993, *Spill science doubted: Little resolved at forum's end*, by David Whitney.

58. Associated Press, as printed in the Juneau Empire, February 1, 1993, *Hundreds of scientists, lawyers gather to review Exxon disaster.*

59. Anchorage Daily News, May 4, 1993*, Exxon forum: Now we're really confused about Prince William Sound*, editorial.

60. Jeff Short, EVOSTC Restoration Workshop, January 2002

61. Anchorage Daily News, January 31, 2002, *Oil remains, appears to be affecting wildlife recovery*, by Jeff Short.

62. Anchorage Daily News, January 31, 2002, *Recent study exaggerates; sound is healthy as ever*, by David. S. Page.

63. Anchorage Daily News, February 3, 2002*, Prince William Sound oil study critic's fraud charge is unfounded*, letter to the editor.

64. Anchorage Daily News, February 3, 2002*, Critic of oil spill study attempts to discredit government science*, letter to the editor.

65. Anchorage Daily News, February 3, 2002*, Author's rebuttal doesn't make oil study any less flawed, biased*, letter to the editor.

66. National Marine Fisheries Service, *Scientific Review of Auke Bay Laboratory Residual Oil Study*, July 2, 2002.

67. The Anchorage Daily News editorial, October 8, 2002, *Exxon's science: Attack on government research was unfounded.*

68. Peninsula Clarion, November 22, 1998, *Alaska scientists challenge Exxon findings*, by Shana Loshbaugh. The information on this confrontation between Short and Exxon scientists is derived entirely from the news report by Ms. Loshbaugh.

69. *An estimate of the annual input of natural petroleum hydrocarbons to seafloor sediments in Prince William Sound, Alaska*, Page, D.S., et al, Marine Pollution Bulletin, Vol. 34, No. 9, pp. 722-749, 1997

70. Peninsula Clarion, November 22, 1998, *Alaska scientists challenge Exxon findings*, by Shana Loshbaugh.

71. Peninsula Clarion, November 22, 1998, *Alaska scientists challenge Exxon findings*, by Shana Loshbaugh.

72. 18 AAC ss70.020.

73. Alaska Coastal Currents, newspaper column and radio series, by Jody Seitz. A technical summary of this work can be obtained through ARLIS.* Request project 00454 Weathered Oil.

74. *Restoration Planning Following the Exxon Valdez Oil Spill, August 1990 Progress Report,* Pg. 7.

75. Trustee Council Transcripts, January 31, 1991.

76. See the illustration (Pg. 188) for information on the three major ecosystem projects funded by the Trustee Council.

77. Adaptive management was borrowed from the book, *The Compass and the Gyroscope*, by Kai Lee.

78. Restoration Update, Summer 1999, *Exxon Valdez* Oil Spill Trustee Council.

79. Voice of the Times editorial, *It's no whale jail*, December 12, 1993.

80. Anchorage Daily News, *Steller opportunity: Research funds bail out Seward's struggling Alaska SeaLife Center*, May 27, 2001, by Tom Kizzia.

81. Trustee Council meeting transcripts, November 2, 1994.

82. The Alaska Legislature provided $12.5 million from the state's share of the criminal restitution, and fundraising provided another $6 million. The remainder came from the sale of bonds through a non-profit group associated with the City of Seward , resulting in substantial debt payments each month.

83. Anchorage Daily News, *Steller opportunity: Research funds bail out Seward's struggling Alaska SeaLife Center*, May 27, 2001, by Tom Kizzia.

84. Anchorage Daily News, *Steller opportunity: Research funds bail out Seward's struggling Alaska SeaLife Center*, May 27, 2001, by Tom Kizzia.

85. Damage assessment studies covered at least 42 species, biotic communities, or other natural resources.

86. Personal Communication, Phil Mundy, February 21, 2001.

87. The Trustees dedicated $129 million to research, monitoring and general restoration over an 11-year period. In addition, the Trustee Council provided another $42.2 million to build a museum in Kodiak, archaeological exhibits throughout the spill region, the marine laboratory portion of the Alaska SeaLife Center in Seward, hatchery improvements in Port Graham, and disposal facilities at most remote communities for proper handling of waste oil and other hazardous wastes. *2001 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

88. This figure is based on expenditures through Fiscal Year 2001, as detailed in the *Invitation to Submit Proposals for Federal Fiscal Year 2002*, February 2001, *Exxon Valdez* Oil Spill Trustee Council.

89. *1998 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

90. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, also known as *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

91. Alaska Coastal Currents, newspaper column and radio series, by Jody Seitz, *Hatchery pinks earmarked for a manageable return*, February 8, 1998. A technical summary of this work can be obtained through ARLIS.* Request projects 186/Pink Salmon Coded Wire Tagging and Recovery in PWS and 188/Otolith Thermal Mass Marking.

92. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

93. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 320/Sound Ecosystem Assessment.

94. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 195/Pristane Monitoring in Mussels.

95. Alaska Coastal Currents, newspaper column and radio series, by Jody Seitz. A technical summary of this work can be obtained through ARLIS.* Request project 94255/Cook Inlet Sonar.

96. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 366/Remote Video and Time Lapse Recording.

97. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, also known as *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 139A1/Little Waterfall Barrier Bypass Improvement.

98. *1998 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 139A2/Port Dick Creek Spawning Channel.

99. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 320/Sound Ecosystem Assessment.

100. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 320/Sound Ecosystem Assessment.

101. Alaska Coastal Currents, newspaper column and radio series, by Jody Seitz. A technical summary of this work can be obtained through ARLIS.* Request project 162/Disease Affecting Declines.

102. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

103. Following the spill, several samples of hardened tar and asphalt were removed from Prince William Sound beaches. Subsequent analysis showed that some of those samples were not from the *Exxon Valdez*, but had been on the beaches since the 1964 earthquake and tsunami. The tsunami washed several large oil tanks into the sea. More than 25 years later, hardened chunks of this oil could still be found on beaches, suggesting that *Exxon Valdez* oil will also be found for decades to come.

104. Ten years after the spill, oil could still be found in mussel beds in at least 30 sites in Prince William Sound. Oil is also scattered on and under the surface at many locations in the western portion of the sound. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, also known as *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

105. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 025/Nearshore Vertebrate Predators.

106. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, also known as *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request projects 025/Nearshore Vertebrate Predators and 427/Harlequin Duck Monitoring.

107. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 163/Alaska Predator Experiment.

108. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 163/Alaska Predator Experiment.

109. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 163/Alaska Predator Experiment.

110. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request project 163/Alaska Predator Experiment.

111. Alaska Coastal Currents, newspaper column and radio series, by Jody Seitz. A technical summary of this work can be obtained through ARLIS.* Request project 012/Killer Whale Investigation.

112. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council. A technical summary of this work can be obtained through ARLIS.* Request projects 064/Harbor Seal Monitoring, Habitat Use, Trophic Interactions and 117/Harbor Seal Blubber and Lipids.

* Alaska Resources Library and Information Services (ARLIS) is a coalition of natural resource libraries, including the former Oil Spill Public Information Center. Information on ARLIS can be found at www.arlis.org.

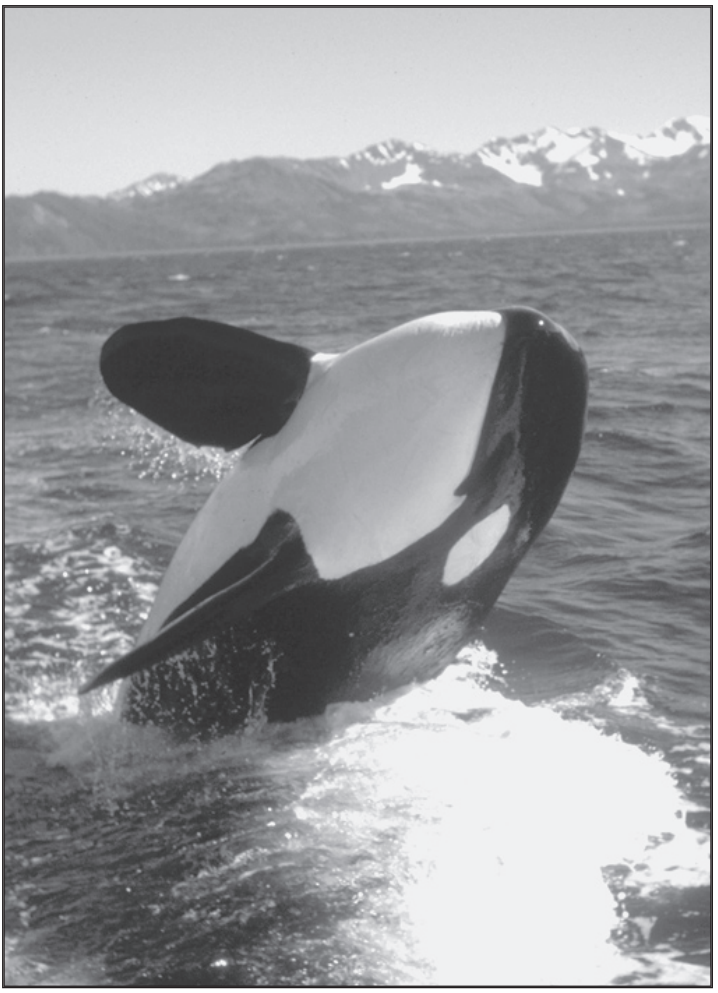


Photo by Roy Corral

Transient killer whales have been shown to have high levels of contaminants in their blubber.

Photo by Roy Corral

Chapter Six

Public Involvement

Introduction

When the General Accounting Office in 1993 criticized the lack of public involvement in the restoration programs, some trustees considered the point laughable. It caused Attorney General Cole to respond that "we're choking, absolutely choking on public participation."[1]

This is one area the Trustee Council never shorted and, likely, could not have quelled if it wanted to. There was nearly $700 million at stake and the public wanted its say in how the money would be spent. At the time of the GAO report, the Trustee Council had just finished conducting 22 public meetings throughout the spill region and had tabulated more than 2,000 written and oral comments about spending priorities. It had a strong 17-member Public Advisory Group and it opened itself to public comment on any topic at every turn. Meetings were advertised throughout the spill region with a standing offer to tie in any member of the public free via teleconference who wished to listen to or participate in the meeting. Collect calls were accepted, even from marine operators tying in fishermen, and toll free numbers were set up for calls coming from Alaska and the Lower 48. This kept the proceedings open to anyone who could get to a telephone, whether they lived on an island in Prince William Sound or over the pass on the Kenai Peninsula. The door to the restoration effort was always open.

Yet, there is a big difference between seeking public comment or advice and providing "meaningful public participation" as is required by the settle-

ment. Individuals and user groups within the spill region grabbed hold of that promise of meaning to their participation and fought for greater involvement in the day-to-day restoration efforts. Like so many other aspects of the restoration program, the outflow of information and the development of innovative programs to provide added meaning to the public took time to develop. It wasn't until 1994, for example, that the Trustee Council began explaining its programs and its progress through a quarterly newsletter and an annual report. But, the public component of the oil spill restoration effort became more innovative, varied, and wide spread over time.

When the GAO returned in 1998 to investigate Trustee Council spending and procedures, auditors told Executive Director McCammon that, if anything, the Trustee Council had "too much" public participation in the process. "I told them I could stand being accused of that at any time," she said. "That one I don't mind."[2]

In the book *Conservation Trusts*, authors Guenzler and Fairfax referred to the restoration fund as the "900 pound gorilla" of public trusts and concluded that the "publicity is so intense, the land and resources so spectacular, the ethical issues so profound that it is hard to view the . . . Trustee Council as a model." Given that description, it's understandable that public participation necessarily went well beyond the common roles of observation and comment. In the arena of public accountability, the authors noted that the Trustee Council was "charting new territory."[3]

"And while their efforts have been diverse and imaginative, their success has been spotty," they wrote. "(P)ublic involvement is significantly different from equivalent programs run by the government agencies that make up the council. Even if many (Trustee Council) efforts turn out to have been worthy experiments, its programs will still have been instructive."

Diversity rather than consensus

In his first report to the Trustee Council, Brad Phillips, the newly elected chairman of the newly formed Public Advisory Group, had a little fatherly advice for the trustees.

"(W)hen I was much younger and before I had any children, I had a philosophy of education where you would advise your children not to accept on face value everything that's told to them in the schools and to always question and to have their own opinions," Phillips said. "And I did this. I followed this with my daughter and I found out that I created my own monster because she rarely agreed with me on those things which I thought were pretty important to believe. You may have created your own monster with the public advisory committee because there are 17 completely different people with different ideas, and I hope as a parent group you will have some of the consideration and tolerance of what

you're going to get out of this group. I've found already in two meetings that they are not bashful at all in their opinions."[4]

Phillips cautioned that he would try to bring the group to consensus, but that the personalities and perspectives of its members would make that a difficult task.

With this introduction, the Trustee Council knew it had in the Public Advisory Group (PAG) the mix of interests and opinions that it wanted. Consensus was not the goal. It was more important, trustees thought, to have a mechanism to receive informed feedback from all corners of the spill region and from all user perspectives. Equally important to the Trustee Council was the hope that the Public Advisory Group would serve as a direct link or conduit to the communities and interest groups represented, passing on their knowledge of the restoration planning effort and, in this way, help keep the spill region informed.

Consensus was not expected, nor was it encouraged. The Trustee Council consciously made this choice when it debated the make-up of the PAG. It was thought that a large advisory group would provide a broad sounding board for restoration ideas and programs, but the responses would be varied and difficult to interpret. A smaller group, on the other hand, would be more likely to reach consensus on issues. Given this dichotomy of philosophy, the trustees decided bigger was better.[5]

Trustee Curtis McVee pointed out that the council's public advisors would be most effective in helping establish policy and guidelines rather than dipping into the minutiae of restoration proposals and activities. But Steve Pennoyer and Mike Barton were quick to add that there will be no stopping this wide-ranging group from offering its opinions on every facet of restoration. The group, individual members, and coalitions within the group will advise on any issue that piques their interests.

The Trustee Council originally established a 15-member group representing 12 special interests with three public-at-large seats. It later added two additional public-at-large positions. Two ex-officio members were also named to the group to represent the Alaska House and Senate.[6] The interest groups identified for representation included:

Aquaculture	Local government
Commercial fishing	Native landowners[7]
Commercial tourism	Recreational users
Conservation	Science/Academic
Environmental	Sport hunting and fishing
Forest products	Subsistence

Of course, one person could easily satisfy two or more of the special interests on the list, thereby allowing each interest to be covered and, at the same time, providing a smaller group for consensus building. Such an idea was quickly rejected. Broad representation on the PAG had insulating value for the trustees.

Cole pointed out that "we're less subject to criticism from any particular interest group" because each would have a chance to have its say through a representative on the PAG. A broader group also serves to balance out the views so that no one group has a disproportionate voice, Cole said.[8]

For Cole, this may have been a lesson learned from his experience with the original doomed settlement with Exxon. That agreement fell apart largely due to public opinion and the overwhelming pressure placed on the court, Congress and the Alaska Legislature by various interest groups from inside and outside the spill region. The public, the politicians, and the media were completely shut out of negotiations and kept in the dark about the parameters and the details being discussed. When the settlement was finally released, it had no public foundation on which to stand. Government negotiators worked endlessly to shore it up, but without solid support, the winds of public discontent brought it crashing down. One can easily imagine Cole reliving that experience as he told his fellow Trustees: "I just think it's a big mistake if we don't listen closely to these interest groups. To try to make an end run for whatever good purposes . . . would be a mistake. Because if we don't listen to these people, they will find some mechanism to make their voice heard, and it's best to have them follow along in the process."[9]

Creating the Public Advisory Group

The mandate of a public advisory group came directly from the Memorandum of Agreement between the federal and state governments. It called for "meaningful public participation . . ., which shall include establishment of a public advisory group." Such advisory boards are commonplace in both federal and state governments and are frequently used to provide advice on the management of natural resources, including parks, forests, fish, and game.

The formation of the advisory group is subject to the Federal Advisory Committee Act (FACA), which provides general guidelines for formation of such public groups. Nominations are therefore sought from the public through a formal process that includes notice in the Federal Register.[10]

After advertising throughout the spill region, the Trustee Council received 31 nominations for 15 positions.[11] The response was disappointing. Trustees and staff members alike expected to receive a hundred nominations or more. Each of the trustees, however, felt the high quality of the applicants made up for the low quantity.

The low number of nominees did not make the selection process any easier. What should have been a one or two hour selection process fizzled into a three-month debate that spanned four meetings. It fell apart for policy and technical reasons as trustees struggled to create a selection process that they considered fair, legal, and broadly focused.

Rather than make the initial selection in executive session, as was planned,

Cole argued that perhaps selections should be done in the open. It was a close call. They would essentially be making personnel decisions, reviewing job history, performance, and letters of recommendation for each nominee. This is usually done in executive session. But they were choosing representatives of the public. Didn't the public, therefore, have a right to hear the arguments pro and con for each nominee? Cole feared that if selections were made in secret, the public would not trust the choices and lose faith in the process.

Trustee John Sandor considered it an embarrassment that the trustees had placed selection of the PAG on the agenda, yet couldn't even agree on a method for making the selection. The selection was tabled, even though it meant the PAG would not be seated in time to adequately review the proposed 1993 work plan.

At the next meeting, the selection of the PAG was again delayed, this time for legal reasons. Trustees were advised by a DOI attorney that they might need conflict-of-interest statements from each of the nominees before making a selection. Finally, on August 31, 1992, trustees quickly and efficiently discussed and named the representatives for most of the interest groups. They stumbled, however, as they considered the public-at-large nominations. At issue, once again, was whether representation on the PAG was broad enough to include adequately those people who did not have a special interest perspective. Although the council did not discuss specifics of this concern on the record, the move was interpreted by many as an attempt to stack the Public Advisory Group against habitat protection. Since most of the interest groups favored the idea of buying land to protect it, more at-large positions had to be added to avoid any possibility that a unified PAG could force the issue. During the following meeting on September 14, 1992, the Trustee Council increased the number of public-at-large seats to five in order to create better geographic and philosophic balance in the group. It filled each of the positions and the membership of the PAG was finally decided.

It is interesting to note that the trustees once naively expressed the hope that the PAG would be seated and meeting by mid-January, just six weeks after the first Trustee Council meeting.[12] Like so many expectations of the Trustee Council, this was unrealistic. Instead, it took 11 months. And, the delays beyond what should have been realistic were of its own making.

Public Advisory Group: "live scenery"

The high level of public and political interest in the role of the Public Advisory Group was evident at the first meeting when two of Alaska's three-member Congressional delegation made appearances. Congressman Don Young and Senator Frank Murkowski each spoke briefly before the group, as did State Senator Arliss Sturgulewski, who had earlier been the Republican nominee for governor. Trustees Cole, Sandor, and McVee were each in attendance.

The trustees honestly expressed the troubles they faced and asked for the

PAG to step in and help guide them with their advice. McVee said that "trustees are very aware of the criticism leveled by many members of the public and the national and local media on the lack of progress that has been made and . . . the level of money being spent for administrative support." [13] He discussed the agency domination of the process and the potential for agency bias. Cole admitted that the Trustee Council had struggled considerably during its first year and he was concerned things were getting overly bureaucratic. There seemed to be almost a sense of relief on the part of trustees that they had a group with whom they could share some of these burdens, even though they would not share the decision-making.[14]

Sharing the burden of restoration brought with it a different kind of discomfort. The Public Advisory Group, with its diversity of background and opinions, was never happy with its supporting role – at least during its first few years. Frustrations were frequently expressed within the group and sometimes by the group itself that its role was poorly defined and its advice often ignored. Chairman Phillips once compared the members of the PAG to supernumeraries in a staged opera, a supporting cast without a singing role, considered part of the "live scenery."[15]

Phillips complained that there was not enough communication with the PAG on important issues and that members were no longer showing up to meetings because they didn't feel it worth their time. One problem, he said, was that the group had no staff dedicated to help digest the material and provide more concise presentations. Meeting packets were overwhelming (his latest weighed 16 pounds) and there was never enough lead time to absorb the information. Phillips also said PAG requests and recommendations to the Trustee Council were often ignored or rejected. Several members, he said, were angered that they had to read about habitat acquisitions in the newspaper and were not consulted or informed before hand.

"I think (members) will spend the time that's necessary, if they feel that it's doing something, that somebody is listening or that it's contributing," he said. "Many of us think that we'd rather not spend any time if it's just an exercise."

Phillips made these criticisms 18 months after the PAG was formed and five months after Jim Ayers established an independent office to run the restoration program. In that time period, the PAG met 10 times and reviewed two work plans, both of which were late, leaving little time for review. The two major habitat acquisitions – Kachemak Bay and Seal Bay – were done almost spontaneously and were as much a surprise to the staff and many of the trustees as they were to the PAG. Phillips saw in the new management an improvement, but not to the point of harmony. The PAG wanted more staff, better communication, less paperwork, and some sense that its advice was being taken seriously.

Frustration sets in

It's too strong to say that the PAG was set up to fail, but the group was, perhaps inevitably, set up for frustration. As a group, it experienced many of the same disappointments the Trustee Council was going through, but without the power to do anything about them. Everything seemed to move too slowly. There were few, if any, opportunities for immediate and direct restoration of the spill region. PAG members were suspicious of agencies controlling the work plan process. Finding agreement amongst the group was almost impossible on key issues. And in addition, the PAG started off with expectations considerably higher than the role the Trustee Council gave it.

Whereas the PAG originally saw itself as *the* arbiter of public opinion, the Trustee Council looked upon the group as one integral part of a much wider array of public input. It would take years before the group understood and accepted its role as a diverse pool of opinion rather than as a central clearinghouse for public input.

The PAG, for example, was at one time skeptical and even hostile to the concept of acquiring habitat. The majority of the group asked that habitat protection efforts include a policy that there be "no net loss" of private property in Alaska, meaning that they preferred land trades to land purchases. This was an idea that resonated with some trustees as well, particularly Sandor and Barton. But, given the overwhelming support for habitat protection through public comment and community meetings, the PAG's request clearly did not reflect the opinions of the public, in and out of the spill region.

A lack of understanding and impatience with the government process also became a source of frustration to some members. By definition, the Public Advisory Group did not contain a state or federal government perspective. FACA prohibited the inclusion of federal employees in the group and, by charter, all employees of trustee agencies were barred from participating. The trustees consciously decided that the advisory group should be made up of users of the spill region, not elected or government officials.

The public has rarely been understanding of the ways of government and the PAG was no exception. At its second meeting, for example, the PAG passed a resolution urging the Trustee Council to hire more private contractors within the spill region to work with researchers, supplying charters, services, and products. This is a reasonable and logical request from a citizen's perspective. Government agencies, however, already have reams of laws, regulations, and procedures to follow concerning purchase of goods and services. There was nothing the Trustee Council could do, except pass its own resolution in support of the idea.

Likewise, with many people still hurting economically from the spill, the idea of economic restoration remained strong amongst PAG members. Individual members, as expected, supported any restoration proposal that impacted their

community or interest group, regardless of whether it had a strong link to injured resources. Many of these proposals simply did not qualify under the settlement and would not pass scrutiny of the Trustee Council or the Department of Justice.

Twelve years after its inception, the overall effectiveness of the Public Advisory Group remains a matter of interpretation, subject to the expectations of the interpreter. There is no question that the Trustee Council – to a member – considers the group as a vital and effective component of the public process. The citizens who provided their advice, however, have a much more mixed view of their impact on the restoration process.

Pam Brodie, the Sierra Club activist who served eight years on the Public Advisory Group, said that as a parlayer of advice, the PAG was mostly ineffective. "People wanted to achieve consensus, but we were a largely disparate group politically," she said. "Any consensus achieved was mush."[16]

In effect, the PAG became unnecessary because the public had clear and easy access to the real decision-makers, the Trustee Council, Brodie said.

Without consensus, the primary purpose of the PAG was to create a group of 17 citizens super-informed on the ins and outs of the restoration process. But, this is only useful if those individuals return to their constituents and actively pass on the information. Relatively few of the PAG members did that, Brodie said. "Most didn't take seriously that they were supposed to be representing an interest group," she said. "Most were just there to give their opinions."

That in itself is useful, according to Chris Beck, a three-term member of the PAG representing the public-at-large. He compared the group to municipal commissions, which provide a valuable service even though the city councils get the final vote on most matters. Commissions and the PAG, he said, are less politicized and provide some cover for officials who must make a difficult or unpopular decision. The PAG did this concerning the building of archaeological repositories and the uses of the Restoration Reserve. At the same time, he said, the PAG could become a political force whenever it did reach consensus on an issue. "When consensus was reached, the Trustee Council could be much more confident that the vote reflects the public's desire," Beck said.

"I don't think it has been an overwhelmingly successful body," he added, "but I think on balance, it has brought value and has been worthy."

Funding for the future

The PAG's largest single contribution to restoration was its early and non-flinching support of an endowment. The group asked the Trustee Council to set aside $30 million a year to create a fund of $200 million or more to serve restoration long after the last settlement check from Exxon was cashed. It did not formally define a purpose for the long-term fund, but discussion within the PAG centered on the need for continuing research and monitoring for a period of

two long-term ecosystem cycles or an estimated 30-40 years.[17] The group did not formally endorse a use for the endowment due to opposition within the PAG by a minority who felt the option of habitat protection should remain open.

Even though the Draft Restoration Plan did not contain an option for an endowment, the PAG continued to push forcefully for one. With the support of Jim Ayers, the PAG prevailed. The Trustee Council established a Restoration Reserve by setting aside $12 million a year for nine years.

Six years later, as the PAG met to discuss the potential uses of the Restoration Reserve, it voted 11-5 to use the fund primarily for research and monitoring. Despite a strong push by the environmental community, which wanted 75 percent of the funds used for habitat protection, the PAG again prevailed. The Trustee Council dedicated most of the Restoration Reserve, at least $115 million in principal and interest, to long-term research, monitoring, and community-oriented restoration. The remaining funds from the habitat protection budget and leftover funds from previous work plans provided an additional $25 million that was dedicated for long-term habitat programs.

The human services

The Public Advisory Group was configured to represent a cross-section of the spill-area users, but for the most part, it also reflects the "human services" of commercial fishing, subsistence, recreation/tourism, and passive uses.

If the term "human services" seems less than clear, then imagine the confusion it generates among the people of the spill region. The term implies that the injury is not to individuals or to industries impacted by the oil spill, but to the ability of nature to service those people and businesses. It is reasoned that the natural resources of the affected region have long provided services to the human inhabitants and visitors who depend on those resources. Commercial fishermen, subsistence users, tourism operators, and anyone who recreates in the area touched by oil fall into a class of people affected by the injuries to natural resources, but are not themselves considered, at least by the restoration program, to be injured. This is important because it means that settlement funds cannot be directly used to benefit individuals or industries.

Such a distinction can be very fuzzy, especially for someone who continues to reel 13 years after the spill, maybe because commercial fishing permits in Prince William Sound have dropped about 85 percent in value since 1991 or because oil still remains on some shores once popular for subsistence harvests. Many people, if not most, feel that the injury is closer to home than the term human services implies, that the human injury hits at the individual, community, and industry levels.

The restoration program, however, was not set up to make individuals or industries whole again. Its focus is on the plants, animals, water, and sediments

which make up the injured environment. The primary recovery objective for each of the human services involves the recovery of injured resources and the ecological functions on which those services depend.

The Restoration Plan says that commercial fishing will have recovered when the commercial species of pink salmon, sockeye salmon, and Pacific herring again reach normal population levels and distribution. Criteria for subsistence recovery specifies the return of clams, harbor seals, Pacific herring, sea otters, and pink and sockeye salmon, as well as the return of confidence levels that these animals are safe to eat. Recreation and tourism will have recovered, not when the industry is again functioning in healthy economic terms, but when wildlife viewing, fishing, and hunting return to normal. Thirteen years after the spill, many sightseeing boats were bigger and carry more passengers than before 1989. Tourism in Alaska, including the spill region, has more than doubled since then. Yet, the viewing of killer whales, sea otters, harbor seals, and various birds may not be back to normal levels, hunting and fishing of some species remains restricted, and beaches that still contain oil are not hosting kayakers, campers, and boaters who previously would have used the area.

In addition to the three prominent human services, passive use of the area is also considered an injured service. It comes directly from the original contingent valuation study which documented a $2.8 billion sense of loss to the intrinsic value of knowing that places like Prince William Sound, Kodiak Island, and the Alaska Peninsula exist without oil tainting their shores and wildlife. This service is often overlooked because it has no organized constituency. Environmental organizations, when advocating spending for habitat protection, occasionally remind the Trustee Council about its obligation to restore this service, but for the most part, passive use is treated passively.

Just about every dime spent on restoration in some way benefits passive use because most projects boost public confidence that recovery is being helped along. The Restoration Plan points out that injuries to the aesthetic and intrinsic values are tied to public perception. Therefore, recovery will be measured by public perception that the wild lands and marine areas are no longer tainted by the oil spill. How this perception would be measured has never been determined, considering there is no real baseline other than the contingent valuation study. And duplicating that study for a proper comparison would cost far too much. Instead, the Trustee Council views its public outreach and educational efforts as a means to improve, although not measure, the public's confidence in the recovery of the spill region.

Commercial fishing

In the minds of many commercial fishers, the human service of commercial fishing and the fishing industry are one in the same. Many have argued strongly

that the fishing industry itself should be more directly aided in recovery, through such means as the "buyback" of fishing permits to reduce the size of the fleet, financial support of the hatchery programs, and direct payments to individual fishers. Such ideas have not been viewed favorably by trustees because they appeared to benefit the individual or the industry rather than the resource itself.

The plight of commercial fishing families, particularly in Prince William Sound, provides a good example of how restoration of "human services" often fails to heal the human injury from the spill.

In a 1997 presentation, Executive Director Molly McCammon pointed out that the focus of commercial fishing as a human service falls substantially short for an industry whose social fabric has been torn and whose members teeter on bankruptcy.[18] It is not clear how much of their continuing problems can be blamed on the oil spill – any connection is hazy, at best[19] – but commercial fishers make strong arguments that the spill was a catalyst for much of their economic troubles. The economic woes of the fishing fleet and fishing communities have been continuous now for more than a decade.

- Simultaneous with the oil spill was the emergence of farmed salmon on the world market and a subsequent drop in the price of pink salmon from a high of 92 cents a pound in 1988 to a low of 14 cents a pound in 1997.[20]
- Salmon seine permits in Prince William Sound peaked in value from 1989-1991, but by the 10th anniversary of the spill, had declined to about one-sixth of the peak value.[21]
- The hatchery program in the sound – the largest in the United States – was funded through the sale of returning hatchery fish. The low price of pinks was not enough to make expenses and the non-profit hatcheries faced possible bankruptcies.
- The complete collapse of the herring fishery (detailed in chapter five) has removed an important spring money-maker for fishing families who survive the winter with very little income.

The world market for salmon plays an important role in the recovery of the commercial fishing industry, yet there is nothing the Trustee Council can directly do to aid market research, advertising, or other means of boosting the industry's share of that market. Likewise, the injury is to the wild salmon stocks that are hatched from and spawn in intertidal streams, and not to the hatchery stocks which make up the majority of returning pink salmon in Prince William Sound. The council has been unable to provide direct benefits to the hatchery program, except through research which helps differentiate hatchery fish from wild fish.

So, even if pink and sockeye salmon have officially recovered from the effects of the spill (although herring has not), economic conditions do not reflect that recovery. "I can assure you," McCammon said, "it's a tough sales job to talk to a

near-bankrupt commercial fisherman and convince him that the Trustee Council program is successfully restoring the commercial fishing service."[22]

Whereas the Trustee Council's direct investments into commercial fishing as an industry have been limited by legal and policy constraints, the indirect benefits have been substantial. The main components of research and monitoring, general restoration, and habitat protection will have long-lasting benefits for the people of the spill region. Better management tools, new knowledge, protected salmon streams and shoreline, additional public recreation areas, and new laboratory and archaeological facilities, add up to a big impact, although not necessarily a direct one, for the people who live, work, and recreate in the area, as well as for those who are simply happy to know such wild places exist.

Public involvement

The restoration of subsistence, commercial fishing, and recreation/tourism – the injured human services – is discussed here under public participation because of the human context in which they must be considered. While the actual restoration of these services is tied mostly to the recovery of the injured resources on which they depend, the development and implementation of projects affecting human services requires extraordinary participation by the human users of the spill region.

Advisory boards, information campaigns, hearings, and comment periods are all normal channels in which government interacts with its public. Efforts to tie the public directly into the Trustee Council planning process, however, went well beyond the ordinary.

Credit here goes directly to the users of the spill region who insisted on being involved in the key decisions affecting their lives and their livelihoods. The rebellious blockade of the Port of Valdez by the Cordova fishing fleet opened the door to public participation in a way that was truly meaningful, unarguably satisfying the legal wording of the settlement. When the fishermen strong-armed the Trustee Council into starting an intensive ecosystem study in Prince William Sound focusing on pink salmon and herring, they also insisted on sitting at the planning table. Commercial fishermen joined fisheries managers and research scientists of different disciplines, meeting many times over a period of several weeks to develop a plan that satisfied their concerns. In this way, the fishermen not only got funding for their pet project, but became partners in the process.

Torie Baker, a commercial fisher and long-time member of the Public Advisory Group, remembered the planning meetings as very difficult, but ultimately satisfying. Bringing together representatives of different federal and state agencies, universities, and the Trustee Council was to set several bureaucracies in motion at the same time.

"Fishermen hate bureaucracies. It's our strength and it's our weakness," Baker

said. "Fishermen are practical, in-the-moment problem solvers. That's how we keep from sinking or getting hurt out there."

It was the job of each person sitting at the table to bring the various bureaucracies into harmony.

Baker and other commercial fishers at the table struggled to understand the ways and the language of scientists while making sure that any research delivered practical results for the fishing industry. The first thing they had to learn was that science does not move with the speed of a seiner encircling a school of salmon. The answers, they soon realized, were not going to come quickly, and nothing would be guaranteed. "It was a big learning curve for everybody," she said. "It was a real challenge for us to try and understand what the scientific process was."[23]

When the resulting Sound Ecosystem Assessment project was before the Trustee Council for funding, Baker told the six trustees that the experience was "unique, and probably one of the biggest turning points for a lot of us who have been impacted by the spill . . ."[24]

For the public to have a meaningful role in restoration of the spill region, it required more than public information, comment, and advice. The lesson from the development of the SEA project is that it required direct involvement by residents and users of the spill region.

The plan to restore subsistence to pre-spill usage and confidence levels would take this philosophy of involvement to new heights.

The subsistence plan

Subsistence users did not have to resort to protests to get the Trustee Council's attention, but they were heading down that same path of frustration and anger with the restoration process.

Shortly after McCammon joined the restoration office, she was invited to a meeting with the board of directors of the Chugach Regional Resources Commission, a non-profit arm of Chugach Alaska Corporation, the regional Native corporation operating in the Prince William Sound region. "They were talking about the oil spill and oil spill funding and the incredible amount of anger, hostility and frustration expressed at that meeting over the process . . . was truly astounding to me," McCammon told the Trustee Council in 1995, as she introduced an array of new subsistence projects for funding. "It definitely set me back, and I think what you see in this group of projects, and actually I think throughout the restoration program, is a reflection of a very intensive effort over the last two years to respond to that frustration and work with the communities much more closely."[25]

The Trustee Council that day endorsed a 4-pronged strategy for restoration of subsistence, developed after a year-long dialogue with Native residents of the spill region. The first and overriding step was to restore the resources on which subsistence users depend. Step two required the replacement or enhancement of

injured species, such as the seeding of clam beaches or planting of salmon in local streams. A third step included diagnostic tests of subsistence foods in an effort to reassure village residents that their wild meats and vegetation weren't tainted or contaminated by oil. The fourth, but congruent, step was to involve directly spill area communities in the projects that impact subsistence resources.

Community involvement, traditional knowledge

Martha Vlasoff, the subsistence representative on the Public Advisory Group, introduced the concept of a "community transfer of knowledge" to the Trustee Council. The idea was to bring together Native residents, who have a practical and holistic knowledge of their marine environment, with research scientists who approach their studies in a more linear and clinical way.

It was well known that oil spill researchers had large gaps in their pre-spill knowledge of some species. At the same time, community leaders were complaining that they were not being kept up-to-date on research that was taking place near their villages or involving species they depend on for subsistence. Communities also had their own ideas for restoration projects, but didn't have the expertise to apply for funding through the Trustee Council's competitive process.

Vlasoff recognized that these problems could be addressed to the mutual benefit of everyone by creating a "community involvement" program, designed specifically to improve the flow of information to and from Native communities in the spill region. At the same time, the program would assist scientists in tapping into the "traditional ecological knowledge" of village residents.

"Traditional knowledge" is a deep understanding of one's surroundings, based on know-how from years of experience, as well as insight passed down from generation to generation. It is more anecdotal than quantitative, based on observations over a lifetime rather than statistical analysis of data. To a historian trying to understand a particular community, for example, the traditional knowledge of families that have lived there for generations can provide important information. Similarly, a scientist trying to understand the movements of harbor seals or the locations of juvenile herring could glean valuable ecological information from the people who have lived closest to these animals for hundreds of years.

Vlasoff envisioned the program as "a multi-cultural partnership between the people who have subsisted off the land . . . for centuries, and the scientific community who have carried out detailed studies of the ecosystem since 1989, but have a limited scientific data base of the region prior to that time."[26]

Vlasoff's idea would soon be split into two distinct parts, one promoting community involvement[27] and the other advocating the use of traditional ecological knowledge[28] to assist western scientists with their studies. Both programs would be coordinated and administered by the Chugach Regional Resources Commission and funded by the Trustee Council.

The backbone of the community involvement program consisted of part-time liaisons hired in each of nine (later expanded to 10) communities who kept their communities up-to-date with restoration efforts and passed on local concerns and ideas to the restoration office. A full-time community coordinator was hired by the Native commission and housed at the restoration office.[29] When a community wanted funding for a restoration project, the liaison and coordinator would work with the local village council, government agencies, and the restoration office to develop a competitive proposal.

This program worked to varying degrees depending on the individuals and the communities involved, said Hugh Short, who served as community involvement coordinator from 1997-2000. Community liaisons were funded to attend meetings in Anchorage and learn how to access the various pots of money set up to assist communities in the spill region. Those who learned how to work creatively within the system managed to get more projects funded benefiting their communities.[30]

At least partially due to the community involvement effort, the number of subsistence projects grew from four in 1994 to 15 in 1997. For seven successive years, the percentage of funding dedicated to subsistence projects grew, rising from 3.0 percent in 1994 to 13.2 percent in 2000.[31]

Harbor Seal Commission

One of the first such projects resulted in the creation of the Alaska Native Harbor Seal Commission,[32] a consortium of subsistence hunters and traditional skin-sewers representing their villages and regions on a statewide planning board. The founders of the commission sought Native involvement in post-spill studies of the harbor seal as well as co-management of the species statewide.

They had plenty to be concerned about. The harbor seal is both a food staple of many subsistence communities and a cultural tie to Native traditions that span centuries or even millenia. Before the spill, harbor seals were clearly on the decline, dropping in population by about 80 percent in Prince William Sound over a 20-year period. In the midst of this decline, the oil spill killed an estimated 300 animals and created a one-year drop in population of about 43 percent in oiled areas compared to about 11 percent that year in unoiled areas.[33]

It made good sense to utilize Native hunters when it came to analyzing the overall health of the harbor seal population, for they were the only Alaskans that could legally harvest the animals. The harbor seal commission received funding for nine successive years to develop a biosampling program, using Native hunters to sample stomach contents, livers, blubber, and other organ tissues, as well as record the age and size of the animals. Native hunters in several communities were taught to take samples using laboratory-accepted techniques and freeze them for study.[34]

In 1999, the Native commission reached agreement with the National Marine Fisheries Service to take an active role in co-managing harbor seals.

Youth Area Watch

School children throughout the spill region were also taught the biosampling technique as part of Youth Area Watch.[35] This project, originated by the Chugach School District, places students in the field and laboratories to work side by side with scientists conducting oil-spill research. The idea, according to former superintendent Roger Sampson, was to give students a greater appreciation of the importance of science in their daily lives and encourage stewardship of the resources on which they depend.

"We originally thought it was going to be great to get kids in the field with scientists," Sampson said. "We thought it would be a healthy way to promote scientific concepts and science skills. But it's grown to be so much grander and bigger than that."[36]

Funded as a pilot project in Fiscal Year 1996, the Youth Area Watch quickly expanded to include more communities in the Prince William Sound area. The school district covering Kodiak Island has also started its own hands-on educational programs. Over the years, students have been involved collecting and analyzing blue mussels, dissecting herring, scientifically sampling harbor seal organs, taking oceanographic measurements, and conducting lab work at the Auke Bay Laboratory near Juneau. In addition to oil spill research, students must develop and conduct their own restoration projects benefiting their local community.

For many students, it has brought them closer to their elders and renewed their interest in cultural traditions. "For those students, the emphasis might be on sea mammals and culture and history and their own family, and how it all relates to community," Sampson said.

Spotty success

As Guenzler and Fairfax pointed out in their book *Conservation Trusts*, these imaginitive efforts to involve the public weren't entirely successful. The seed of traditional ecological knowledge (TEK), in particular, may have sprouted, but it never really blossomed.

There were a few researchers who tapped traditional knowledge at the same time they sought new data, but those instances were rare. Scientists were encouraged, but not required to involve communities as part of their projects. Many of the key studies were well underway or even winding down by the time the program got started. Some researchers over the years reported that they did not wholly embrace the concept of traditional knowledge. Others simply could not see how it would help in their efforts to study a particular resource. Many more felt that the process for including traditional knowledge was too structured, adding another

layer of tribal bureaucracy to an already overly cumbersome process.

During an early planning workshop to flesh out a mechanism for incorporating traditional knowledge, Dr. Henry Huntington, an expert in intercultural relations, advised his audience to keep it simple. It was important to create a road map to guide scientists toward traditional knowledge, not establish a bureaucratic obstacle course that discouraged them, he said.[37]

In the end, however, a Native-dominated committee wrote and the Trustee Council adopted a set of protocols for scientists that appeared more bureaucratic than streamlined. The protocols called for research proposals incorporating traditional knowledge to be reviewed by the TEK specialist, community involvement liaisons, and village councils. It instructed researchers to work out a thorough research agreement with each affected village council spelling out the terms and conditions of the research. Native viewpoints were to be included in the annual and final reports for that project. Researchers were encouraged to hire local community research assistants and provide training, if necessary. They were asked to conduct business in the Native language whenever appropriate, and consider the establishment of a Native Research Committee to review planning, progress, and conclusions.[38]

All of this, and a lot more, was in addition to the normal channels that researchers had to follow in order to satisfy their agency or university procedures as well as the many demands imposed by the Restoration Office.

If the TEK protocols appeared daunting to researchers, they also made many of the village councils uneasy. More than a year after the Trustee Council adopted the protocols, only one village council had ratified the agreement. The others were somewhat wary about the ownership of the information they would be providing, a concept known as "intellectual property rights." The concept grew out of the passing on of indigenous knowledge to pharmaceutical researchers working in equatorial regions. Corporations then used the information to make millions or billions of dollars selling prescriptions drugs, often paying little or nothing to the people who were the source of that knowledge. Realistically, such intellectual property rights concerns were very limited in the restoration arena, Huntington said. Of greater concern was the legal use of the information to be gathered.

"It's a question of how this information will be used and what format it will be presented and to whom," McCammon told trustees. "And I think their big fear is that they will be contributing towards the gathering of information that will be used to regulate against them."[39]

The trial-wary village councils, which had already seen Exxon win court orders for the release of data gathered under the promise of confidentiality, were cautious about opening themselves to further unintended review. McCammon was less than reassuring when she told village leaders that since the Trustee Council is a government organization, all of the information coming from publicly-funded

projects must be considered public.

"It got kind of out of hand when they were told that raw notes, raw cassette tapes, everything, you know, belongs to the public," Patty Brown-Schwalenberg, executive director of the Chugach Regional Resources Commission, told the Trustee Council. "You know, that scares people, frankly."[40]

A series of community workshops were held on the topic and over time, most of the village councils ratified the protocols. Brown-Schwalenberg reported on September 29, 1998, 22 months after the Trustee Council approved the protocols, that nine communities had ratified the agreement.

By that time, "we had missed the crest of the wave," Huntington said, looking back on the course of events. By the time TEK protocols were approved and ratified, all of the ecosystem-based science projects were already planned and underway. Many multi-year projects were in their final stages, with researchers analyzing data and forming conclusions. Most ongoing science projects were being conducted by researchers who had been doing oil spill work for years. Their routines were already set and there was very little interest in varying them to include a TEK component, Huntington said.[41]

The merging of traditional knowledge with western science did not take place in any substantial way, yet the introduction of TEK into the restoration program has raised awareness among scientists that there is another source of valuable information available to them. Huntington argues that it's not realistic to think that the program would break through racial, cultural, and philosophical barriers in a few short years. The hope, he said, is that TEK will not be a short term effort that, for the most part, did not bear fruit. It should be considered a long-term pursuit on a par with the Trustee Council's research and monitoring efforts for the rest of the 21st century.

Public outreach

The Trustee Council opened itself to public comment at every turn and actively sought public input into thick restoration documents, but it did not create an effective outreach program until 1994, after Jim Ayers took over as executive director.

He looked at the residents of the spill region and others following the restoration effort from around the United States as shareholders of a billion-dollar corporation. Keeping them informed was the first step in quelling shareholder unrest. He reached out to the public and the media in 1994, creating a forum and workshop to coincide with the 5th anniversary of the spill. At the same time, he established a newsletter and annual status report sent to a mailing list of 3,200 people in and out of the spill region who followed the restoration programs.

Under Molly McCammon, efforts to inform the public were expanded. She established the annual 3-day workshops which, in effect, provided a yearly

state-of-the-spill-region forum to help the media and the public stay current with projects and progress toward recovery. To help explain the enormous science program and the results of individual projects, the Trustee Council funded a 3-year effort which provided weekly reports to newspapers and radio stations. The independently produced program, known as Alaska Coastal Currents,[42] explained the research in two-minute segments, airing several times weekly on Alaska Public Radio Network stations. The program expanded to disseminate the same information through newspaper columns which were published weekly throughout the spill region.

For similar reasons, the Restoration Office produced a natural history series called the Restoration Notebook,[43] which featured the biology of, the injury to, and restoration activities involving species injured by the spill. The series was written in lay terms by the scientists in the field and included up-to-date information about their findings. The series covers harbor seals, killer whales, marbled murrelets, pigeon guillemots, sea otters, black oystercatchers, Pacific herring, bald eagles, and subsistence.

A wide-ranging website was created to help meet the needs of Ph.D. candidates researching their dissertations as well as third graders trying to understand the global impacts of fossil fuel consumption. Many thousands of individuals from around the world tap into the restoration website each month to get detailed information on specific projects and species or to learn about cleanup, public relations, legal issues, or any conceivable tie-in to the nation's most prominent oil spill.

Public interest in the restoration effort was expected to peak at the 10th anniversary of the oil spill. Media from around the world would once again descend on Prince William Sound to report on the lasting impacts of oil in the environment as well as in the psyches of those people who live in the spill region. A theme was chosen and plans started three years in advance of the 10th anniversary. "*Legacy of an Oil Spill: 10 Years After Exxon Valdez*" became the working title, complete with a logo, for the anniversary and everything leading up to it. A 10-year "report to the nation" and scientific conference had that title. A 30-minute documentary, a booklet providing straight-forward answers to frequently asked questions, and exhibits seen by a half-million people were each produced using that same theme and logo.

The world's media, as expected, began preparing for the story as far as a year in advance of the anniversary. Hundreds of newspaper, magazine, television, and radio journalists from 13 countries contacted the Restoration Office as part of their coverage. There was a marked difference between these news stories and just about anything written or said about the Trustee Council before 1995. Reporters referenced the rough start but mostly dismissed the stumbles as a new organization learning to walk before it could run. Once it got its footing, the progress made by the Trustee Council was self-evident. They had plenty to write and report about,

whether they focused on habitat protection, the science projects, or the current status of injured species.

OSPIC to ARLIS

By the fall of 1989, just months after the grounding, the Oil Spill Public Information Center (OSPIC) opened as a library clearinghouse of all things related to the *Exxon Valdez*. It was funded through the Department of Justice and contained spill-related materials from all perspectives. This library kept records of newspaper stories, videos, the Alaska Oil Spill Commission and National Transportation Safety Board investigations, and all public documents generated from the spill. Although it did not contain the results of studies being done for litigation purposes, librarians quickly gathered an impressive collection of reference material that could be found in the public arena. It became a valuable tool for reporters, lawyers, environmental advocates, and just about anyone curious about the oil spill.

After the settlement, the Trustee Council decided to maintain the collection as a long-term repository for *Exxon Valdez*-related material, including all of the scientific and economic reports generated through damage assessment studies. The continuing worldwide interest in the *Exxon Valdez* spill has resulted in a long-term commitment by the Trustee Council to keep the collection available to the public. The library is besieged by requests, usually from scientists, teachers, or students, especially at the beginning and near the end of each school year. An oil spill half way around the world will also bring a marked increase in requests for information.

The oil spill library joined with libraries from several other federal and state natural resource agencies in 1998 to become ARLIS, a nice acronym for the more unwieldy Alaska Resource Library and Information Services. The Trustee Council continues to fund a single librarian as part of the conglomerate library, but long-term plans call for the collection to be owned and maintained by the University of Alaska.

Footnotes
Public Involvement

1. Trustee Council meeting transcript, August 23, 1993.
2. Personal communication, Molly McCammon, April 20, 2001.
3. *Conservation Trusts*, by Darla Guenzler and Sally Fairfax, University Press of Kansas, 2000.
4. Trustee Council meeting transcript, February 16, 1993.
5. Ernie Piper, who led the Restoration Team in establishing the Public Advisory Group, pointed this out during the Council's second meeting, December 19, 1991. "(W)hat are you seeking from this group? If it is something like consensus, then a group of 18 of very, very diverse interests, some of which may be very polarized, you may have a very, very difficult time getting consensus and render the group useless. If the goal is access, you can have a very large, diverse group with potentially polarized interests because they would all have that access. And, they wouldn't necessarily be expected to . . . make political trade-offs amongst themselves to mollify decision-makers. They could just say directly what it is they wanted to do."
6. When Keith Golz, the Department of the Interior solicitor, spoke to the PAG at its first meeting, he tried to make the point that this large group is meant to encompass all major interest groups in the region. "Hopefully, there's enough concentric circles here that by drawing them around all of these views, we've included the entire public. That's the idea of this." Public Advisory Group meeting, October 29, 1992.
7. The trustees were subject only to the requirement that a Native corporation landowner be included in the mix, as per the legal agreement between Native landowners and the state and federal governments signed as a prerequisite to the final Exxon settlement.
8. Trustee Council meeting transcript, September 14, 1992.
9. Trustee Council meeting transcript, December 19, 1991.
10. The Trustee Council selects members from the list of nominees and forwards the names to the Secretary of the Interior for final approval. A charter was drawn up and approved by the Trustees, the Department of the Interior and the General Services Administration. Once the PAG is seated, a DOI employee must oversee the process and attend every meeting to ensure that FACA rules are followed. Federal Advisory Committee Act of 1972 (FACA), 41 CFR 101-6.
11. Trustee Council meeting transcript, June 29, 1992.
12. Trustee Council meeting transcript, December 5, 1991.
13. Trustee Council meeting transcript, October 29, 1992.
14. The trustees rejected an early proposal to have a PAG representative join the Trustees as a non-voting member. This was suggested by members of the public during hearings held to determine what role the advisory group would play in restoration planning.
15. Trustee Council meeting transcript, July 11, 1994.
16. Personal communication, Pam Brodie, May 21, 2001.
17. Trustee Council meeting transcript, Public Advisory Group report, November 30, 1993.
18. *Restoring Human Services: The Experience of the Exxon Valdez Oil Spill Trustee Council*, speech delivered at the Conference on Restoration of Lost Human Uses of the Environment, Washington, D.C., 1997, co-sponsored by the National Oceanic and Atmospheric Administration and the American Petroleum Institute.
19. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, also known as *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.

20. *Legacy of an Oil Spill: 10 Years After Exxon Valdez*, also known as *1999 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.
21. A jury in 1994 determined that few of the continuing economic problems could be traced back to the oil spill. The jury decided that any financial effects on fishermen after the 1989 fishing season, were not attributable to the spill, with the exception of the salmon seine fishing in Prince William Sound in 1992-93 and the herring fishery in 1993.
22. *Restoring Human Services: The Experience of the Exxon Valdez Oil Spill Trustee Council*, speech delivered at the Conference on Restoration of Lost Human Uses of the Environment, Washington, D.C., 1997, co-sponsored by the National Oceanic and Atmospheric Administration and the American Petroleum Institute.
23. Personal Communication, Torie Baker, February 21, 2001.
24. Trustee Council meeting transcript, January 31, 1994.
25. Trustee Council meeting transcript, August 25, 1995.
26. Trustee Council meeting transcript, June 1, 1995.
27. A technical summary of this work can be obtained through ARLIS.* Request project 052a/Community Involvement.
28. A technical summary of this work can be obtained through ARLIS.* Request project 052b/Traditional Ecological Knowledge.
29. Vlassoff, who originated the idea of community involvement/traditional knowledge while a member of the PAG, became the first coordinator of the project from 1995-1997.
30. Personal Communication, Hugh Short, May 21, 2001.
31. *2000 Status Report*, *Exxon Valdez* Oil Spill Trustee Council.
32. A technical summary of this project can be obtained through ARLIS.* Request project 244/Community Harbor Seal Sampling/Management.
33. Restoration Notebook, *Harbor Seals*, by Kathy Frost, published by the EVOS Trustee Council.
34. A technical summary of this project can be obtained through ARLIS.* Request project 245/Community-based Harbor Seal Biosampling.
35. A technical summary of this project can be obtained through ARLIS.* Request project 210/Youth Area Watch.
36. Alaska Coastal Currents newspaper column, August 17, 1997, by Jody Seitz.
37. Meeting notes, *Work Session on Traditional Ecological Knowledge: Developing Protocols*, April 9-10, 1996, opening comments by Henry Huntington, Ph.D.
38. *Protocols for Including Indigenous Knowledge in the Exxon Valdez Oil Spill Restoration Process*, Adopted December 6, 1996.
39. Trustee Council meeting transcript, February 14, 1997.
40. Trustee Council meeting transcript, December 18, 1997.
41. Personal Communication, Henry Huntington, May 14, 2001.
42. Alaska Coastal Currents radio program was written and hosted by Jody Seitz and produced by Steve Heimel, Alaska Public Radio Network. The newspaper columns were written by Jody Seitz and edited by Joe Hunt, EVOS Trustee Council.
43. The Restoration Notebook series is available through ARLIS or the Restoration Office. Topics include harbor seals, marbled murrelets, killer whales, sea otters, pigeon guillemots, Pacific herring, black oystercatchers, and subsistence.

Photo courtesy SeaWIFS Project,

Chapter Seven

The Future of Restoration

Introduction

There is so much hope and promise wrapped up in the Restoration Reserve that those connected with it are somewhat mystified by its potential. More than six years after leaving the Trustee Council to become chief of staff over Alaska's 16,000 employees, Jim Ayers said that he considers the establishment of the trustee's long-term savings account as the single greatest and most important achievement of his career.[1] He is not alone in his optimism. Current and former trustees, members of the Public Advisory Group, Executive Director Molly McCammon, Chief Scientist Bob Spies, peer reviewers, restoration researchers, commercial fishermen, and many members of the public have each expressed high expectations at the birth of an ecosystem-based research and monitoring program that is expected to outlive them all.

The Restoration Reserve itself is already history, having been split into two pots in 1999 with separate missions. The Gulf Ecosystem Monitoring and Research program, known as GEM,[2] is the largest and most intriguing of the two. This science-based program, funded with about $100 million, has been set up as a permanent endowment to continually take the pulse of the northern Gulf of Alaska. As envisioned, it will progress from restoration-centered needs to general ecosystem studies as the impacts of the oil spill wane with time. As such, it will become one of the best-funded permanent ecosystem programs anywhere on earth.

A National Research Council review of the GEM program called it "an

unparalleled opportunity" and said that it "has the potential to make substantial contributions of importance to Alaska, the nation, and environmental science."[3]

Another fund, although perhaps not as permanent, was established to provide annual income of $1 million or more to be used for acquiring and protecting habitat. The door remains open, however, for this $25 million fund to be tapped and entirely consumed some day if a unanimous Trustee Council should choose to acquire a large tract of land or use it for some other form of habitat protection.

It took three years to create the Restoration Plan for the 1989 oil spill – at least twice as long as anyone thought it would take – and the long process resulted in a firestorm of protests, bad publicity, and hard feelings on the part of many spill area residents. The planning process for dividing up the Restoration Reserve and implementing its science and long-term habitat programs took about five years. Although there was great public interest in how the reserve would be divided and used, the implementation of the programs has been followed mostly bt stakeholders, such as commercial fishers, scientists, Native organizations, and conservation groups. Both programs were initiated in October 2002, continuing the restoration efforts – and a lot more – after the final payment from Exxon was received and expended.

Only time will tell whether the expectations of the originators of these programs will be rewarded.

Establishing the reserve

Almost all of the early discussion about a long-term endowment was connected to issues of science. It was conceived under the belief that complete recovery from the oil spill will not occur for decades and, therefore, research and monitoring should continue long beyond the last settlement payment from Exxon. Early proponents of an endowment, including a strong majority of the Public Advisory Group,[4] commercial fishing groups,[5] U.S. Sen. Frank Murkowski, and Alaska Sen. Arliss Sturgulewski, who drafted the first marine endowment proposal,[6] were clearly banking on long-term science. When Ayers pitched his plan for a comprehensive balanced approach to restoration, he included an illustration that showed the habitat protection program ending by 2001 while research, monitoring and general restoration continued indefinitely in the form of the Restoration Reserve. His proposal, which would eventually be adopted, was to set aside $12 million a year for nine years, creating a reserve of $108 million plus interest.

The growing emphasis on a long-term research fund was a direction many environmental organizations were not happy about. The idea of setting money aside for a science-based endowment did not sit well with those people who believed strongly in the benefit of habitat protection. Rather than gamble on an unknown and nebulous benefit decades from now through science, they preferred the known benefit of acquiring and protecting habitat, particularly those forests

threatened with logging. To this group, the Restoration Reserve was a drain of money from their cause.

The Restoration Reserve, however, had powerful supporters. Sen. Murkowski took it upon himself in 1993 to introduce legislation that would have authorized the Trustee Council to create a "stewardship endowment," allowing better investment opportunities for a long-term fund limited to marine research.[7] The legislation was not successful.

Gov. Wally Hickel and Secretary of the Interior Manuel Lujan were also early supporters of the endowment concept,[8] although its purpose was poorly defined at the time. When Bruce Babbitt replaced Lujan in January 1993, the emphasis of the department also changed, moving strongly toward habitat and away from science. Babbitt had little interest in the idea of putting money aside for an endowment, even though he was in the process of boosting the biological sciences division of the department.

This is where Ayers played the key role in making much of the Restoration Plan come together. Hickel wanted the Restoration Reserve as well as funding for the Alaska SeaLife Center. Babbitt wanted a habitat protection program without having to fight the state trustees to get the job done. With Ayers playing the mediator, Hickel and Babbitt shook hands on a deal that gave both men what they wanted.[9] The Restoration Plan was finished. And the Restoration Reserve was born.

The reserve, however, was born without direction. As the council readied to vote to establish the reserve, the Department of the Interior's representative, Deborah Williams, balked at the suggestion that all of the money be specifically designated for research and monitoring.[10] The use of the reserve should be left open and flexible, she argued. Williams was sitting in for Assistant Secretary of the Interior George Frampton, Jr., who had earlier agreed in writing[11] that the focus of the set-aside would be science. The Trustees approved the reserve at their next meeting, unanimously and without discussion, leaving the door ajar for future arguments in support of a long-term habitat protection program.

Public preferences

Serious discussion about the use of the Restoration Reserve began less than three years later, in August of 1997, when Molly McCammon informally invited suggestions from the public. She hoped that over the following year, public comments would help shape a plan and lead to a Trustee Council vote before the 10th anniversary of the spill in March 1999.

McCammon followed closely the public process that led to the Restoration Plan, creating a newsletter that detailed the key questions and possible alternatives and mailing it widely throughout the spill region. Just as in 1993, public meetings were held in more than a dozen communities with the newsletter providing most of the key information and including an easy-to-use comment form.[12]

There was, however, one key difference between the 1993 process and the 1998 request for public comments – the advent of e-mail. While the newsletter and public meetings provided a healthy number of respondents, it paled in comparison to advocacy campaigns conducted by various groups hoping to overwhelm the process and tip the scales toward their favorite causes. The Alaska Center for the Environment, the Sierra Club, and the Rainforest Campaign each mounted e-mail campaigns advocating that 75 percent of the reserve be used for habitat protection. Grant Baker, a member of the faculty at the University of Alaska Anchorage and a commercial fisherman in Prince William Sound, personally mounted a campaign to have a restoration endowment set up and administered by the university. The Chugach Regional Resources Commission conducted a campaign the old-fashioned way – using petitions – in hopes of getting $20 million set aside specifically for community-based activities.[13]

By the time the Trustee Council made its decision, 2,432 comments had been received, more than two-thirds of which were generated by organized campaigns.[14]

The public was asked to address six issues:

Use: how the money should be split;

Location: what should be the geographic limits of the reserve;

Term: should the endowment be permanent or fixed for a period of 10, 20, or 30 years;

Governance: should the Trustee Council continue or should a new board be established;

Administration: should the program be managed by a government agency, by the current (but smaller) Restoration Office, or by a non-profit organization;

Public Advice: should the PAG continue, be reduced, or be eliminated.

The advocacy campaigns emphasized the use of the money, so not surprisingly, only 10-20 percent of the comments touched on other areas of concern. The final tally was that more than 50 percent of the people wanted most of the funds used for habitat; about 20 percent supported a $20 million endowment for community projects, and another 20 percent wanted to fund mostly science.[15]

The numbers were more telling when comments were considered by their place of origin. About two-thirds of the people living outside of the spill region wanted to buy habitat and thought the Trustee Council and PAG should continue. Inside the spill region, less than 1-in-5 supported habitat and most who commented thought that a new governing board should be established and the PAG should be eliminated.[16]

Perhaps even more telling, was that one of those comments from outside the

spill region came from Gov. Tony Knowles, who in effect controls three of the six votes on the Trustee Council. The governor, surely following the advice of his chief of staff, Jim Ayers, wrote in support of a balanced use of the Restoration Reserve, emphasizing science with a community-based element to it and a separate smaller fund for acquisition of small parcels.[17] This is almost a mirror reflection of the "comprehensive balanced approach" in the Restoration Plan, which emphasized habitat, along with smaller science and community-oriented programs.

Speaking for the plankton

Williams was mostly alone on the Trustee Council in her desire to use a substantial portion of the Restoration Reserve for habitat. The other five trustees appeared sympathetic to the cause, but believed they had accomplished most of the goals of the habitat protection program. Frank Rue pointed out that as a long-time director of the state's habitat division he had dedicated much of his life to the cause, but felt that science also had an important role in conservation.[18] Williams looked to the future and saw several large privately-owned tracts within Lake Clark National Park and Becharof National Wildlife Refuge, as well as unfinished acquisitions of the Karluk and Sturgeon rivers in the Kodiak refuge, and she saw that the habitat work was not yet done. To her, she said, "the ultimate Restoration Reserve is protected habitat."[19]

She told the trustees that she was having a difficult time finding the link between a long-term science program and restoration of injured species. Chief Scientist Bob Spies was ready for that question. The link, he said, was exactly the same as the one for habitat. "I think just . . . as we're not going to give back the habitat or sell it or let those accomplishments fall by the side after the resources have recovered, so too, I think we need to balance that with protection of the marine resources and this is the logical step to move in that direction."[20]

"We can't go out and buy the ocean," added Science Coordinator Stan Senner. "We really only have two things we can do. One is to have marine reserves, as has been suggested. The other is to get the best information we can and apply that to (resource management) decisions that are made. We all know that having good information doesn't mean good decisions . . . (But) having no information or bad information pretty well guarantees bad decisions."

If Williams felt alone against the other trustees and the advocacy of the Restoration Office, she had plenty of support from the public. Public comment periods were dominated by voices of support for habitat. They argued strongly that research provided little in terms of conservation, that the money was wasted as a subsidy for government agencies and that most of the data sits on book shelves with no practical application. The benefits of protecting habitat, they said, were real, immediate, and forever.

These arguments once caused Steve Pennoyer to defend the Trustee Council's

science efforts, saying "this is not a doctoral welfare program."[21]

Charles "Pete" Peterson, an ecologist with the University of North Carolina and a long-time peer reviewer of restoration science, summed up his presentation before the Trustee Council by recalling a cartoon that appeared in the New Yorker when he was just a kid. It showed two women at a table sipping coffee with one of them saying: "Yeah, but who's going to speak for the plankton?"

"And, you know," he said, "we're dealing with just that sort of thing. The understanding of the process in this is really important. The physical forces are going to affect largely the lower base of the ecosystem first. Some of these things are going to affect the top of the ecosystem . . . where we look at (large animals) to harvest. And it's knowledge of both of them, simultaneously, and how they work together that I think is so valuable to affect a good management program and a good conservation program."[22]

Making a deal

When McCammon put a proposal in front of the Trustee Council March 1, 1999, for discussion and, she hoped, a vote, the package looked a lot like the governor's proposal, except with solid numbers attached and with creative financing.

She took the $108 million plus interest, added everything she could scrape together from underspent work plans, and $16.5 million set aside for completing acquisition of the Karluk and Sturgeon rivers on Kodiak Island, creating a $170 million pot of money to be split. (This figure included projected interest, which proved to be optimistic in the face of the recession of 2000). She recommended funding a $115 million permanent science program with a strong community-based element to it and a $55 million habitat protection fund. Acquisition of the Karluk and Sturgeon rivers from Koniag would have to come from that fund.[23] In this way, there was something for everyone.

Timing was everything in getting a decision from the Trustee Council. The 10th anniversary of the spill was just weeks away and, given the heavy media attention and the upcoming "Report to the Nation" symposium, there was a great deal of incentive to finally nail down the future of restoration.

But, perhaps the most important key to getting a decision was that Deborah Williams had suddenly quit her job as Bruce Babbitt's special assistant in Alaska. This drastically altered the dynamics on the council when it came to this issue, considering Williams' parting remarks included her belief that the reserve should be split 50-50 between science and habitat. Replacing her on the council was Marilyn Heiman, who had most recently served under Governor Knowles and Jim Ayers as the governor's special assistant for natural resource issues. Heiman's first big decision as the Interior trustee was to vote in favor of McCammon's proposed "balanced approach."

With the Trustee Council's endorsement of this plan, the seven-year fight over allocation of the $722 million restoration fund (including interest) came to an end. Habitat protection received $431.2 million or about 60 percent of the fund while science and community projects received $290.8 million or 40 percent.[24] Coincidentally or not, this is almost precisely the split that residents of the spill region sought in 1993 when first asked how the restoration fund should be used.[25,26]

From T-bills to Dow Jones

As far back as 1992, the Trustee Council began looking for ways to invest restoration funds in order to achieve a healthy return on its money. Tens of millions of dollars were sitting in low-interest bearing accounts administered by the U.S. District Court in Houston and invested through the federal Court Registry Investment System (CRIS). With all of the money invested in U.S. Treasury bills, this was a safe repository for the money, but hardly profitable.

At a time when the national economy began its roll toward prosperity and large investment funds were achieving record returns, the restoration fund sat comparatively idle. Short term treasury bills were bringing in a paltry 5 percent interest at the same time that Alaska retirement funds and the Alaska Permanent Fund grew by 12-16 percent annually.[27] Clearly, the Trustee Council's short term funding and its long-term Restoration Reserve could do better invested elsewhere.

The 1998 General Accounting Office audit pointed out that restoration funds were getting doubly shortchanged through the court investment system. Not only was the money in CRIS conservatively managed, the Trustee Council was also getting hit with "excessive fees" for the inadequate service. In 1997, CRIS charged $258,000 for managing the liquidity account and another $181,000 for managing the Restoration Reserve for a total of $439,000 in fees. State of Alaska money managers would have charged $24,000, about 1/20th what CRIS charged, to do the same job.[28]

The Trustee Council quickly learned that it could work with the CRIS money managers to make small improvements to the investments, but it could not invest its money outside of CRIS. Federal law, at least as interpreted by the U.S. Department of Justice, required that the trust money be invested through a federal entity. Given that constraint, CRIS was as good as any. The only answer was a Congressional fix.

The council created the Restoration Reserve in the absence of Murkowski's proposed "stewardship endowment"in 1993, but it could not move to make better investments without Congressional action. In 1997, the council asked the Alaska congressional delegation for help. Sen. Murkowski, who was then chairman of the Senate Energy and Natural Resources Committee, quickly introduced legislation that limited investments under the Restoration Reserve to go to science and community-based restoration, with no habitat acquisitions allowed.

Even though the council seemed to favor long-term research, the U.S. Department of Justice was concerned about the precedent of a directive from Congress on how to spend a court-approved settlement. The settlement and the court left that decision up to six people with trustee responsibilities, who had to agree unanimously, and with meaningful public participation. They were in the midst of obtaining public input and comment on how the reserve fund should be used and Murkowski's plan would have made all of that moot.

This impasse continued for three years at a time when the stock market was making record gains almost daily. Halfway through that political battle, McCammon reported the cost of the stalemate. "We first approached the delegation to get legislative authority to take our money out of the court registry system a year and a half ago," she told trustees, "and we feel that . . . because of the inability to resolve this issue . . . that we've lost probably, at least, $17 million in revenue – conservatively."[29]

McCammon pushed the council for a quick decision on the uses of the Restoration Reserve, in large part, to bring an end to this stalemate. Six months after the Restoration Reserve pot was split, the Trustee Council and Sen. Murkowski came to an agreement on language in a bill allowing funds to be withdrawn from CRIS and invested through the Alaska Treasury. By December 1999, the bill had been released from committee with unanimous support, passed as a rider on an appropriations bill, and signed by President Clinton.[30]

It took several more months for the trustees to wade through the many investment options, adopt conservative-to-moderate investment policies, subject itself to independent review and advice, and finally transfer funds to the state treasury. Despite this due dilligence in setting investment Ironically, this took place about the same time that the shine came off the economy and the Dow Jones lost its '90s luster. One year after implementing its own investment strategies, the Trustee Council reported a loss of $6.8 million,[31] most of it evaporating during the economic freefall that occurred from January to March 2001. By October 1, 2002, when the Trustee Council transitioned from its Restoration Plan into the GEM program, the fund for long-term science was down to $90.5 million.

Predicting the ways of the sea

At the start of the third millenium A.D., the northern Gulf of Alaska remains as pristine an environment as can be found almost anywhere on earth. People live, work, and recreate there – in fairly large numbers during the summer months – yet the land and the sea remain largely unspoiled by the activity. Given the dominance of commercial fishing, the growth of tourism, continuing timber operations, the transportation of oil through the sound, the drilling of oil in Cook Inlet, and other forms of resource extraction, it's an open question as to how long the area can maintain its unspoiled look and feel.

Natural signals, especially climate, continue to be the determining factors in the overall health of the spill area ecosystem. But history in other parts of the world has taught us that eventually the human signals will overtake and overwhelm the natural signals. If anyone doubts this, simply look at the tripling of Alaska's population over the last 40 years, the increased fishing pressure in Southcentral Alaska, the doubling of tourism during the 1990s, and, as of 2000, a road through the mountains connecting Anchorage to Prince William Sound in one hour's drive. Then, consider what the next 40 years might bring.

The idea of the Gulf Ecosystem Monitoring and Research program (GEM) is to keep a permanent vigil over the Gulf of Alaska, a health watch in which researchers continually take the pulse of the marine environment and its watershed. What are the changes taking place? What factors limit the productivity of key species? How can we best react to changes in the ecosystem, caused by both natural fluctuations and human activities? As conceived, this is a well-funded program capable of assisting restoration for as long as there are injured resources that have not recovered from the effects of the spill. Concurrent with that and beyond it, GEM can serve as a sentinel watching over the gulf, providing an early warning system that will help resource managers, policy makers, and the public to minimize the impacts and better prepare for the inevitable increase in human use.

This, at least, encompasses the hope many see in GEM. It's a simple vision, although somewhat opaque. Creating a plan that actually fulfills this mission, however, has been a task on a par with the Restoration Plan in its depth and its frustrations.

Early drafts of the GEM plan focused largely on oceanographic and physical forces in the northern Gulf of Alaska.[32] They centered on climate and weather patterns, hoping to sort out the effects of *El Ninos* and *La Ninas*, as well as decadal climatic trends and global warming. All of these cycles interact with one another, warming and cooling the waters and forcing sometimes drastic shifts in the plant and animal structure of the ecosystem.

A newsletter introducing the concept asked the question: "Can we predict the ways of the sea?" It went on to say, "The only way to understand how natural and man-made forces interact within a complex ecosystem is to collect the data over time and look for patterns."[33]

This approach was not met with enthusiasm by many agency reviewers and commercial fishing interests. Jim Ayers was one of many who felt the emphasis of GEM was too offshore and not close enough to home for most Alaskans. It's the nearshore ecosystem, including the terrestrial environment and watersheds, which have the most human use and human impact. And that's where many people wanted to see the focus of GEM placed.

A review draft prepared for the National Research Council reflected this change. The Trustee Council had contracted with the NRC to independently

review the plan and report back with comments and recommendations. "In the end, GEM must be justified on what it can teach policy makers, resource managers and the public about options for directing human behavior toward achieving sustainable resource management goals," the draft said. It also noted that GEM would focus on the "watersheds, estuaries, coastlines, continental shelf and open ocean systems that affect the marine resources of the northern gulf." Even so, the review draft continued to emphasize the imporatance of oceanographic conditions as the driving engine for biological activity in the northern gulf.[34]

NRC reviewers forwarded several recommendations to improve the plan, but concluded that the establishment of the Restoration Reserve and commitment to long-term funding of GEM "showed great foresight."[35]

"As envisioned," the report said, "(the GEM) program will offer an unparalleled opportunity to increase understanding of how large marine ecosystems in general, and Prince William Sound and the Gulf of Alaska in particular, function and change over time. The committee believes that this program has the potential to make substantial contributions of importance to Alaska, the nation, and the scientific community."

The shaping of GEM

The NRC pointed out that its review of the GEM program was like hitting a moving target. It had the job of trying to review a document that was in a constant state of evolution and development.

The shaping of GEM has been a continuous process since the Restoration Reserve was split in March 1999. The GEM Program was under development by Trustee Council staff and, at the same time, under review by the NRC. As it evolved, different interest groups and agencies continually attempted to mold it to fit their long-term needs and desires. "It was an iterative process," according to Executive Director McCammon.

Advice in the NRC's first "letter of opinion" and then its Interim (February 2001) and Final Reports (2002), was usually incorporated into subsequent drafts. "We used the NRC committee as a sounding board," McCammon said. "When they brought up a criticism, we immediately made changes to respond to it."

The NRC committee members were experienced scientists with fresh eyes looking at the challenges of developing a program to last a hundred years. The two-way process made the resulting GEM program much stronger, according to McCammon.

NRC criticisms focused on the emphasis in early GEM drafts on natural forces such as climate and oceanographic conditions, with not enough attention paid to the environmental impacts of human activities. In addition, the committee felt that a well-developed conceptual foundation was important as a guiding force for the program. The Trustee Council's commitment to community involvement

was questioned, given that the methods for achieving it were missing in earlier drafts. These criticisms resulted in important changes to the program eventually adopted by the Council in July, 2002. However, what was adopted is still a fairly general, framework document. Developing a more specific science plan for actually implementing the GEM Program began in October 2002.

As part of its review, the NRC committee recommended that the first few years of GEM be spent primarily reviewing, digesting, and analyzing data from ecosystem studies conducted over the previous decade. It's important, reviewers said, to understand what we already know before pursuing more knowledge. Reviewers also suggested that the program include more human interaction and figure out ways to narrow its focus.[37]

Although the door remains open for GEM to conduct some offshore studies, McCammon believes that funding will necessitate that the bulk of research be nearshore, focusing primarily on the Alaska Coastal Current and the intertidal and subtidal zones. Offshore studies may be important, but they are usually very expensive, she said.

The nearshore-offshore debate was in full swing during April, 2001, when an NRC representative told the Trustee Council it should back away from its emphasis on climatic patterns. But, they got an argument from Stan Senner, who helped write the original draft before moving on to become director of Audubon for Alaska. Senner keeps his hand in restoration activities by sitting on the Public Advisory Group, representing environmental organizations. "I've been operating under the assumption that unless GEM did a good job of focusing on the . . . oceanographic and climate change that you didn't have a prayer of understanding or interpreting any of . . . the human influence," Senner told NRC representatives. "And so initially, at least – and I don't know whether that means 10 years or 20 years or whatever – but initially, a strong focus on the 'natural influences' seem to me very appropriate."[38]

Don Bowen, a member of the committee and a research scientist at the Bedford Institute of Oceanography's Department of Fisheries and Oceans, said he agreed with Senner, but felt a balance was needed. "I don't think we can just limit ourselves to looking at the physical oceanography," he said. "I think we have to extend that through the biological components and see how those changes in the physics actually affect the biology."

Senner then summed up the conflict that kept GEM in a constant state of flux since its conception. "(W)hen it comes down to the hard decisions about allocating dollars, I think a lot of these human influences are more fundamental responsibilities of the management agencies that are part of this effort," he said. "And, on the other hand, some of the oceanographic and climatic stuff is not so much a core responsibility or part of the mission of some of the agencies. And so the trick here is how are GEM dollars best allocated and what can be leveraged

or encouraged from the agencies through sources of funds other than GEM? And how can those all in combination be packaged to address the things that need to be addressed?"

Habitat protection for the long-term

Although it has committed to a long-term habitat protection program, the Trustee Council is seriously considering getting out of the day-to-day management of such a program. There are many practical matters to consider when pursuing real estate for public protection, not the least of which is identification of potential parcels for acquisition, working with the landowners, appraising the properties, conducting hazardous material reviews, and negotiating the purchase.

The Trustee Council recognized early on that several non-profit groups are already set up to do exactly that. These conservation groups have the in-house expertise and experience to develop and administer a habitat protection program to meet the specific needs of the Trustee Council. Whereas governments have a rigid step-by-step process that must be followed when buying private properties, non-profit groups are able to work more flexibly and efficiently.

They can move more quickly by using their own revolving funds to close a deal. They can tap into existing financial partnerships with foundations, trusts, private businesses, and individuals to leverage funds and increase the potential of the habitat program. They can work with sellers to acquire properties at below the appraised value, taking advantage of financial strategies such as tax breaks, capital gains considerations, and estate planning, that can benefit the seller. And they usually have lower administrative costs.

Such advantages would make a $25 million habitat protection fund stretch further and with greater efficiency. The Trustee Council entered into such a public-private partnership in January 2001, when it granted $1 million jointly to The Nature Conservancy and The Conservation Fund to be used to acquire parcels. These two groups were given until September 30, 2003 to identify and purchase parcels that would ultimately be owned and managed by federal, state, borough, or municipal governments. The Trustee Council would still have to approve each acquisition.

Although the Trustee Council wouldn't put it in writing, the grant is seen as a pilot program that could be continued on a year-to-year basis or lead to an all-at-once grant of the entire $25 million habitat fund.

The reopener clause

After all the settlement money is spent and the long-term science and habitat programs are underway, the U.S. and Alaska governments still have one more card to play in the name of restoration and recovery. While negotiating the settlement, federal lawyers were insistent that a clause be added to the language that would

allow the governments to revisit the case in the event of an unforeseen injury to the environment. If government lawyers can successfully argue that one or more natural resources are showing signs of oil spill injury, and that that injury could not have been foreseen given the knowledge at the time of the settlement, then Exxon can be forced to pay up to $100 million to restore those particular resources.

This clause is more of a safety valve for natural resources than it is a hammer over the head of Exxon. Should the Alaska Department of Law and the U.S. Department of Justice jointly choose to pursue a claim under this clause, they will have to prove first that a given resource is injured and then that they could not have known about the injury at the time of the settlement. If the governments prevail, they would then have to develop a court-approved plan for restoring the injured species back to health. Exxon would be responsible only for the costs of carrying out that plan. The reopener also specifies that the costs cannot be "grossly disproportionate" to the benefits, according to Tillery.[39]

The prospect of extracting another $100 million for restoration has not been lost on the public. A group of 11 environmental organizations staged a press conference on the day Exxon issued its final settlement check in an effort to put pressure on the Trustee Council and the governments to pursue claims under the reopener clause. "The damage is severe," said oil spill activist Rick Steiner. "It's ongoing. Some of it may have been anticipated 10 years ago. Much of it clearly was not."[40]

The coalition argued that the crash of the herring population due to disease, high death rates of pink salmon eggs in streams with nearby weathered oil, the decline of killer whales in the AB and AT1 pods, and the continued leaching of oil into the environment were all unforeseen at the time of the settlement. These arguments appear to be overly optimistic. The status of pink salmon has since been elevated to recovered status while killer whales moved up to the recovering category. Also, the leading expert on herring disease now believes the disease was triggered by overpopulation, not by oil. These conclusions, now in the public record, will make pursuit of further claims difficult. The long-term toxicity of weathered oil and its possible impact on wildlife, on the other hand, is something no one seemed to anticipate at the time of the settlement.

This reopener, even if pursued successfully, is not likely to tap deeply into the $100 million well. During 12 years of restoration, the entire science program, covering all resources, spent $132 million, by comparison. The bulk of restoration costs went to protecting the habitat of injured resources. It's difficult to conceive of an unknown injury that would result in further habitat acquisition as the best course of restoration.

The reopener clause provides a four-year window in which the governments can make a claim, beginning October 1, 2002. Since the reopener specifies that it is a one-time claim, one strategy is to wait until near the end of the four-year

window before pursuing any legal argument. That allows more time for any possible injury to expose itself. It's also important to understand that this is not a Trustee Council decision. The decision to pursue a claim or not will be left to the legal arms of the federal and state governments. It will certainly be decided in consultation with trustees, but it will not be subject to their vote.

Footnotes
The Future of Restoration

1. Personal communication, Jim Ayers, February 23, 2001.
2. Some would prefer to call it the Gulf Ecosystem Research and Monitoring program, thus placing the emphasis on research, but creating an acronym that is considerably less attractive than GEM.
3. *A Century of Ecosystem Science: Planning Long-term Research in the Gulf of Alaska*, 2002, National Academy Press.
4. The PAG encouraged the Trustee Council in 1993 to set aside $30 million a year for an endowment, but the annual work plan would come from those funds. In 1999, the advisory group voted 11-5 to use most of the funds for a long-term research and monitoring program.
5. Commercial fishing groups were strongly behind a research endowment, expecting that such a long-term commitment would greatly benefit hatcheries, fisheries managers, and provide a better understanding of salmon and Pacific herring.
6. Sen. Arliss Sturgulewski, a prominent long-time legislator, frequently attended Trustee Council meetings to encourage establishment of a research endowment. She drafted and circulated a proposal called "The *Exxon Valdez* Marine Sciences Endowment."
7. Cole described this effort and read a Murkowski press release about the bill. Trustee Council meeting transcripts, November 30, 1993.
8. Trustee John Sandor proposed three scenarios for possible endowments during the February 5, 1992 Council meeting, saying that Lujan and Hickel wanted a "substantial part of the settlement fund be placed in an endowment or trust fund."
9. Personal communication, Jim Ayers, February 23, 2001.
10. In a letter to Sen. Arliss Sturgulewski, dated May 9, 1994, Frampton wrote that the Restoration Reserve was created "(t)o implement a research and monitoring effort beyond the year 2001." He also said, "At some future date, the Trustee Council would utilize the endowment to fund restoration activities, with a focus on research and monitoring activities."
11. Trustee Council meeting transcripts, November 2, 1994.
12. Restoration UpDate, Vol. 5 No. 2, March-April 1998.
13. Veronica Christman, a project specialist with the Restoration Office, explained the various campaigns as part of her analysis of public comments. Trustee Council meeting transcripts, September 29, 1998.
14. Trustee Council meeting transcripts, September 29, 1998.
15. Trustee Council meeting transcripts, March 1, 1999.
16. Trustee Council meeting transcripts, September 29, 1998.
17. Knowles letter, Trustee Council meeting, September 29, 1998.
18. Trustee Council meeting transcripts, November 30, 1998.
19. Trustee Council meeting transcripts, November 30, 1998.
20. Trustee Council meeting transcripts, November 30, 1998.
21. Trustee Council meeting transcripts, March 1, 1999.
22. Trustee Council meeting transcripts, September 29, 1998.

23. When the Karluk and Sturgeon rivers package was completed in 2001 for $30 million, that left an endowment of $25 million for habitat.

24. Trustee Council meeting transcripts, March 1, 1999.

25. During the 1993 public comment period to establish the Restoration Plan, about 90 percent of respondents supported habitat protection. Of those people within the spill region who supported habitat, they felt on average that 60 percent of the money should be used for that purpose.

26. If one adds in the $100 million in studies conducted as part of the damage assessment process prior to the settlement, but whose costs were eventually reimbursed by the settlement, the split between habitat and science is much closer to 50-50.

27. Alaska Permnanent Fund, Monthly Management Report, February 29, 2000.

28. Independent auditors for the Trustee Council (Elgee, Rehfeld & Funk) first pointed out the excessive fees and low interest in 1995. The GAO got its information from these annual audits. *Natural Resources Restoration: Use of the Exxon Valdez Oil Spill Settlement Funds*, a Briefing Report to the Chairman, Committee on Natural Resources, House of Representatives; August 1993, General Accounting Office (GAO/RCED-93-206BR).

29. Trustee Council meeting transcripts, January 22, 1999.

30. Trustee Council meeting transcripts, December 16, 1999.

31. Trustee Council meeting transcripts, April 3, 2001

32. *Gulf Ecosystem Monitoring: A sentinel monitoring program for the conservation of the natural resources of the northern Gulf of Alaska*, April 21, 2000.

33. Restoration Update, Volume 7 Number 1.

34. Personal communication, Molly McCammon.

35. *A Century of Ecosystem Science: Planning Long-term Research in the Gulf of Alaska*, 2002, National Academy Press.

36. Personal communication, Molly McCammon.

37. *The Gulf Ecosystem Monitoring Program: First steps toward a long-term monitoring plan*, Interim Report, February 2001, National Academy Press.

38. Trustee Council meeting transcripts, April 3, 2001.

39. Anchorage Daily News, August 31, 2001, *11 groups argue Exxon owes Sound $100 million,* by Doug O'Hara.

40. Anchorage Daily News, August 31, 2001, *11 groups argue Exxon owes Sound $100 million,* by Doug O'Hara.

Appendix A

Highlights from the

Exxon Valdez Oil Spill Restoration Plan

November 1994

A Comprehensive Balanced Approach to Restoration

Mission Statement

The mission of the Trustee Council is to efficiently restore the environment injured by the Exxon Valdez oil spill to a healthy, productive world renowned ecosystem, while taking into account the importance of quality of life and the need for viable opportunities to establish and sustain a reasonable standard of living.

The restoration will be accomplished through the development and implementation of a comprehensive interdisciplinary recovery and rehabilitation program that includes:

- *Natural Recovery*
- *Monitoring and Research*

- *Resource and Service Restoration*
- *Habitat Acquisition and Protection*
- *Resource and Service Enhancement*
- *Replacement*
- *Meaningful Public Participation*
- *Project Evaluation*
- *Fiscal Accountability*
- *Efficient Administration.*

Policies

An Ecosystem Approach

1. Restoration should contribute to a healthy, productive and biologically diverse ecosystem within the spill area that supports the services necessary for the people who live in the area.
2. Restoration will take an ecosystem approach to better understand what factors controld the populations of injured resources.

Injuries Addressed by Restoration

3. Restoration activities may be considered for any injured resource or service.
4. Restoration will focus upon injured resources and services and will emphasize resources and services that have not recovered. Resources and services may be enhanced, as appropriate, to promote restoration. Restoration actions may address resources for which there was no documented injury if these activities will benefit an injured resource or service.
5. Resources and services not previously identified as injured may be considered for restoration if reasonable scientific or local knowledge obtained since the spill indicates a spill-related injury.
6. Priority will be given to restoring injured resources and services which have economic, cultural and subsistence value to people living in the oil spill area, as long as this is consistent with other policies.

7. Possible negative effects on resources and services must be addressed in considering restoration projects.

Location of Restoration Actions

8. Restoration activities will occur primarily within the spill area.

Restoring a Service

9. Projects designed to restore or enhance injured service: a) must have a sufficient relationship to an injured resource; b) must benefit the same user group that was injured; and c) should be compatible with the character and public uses of the area.

Competition and Efficiency

10. Competitive proposals for restoration projects will be encouraged.
11. Restoration will take advantage of cost sharing opportunities where effective.
12. Restoration should be guided and reevaluated as information is obtained from damage assessment studies and restoration actions.
13. Proposed restoration strategies should state a clear, measurable and achievable endpoint.
14. Restoration must be conducted as efficiently as possible, reflecting reasonable balance between costs and benefits.
15. Priority shall be given to strategies that involve multi-disciplinary, interagency, or collaborative partnerships.

Scientific Review

16. Restoration Projects will be subject to open, independent scientific review before Trustee Council approval.
17. Past performance of the project team should be taken into consideration when making funding decisions on future restoration projects.
18. Restoration will include a synthesis of findings and results, and will also provide an indication of important remaining issues or gaps in knowledge.

Public Participation

19. Restoration must include meaningful public participation at all levels – planning, project design, implementation and review.
20. Restoration must reflect public ownership of the process by timely release and reasonable access to information and data.

Normal Agency Activities

21. Government agencies will be funded only for restoration projects that they would not have conducted had the spill not occurred.

Categories of Restoration Actions

Research and Monitoring. Surveys and other monitoring of fish and wildlife in the spill region provide basic information to determine population trends, productivity, and health. Research increases our knowledge about the biological needs of individual species and how each contributes to the Gulf of Alaska ecosystem. Research also provides new information and better tools for effective management of fish and wildlife populations.

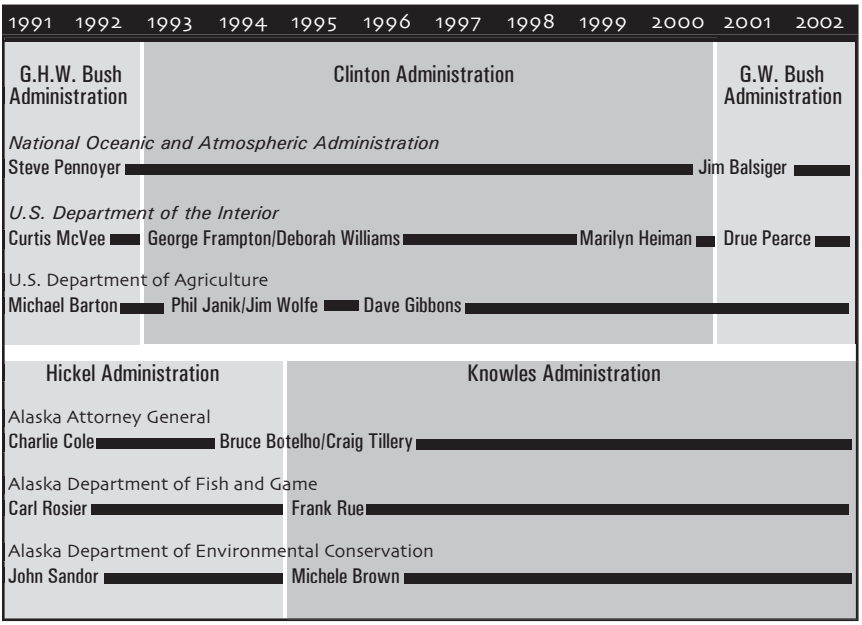
General Restoration. This category is for restoration projects that do not primarily involve scientific research or monitoring or habitat protection. It includes projects to protect archaeological resources, improve subsistence resources, enhance salmon streams, reduce marine pollution, and restore damaged habitat.

Habitat Protection. Protection of habitat helps prevent additional injury to species due to intrusive development or loss of habitat. The Trustee Council accomplishes this by providing funds to acquire title or conservation easements on land important for its restoration value.

Restoration Reserve. This savings account was established in recognition that full recovery from the oil spill would not occur for decades. The reserve fund will support long-term restoration activities after the final payment is received from Exxon in September 2001.

Appendix B

Exxon Valdez Oil Spill Trustee Council
1991-2002



Appendix C
Uses of Civil Settlement
(in millions)

Reimbursements for Damage Assessment and Response	**216.4**
Governments (includes litigation and cleanup)[a]	176.5
Exxon (for cleanup after 1/1/91)	39.9
Research, Monitoring and General Restoration	**169.5**
FY 1992 - FY 2002 Work Plans	128.6
FY 2003 Work Plan (authorized)	4.4
Alutiiq Museum (Kodiak)	1.5
Archaeological Repository/Exhibits (PWS & Kenai Pen)	3.0
Alaska SeaLife Center	26.2
Port Graham Hatchery	.8
Reduction of Marine Pollution/Waste Oil	5.0
Habitat Protection	**374.8**
Large Parcel and Small Parcel habitat protection programs (past expenditures, outstanding small parcel offers and parcel evaluation costs)	
Restoration Reserve	**146.9**
Koniag Special Account	30.5
Habitat Protection	25.9
Gulf Ecosystem Monitoring (GEM)	90.5
Science Management, Public Information & Administration	**30.8**
FY 1992 - FY 2002	29.7
FY 2002 (estimate)	1.1
Total	**938.4**
Exxon Payments	900.8
Accrued interest (minus fees)	37.6

(a) Reimbursement to governments reduced by $2.7 million included in the FY 1992 Work Plan.
(b) Includes investment earnings as of 12/31/02

As of February 25, 2003

Appendix D
Uses of Criminal Settlement
(in millions)

FEDERAL (highlights)

The federal government used most of its portion of the criminal settlement to help the Trustee Council fund habitat protection efforts, including:

Akhiok Kaguyak, Inc.	$10.0
Chenega	$10.1
English Bay	$ 1.3
Koniag	$ 7.0
Old Harbor	$ 3.3
Tatitlek	$10.0

(See Habitat Table, Chapter 4, for more information)

Small Parcel acquisitions of habitat within:

Kodiak National Wildlife Refuge	$ 3.9
Chugach National Forest	$ 1.5
Kenai National Wildlife Refuge	$ .5

Other federal uses include:

Shoreline Monitoring	$ 3.4
Oil Spill Research	$ 5.6

STATE OF ALASKA (highlights)

The State Legislature divided the money among capital improvements benefiting fisheries and research, habitat improvements, subsistence, and new recreational facilities.

Alaska SeaLife Center	$12.5
Kachemak Bay State Park	$ 7.0
Kachemak Bay St. Pk Visitor Center	$ .5
Seward Shellfish Hatchery	$ 3.5
Fort Richardson Hatchery	$ 4.0
State Park Recreational Facilities	$10.9
Kenai River Bank Restoration	$ 3.0
Main Bay Hatchery	$ 2.0
Fishery Industrial Technology Ctr.	$ 3.0
Subsistence Enhancements	$ 6.2
Spill Prevention/Response	$ 2.6
Tatitlek and Chenega Docks	$ .6
PWSAC Hatchery Operations	$ 1.8
PWS Science Center	$ .3
Shepard Point Road	$ 2.7
Kenai Visitors Center	$ 1.9
Fish Stock Identification	$ 1.0
Port Graham Hatchery	$ .5

As of February 1999

Appendix E

Recovery of Injured Resources (1994-2002)

Not Recovering | Recovering | Recovered | Other

Resources listed as injured	1994 Restoration Plan	1996 Update	1999 Update	2002 Update
Archaeological resources	Not Categorized			
Bald eagle				
Black oystercatcher				
Clams	Not Listed			
Common loon	Not Listed	Not Listed		
Common murre				
Cormorants (3 spp.)	Not Listed			
Cutthroat trout	Recovery Unknown	Recovery Unknown	Recovery Unknown	Recovery Unknown
Designated Wilderness Areas	Not Categorized	Recovery Unknown	Recovery Unknown	
Dolly Varden	Recovery Unknown	Recovery Unknown	Recovery Unknown	Recovery Unknown
Harbor seal				
Harlequin duck				
Intertidal communities				
Killer whale (AB pod)				
Kittlitz's murrelet	Not Listed	Recovery Unknown	Recovery Unknown	Recovery Unknown
Marbled murrelet				
Mussels				
Pacific herring				
Pigeon guillemot				
Pink salmon				
River otter	Recovery Unknown	Recovery Unknown		
Rockfish	Recovery Unknown	Recovery Unknown	Recovery Unknown	Recovery Unknown
Sea otter				
Sediments	Not Categorized			
Sockeye salmon				
Subtidal communities				Recovery Unknown

Appendix F
The Comprehensive Habitat Protection Program

The Comprehensive Habitat Protection process contained the following steps: identify landowner interest, apply threshold criteria, evaluate the habitats, rank the habitats, vote to establish a list of targeted acquisitions based on ranking, conduct appraisals, negotiate with owners, evaluate the negotiated package, vote to approve or reject the package, acquire the title or partial interest and incorporate it into public management.

Determine landowner interest — On March 18, 1993, the Restoration Office mailed letters to 90 landowners of large parcels in the spill region. Thirty-two nominations were received identifying 12 major landowners with interest in selling, 11 of which were Native corporations. The 12th was the Kodiak Island Borough, which owned most of Shuyak Island.

Apply threshold criteria — Before any land could be considered for acquisition, it had to satisfy three criteria: (I'm not sure what the threshold criteria actually were for the large parcels)

- there must be a willing seller;
- the parcel must contain key habitats benefiting injured resources;
- a state or federal land management agency must be willing to incorporate the land into its own management system.

Evaluate habitats — The Restoration Office identified 81 large parcels of different habitat qualities and types belonging to the 12 landowners. The principal investigators conducting research on each of 14 species injured by the oil spill provided detailed descriptions of the seasonal habitats needed for their survival. These researchers and other experts in intertidal and subtidal ecosystems, archaeology, subsistence, recreation, and designated wilderness areas then evaluated each of the 81 parcels, ranking the habitat as high-, medium-, or low-quality for each natural resource or human service injured by the spill. More than 850,000 acres were evaluated in this manner.

Rank parcels — A formula was developed to give each parcel a numerical ranking based on the overall value of the habitat to injured resources and services. The formula was based on eight criteria for ranking: 1) the parcel contained essential habitat for injured resources or services; 2) the parcel was of sufficient size to function as an intact ecological unit or can be connected to other protected habitat in the greater ecosystem; 3) adjacent land uses will not degrade the ecological function of the habitat; 4) protection of the habitat would benefit more than one injured resource/service; 5) the parcel contains critical habitat for depleted, rare, threatened, or endangered species; 6) the habitat is vulnerable to human activity; 7) management of adjacent lands could be made compatible with habitat protection objectives; and 8) the parcel is located in the spill region.

Trustee Council action — An explanation of the evaluation and ranking process, along with a list of the properties in order of their rankings was published and distributed to the public on November 30, 1993. Public comments were accepted for 60 days before the Trustee Council took action adopting the ranking and directing the executive director to put together a list of parcels to be targeted and a plan for conducting appraisals and negotiations.

Appendix G

Ranking and Scoring Large Parcels

Evaluation / Ranking Criteria

After identifying approximately 850,000 acres within the spill region that could potentially be acquired, the habitat protection team divided the parcels by landowner and by ecosystem units ranging from 600 acres to 57,000 acres in size. Eighty-one units, each considered to have its own ecosystem characteristics, were identified. Each of the units was evaluated, scored, and ranked according to the criteria and formula below.

1. The parcel contains essential habitat(s)/sites for injured resources or services. Essential habitat include areas for feeding, reproduction, molting, roosting, and migration; essential sites include known or presumed high use areas. Key factors for determining essential habitat/sites are: (a) population or number of animals or number of public users, (b) number of essential habitats/sites on parcel. And (c) quality of essential habitats/sites.
2. The parcel can function as an intact ecological unit or it contains essential habitats that are connected to other elements/habitats in the greater ecosystem.
3. Adjacent land uses will not significantly degrade the ecological fundtion of the essential habitat(s) nominated or recommended for protection.
4. Protection of the habitats on a parcel would benefit more than one injured resource/service (unless protection of a single resource/service would provide a high recovery benefit).
5. The parcel contains critical habitat for a depleted, rare, threatened, or endangered species.
6. Essential habitats/sites on a parcel are vulnerable to or potentially threatened by human activity.
7. Management of adjacent lands is, or could easily be made compatible with protection of essential habitats on a parcel.
8. The parcel is located within the oil spill area.

Questions 2-8 required a simple YES or NO response with every YES qualifying for one point.

Question number one, however, required a thorough analysis of each unit's habitat and human use. Biologists and other experts specializing in the injury and recovery of resources and services were asked to evaluate each unit for its habitat characteristics and rank them either high, moderate, low, or non-existent for each of 19 resources/services

EXAMPLE: ABC/01 Any Parcel 4,900 acres

Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence	
M	—	M	M	—	M	L	L	H	H	H	H	H	M	L	M	H	L	L	

For each resource and service evaluated in Question 1, a "high" response received one point and a moderate response received a half point. The number of YES responses from Questions 2-8 would then be multiplied by the score of question number one to obtain an overall score.

The example above is rated High (H) in six categories, Moderate (M) in six categories, Low (L) in five categories, and non-existent in two categories. Its scoresheet might look like the following:

ABC 01 / Any Parcel

Evaluation Criteria								*Score*
1	2	3	4	5	6	7	8	
6H, 6M	Y	Y	Y	N	N	Y	Y	45

[6H + (.5 x 6M)] x 5Y = (6+3) x 5 = 45.

All 81 parcels were scored in this way, resulting in a high score of 77 and a low of 10. Based on these scores, the overall rating of the parcel was ranked high, moderate, or low.

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Appendix H

Ranking of Resources and Services (by parcel)

Large Parcel Program

Akhiok-Kaguyak, Incorporated		Acreage					Coastal Miles						Salmon Streams									Total Price
Parcel No./Description	Acreage	Score/Rank	Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence	
AKI 01 / Kaiugnak Bay	4,900	45/M	M	—	M	M	—	—	M	L	L	H	H	H	H	H	M	L	M	H	L	L
AKI 02 / Kiavak Bay	4,200	30/L	M	—	L	L	—	—	M	L	L	L	M	H	M	M	M	L	H	H	L	L
AKI 03 / Kaguyak Bay	12,400	30/L	M	—	M	L	—	—	L	M	L	M	M	M	L	M	M	L	M	H	L	M
AKI 04 / Aliulik Peninsula	34,300	65/H	M	—	H	H	—	—	M	H	H	H	H	H	H	H	H	L	M	H	L	M
AKI 05 / Sulua-Portage	8,200	50/M	M	—	M	L	—	—	H	M	L	H	H	H	H	H	H	L	M	H	L	L
AKI 06 / N. Olga Bay	16,900	67/H	H	H	H	H	—	—	H	L	L	H	H	H	M	H	H	L	M	M	H	H
AKI 07 / Olga Narrows	15,200	25/L	L	L	L	L	—	—	L	M	L	M	H	M	H	M	M	L	M	L	L	H
AKI 08 / Upper Station Lks	15,600	60/H	H	H	L	H	—	—	H	M	L	H	M	L	L	L	H	L	H	M	M	H
AKI 09 / Sukhoi-Kempff	15,900	42/M	M	—	L	L	—	—	L	M	L	H	H	H	L	M	H	L	H	L	L	H

Old Harbor Native Corporation	Acreage	Coastal Miles	Salmon Streams	Total Price
Parcel No./Description	Acreage	Score/Rank	Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence	
OLD 01/Kiliuda Bay	9,500	34/M	H	—	H	L	—	H	L	M	M	M	L	L	M	M	L	H	M	M	H	
OLD 02/Sitkaliak Strait	8,000	30/L	M	—	L	L	—	H	M	L	H	M	M	L	M	M	L	M	H	L	H	
OLD 03/Midway Bay	7,300	28/L	H	—	M	L	—	M	L	L	L	H	H	L	M	M	L	M	L	M	H	

Koniag Native Corporation	Acreage	Coastal Miles	Salmon Streams	Total Price
Western Kodiak Island				
fee title	59,674	41	11	$26,500,000

Parcel No./Description	Acreage	Score/Rank	Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence
KON 01/Brown's Lagoon	9,900	58/H	H	—	H	L	—	H	H	M	H	H	H	H	H	H	H	H	L	H	H
KON 02/Uyak Bay	7,000	54/H	H	—	L	L	—	M	M	M	H	H	H	H	H	H	H	H	H	H	H
KON 03/Larsen Bay	22,400	42/M	M	—	L	L	—	M	H	M	M	H	H	H	H	H	M	L	L	H	H
KON 04/Karluk River	28,200	57/H	H	H	H	H	—	—	—	—	—	H	—	L	—	H	—	H	M	H	H
KON 05/Halibut Bay	21,900	42/M	M	—	M	M	—	L	M	L	H	M	L	L	L	H	L	M	H	L	H
KON 06/Sturgeon River	22,400	36/M	M	—	M	M	—	—	—	—	L	H	—	L	—	H	—	M	H	L	H

Afognak Joint Venture

Parcel No./Description	Acreage	Score/Rank	Acreage	Coastal Miles										Salmon Streams										Total Price
			Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence	
AJV 01/ Shuyak Strait	27,100	65/H	M	L	H	H	—	H	H	L	H	H	H	H	H	M	H	H	H	L	L	L
AJV 02/ Delphin Point	2,100	19.5/L	H	L	L	L	—	H	L	L	L	M	M	M	H	M	H	L	M	L	L	L
AJV 03/ Pauls-Laura Lake	13,400	78/H	H	M	H	L	—	M	H	L	H	H	H	H	H	M	H	H	H	M	L	L
AJV 04/ Paramount	56,700	48/M	M	M	M	M	—	H	M	L	H	H	M	M	H	M	H	M	H	M	H	H
AJV 05/ Inner Malina Bay	12,700	40/M	H	L	M	M	—	H	M	L	L	L	M	M	M	M	M	L	M	M	H	H
AJV 06/ Malina Penn	27,300	45/M	M	M	M	L	—	H	M	L	L	H	L	M	H	M	H	L	M	M	H	H
AJV 07/ E Tonki Bay	2,500	25/L	M	L	M	M	L	M	M	L	L	L	L	L	L	M	L	H	H	L	L	L
AJV 08/ W Tonki Bay	13,400	10.5/L	M	L	L	L	L	H	L	L	L	L	L	L	L	L	L	H	H	L	L	L

Kodiak Island Borough

Parcel No./Description	Acreage	Score/Rank	Acreage	Coastal Miles										Salmon Streams										Total Price
			Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence	
KIB 01/ Shuyak Island	27,900	63/H	L	L	M	H	—	M	M	L	M	M	H	M	H	H	H	H	H	H	M	L

Chenega Corporation	Acreage		Coastal Miles			Salmon Streams														
Parcel	Acreage	Score/Rank	Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence
CHE 01/ Eshamy	7,900	66/H	H	H	M	H	H	L	M	L	M	M	M	M	L	H	M	L	M	H	H
CHE 02/ Jackpot	12,100	72/H	M	H	H	H	M	L	L	L	M	H	M	M	H	M	M	M	H	H	H
CHE 03/ Granite-Paddy	15,000	34/M	H	L	H	L	M	L	M	L	L	L	M	M	L	M	H	M	H	M	H
CHE 04/ NW Chenega	7,300	38/M	H	L	L	L	L	L	H	L	H	H	M	M	L	M	H	H	H	L	H
CHE 05/ SE Chenega	8,300	22/L	H	L	M	L	L	L	L	L	L	L	L	M	H	L	L	H	M	L	H
CHE 06/ S Knight	5,400	27/L	M	L	M	L	L	L	L	L	L	L	L	M	L	L	L	H	H	L	H
CHE 07/ NE Whale	1,500	15/L	M	L	L	L	L	L	L	L	L	L	L	M	M	L	L	L	H	L	M
CHE 08/ Fleming	1,700	30/L	H	L	L	L	L	L	M	L	H	M	L	M	M	L	L	L	H	L	H
CHE 09/ NW Evans	6,200	45/M	H	L	M	L	L	L	M	L	H	M	M	H	L	M	H	M	H	L	H
CHE 10/ Sleepy Bay	3,700	16/L	H	L	L	L	L	L	L	L	L	L	M	M	L	L	L	H	L	L	H
CHE 11/ Pleiades Island	400	17.5/L	L	L	L	L	L	L	L	L	M	L	L	L	H	L	L	L	H	L	H

Tatitlek Corporation		Acreage			Coastal Miles								Salmon Streams								Total Price
Parcel	Acreage	Score/Rank	Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence
TAT 01/ Bligh Island	8,800	69/H	H	L	L	L	L	H	H	L	M	H	H	M	H	H	M	H	M	M	H
TAT 02/ Sawmill Bay	3,200	51/M	M	L	M	L	L	H	L	L	L	H	H	M	L	L	L	H	H	H	H
TAT 03/ Columbia Bay	13,500	37.5/M	H	L	M	L	L	H	L	L	H	L	L	L	L	L	H	L	H	H	H
TAT 04/ Galena Bay	13,200	36/M	H	L	H	L	L	H	M	L	L	L	H	M	L	M	L	H	H	M	H
TAT 05/ Landlocked Bay	7,400	36/M	H	L	M	L	L	H	M	L	L	H	H	M	L	M	L	H	H	L	H
TAT 06/ Port Fidalgo	17,555	31.5/L	H	L	H	H	H	H	L	L	H	H	H	M	L	M	L	M	L	L	H

Eyak Corporation		Acreage	Coastal Miles		Salmon Streams		Total Price													
Parcel No./Description	Acreage	Score/Rank	Bald eagle	Sockeye salmon	Pink salmon	Dolly Varden	Cutthroat trout	Pacific herring	Black Oystercatcher	Common murre	Harbor seal	Harlequin duck	Intertidal/Subtidal	Marbled murrelet	Pigeon guillemot	River otter	Sea otter	Archeological	Wilderness Area	Rec/tourism\	Subsistence
EYA 01/ Port Gravina	3,400	54/H	H	L	M	L	L	M	L	L	M	H	M	M	L	H	M	M	H	M	H
EYA 02/ Sheep Bay	9,100	75/H	H	L	H	M	L	M	H	L	H	H	H	M	L	M	H	H	M	H	H
EYA 03/ Windy Deep Bay	7,100	63/H	H	L	H	M	H	M	M	L	M	L	M	M	L	M	H	M	H	H	H
EYA 04/ Canoe Passage	3,700	30/L	H	L	H	M	M	M	M	L	H	L	M	M	L	M	M	M	M	H	H
EYA 05/ Outer Sheep Bay	7,600	30/L	H	L	L	L	L	H	L	L	L	L	L	M	L	M	L	L	H	L	H
EYA 06/ W Simpson	4,000	26/L	H	L	L	L	L	L	L	L	M	M	M	M	L	L	H	L	M	H	H
EYA 07/ E Simpson	3,300	28/L	H	L	M	L	M	L	L	L	M	L	M	M	L	L	H	L	M	H	H
EYA 08/ Power Creek	4,800	28/L	H	H	L	H	H	—	—	—	—	L	—	L	—	H	—	L	L	H	H
EYA 09/ Eyak Lake	5,100	21/L	H	H	L	H	H	—	—	—	L	L	—	L	—	H	L	L	L	H	H
EYA 10/ Eyak River	3,800	18/L	H	M	L	H	M	—	—	—	L	L	M	L	—	M	L	L	L	H	H
EYA 11/ Core Parcels	13,700	42/M	H	H	L	H	H	—	—	—	L	L	L	L	—	H	L	L	L	H	H
EYA 12/ Rude River	6,900	13.5/L	L	L	M	L	L	—	—	—	L	M	—	M	L	H	L	L	H	L	H
EYA 13/ Orca Narrows	4,600	20/L	M	L	L	L	L	L	L	—	L	L	L	H	L	L	M	L	M	H	H

Appendix I
Small Parcel Evaluation/Ranking Criteria

The Small Parcel evaluation and ranking system is based on different criteria and a different formula than that of the Large Parcel Program. Rather than evaluate the parcel on each of the 19 resources/services used in the Large Parcel criteria, the Small Parcel criteria asks about the uniqueness, quality, and interconnectedness of habitat. It requires linkage to only one resource/service.

The criteria for the Small Parcel evaluation process is as follows:

Linkage

A. *Occurrence* – the parcel contains key habitats/sites that benefit the recovery of injured resources or services.

B. *Uniqueness* – key habitats/sites on the parcel are unique in relation to key habitats/sites off-parcel (within the region).

C. *Connectedness* – the essential habitats/sites linked to injured resources/services on parcel are connected to other elements/habitats in the greater ecosystem.

D. *Quality* – does the parcel have high levels of production, diversity, use levels or other measures of habitat richness.

Protection Potential

A. Key habitats/sites on parcel are vulnerable to or potentially threatened by disturbance of habitat loss.

B. Key habitats/sites on nearby lands are vulnerable to or potentially threatened by disturbance or habitat loss from development on the subject parcel.

C. Key habitats/sites on-parcel are protected (not vulnerable) from incompatible adjacent land uses.

D. Recovery of the injured resources/services would benefit from protection in addition to that provided by the owner and applicable laws and regulations.

Management

A. Will acquisition of the parcel allow for enhancement of injured resources/services?

B. The parcel has strategic value to protect or provide access to key habitats/sites that occur on or beyond the parcel's boundaries.

EXAMPLE: Any Small Parcel

Evaluation and Ranking Criteria										Score
Linkage				Protection Potential				Management		
A	B	C	D	A	B	C	D	A	B	
Y	N	Y	Y	N	N	N	Y	N	Y	16

The scoring formula multiplies the Linkage (L) by the Protection Potential (P) by the Management (M) for an overall score. The formula is stated:

(1+L) (1+P) (1+M) = Score*
(1+3) (1+1) (1+1) = 16

* The constant 1 is added to each category in order to prevent a multiplier of 0 from occurring.

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Mission Without a Map

The Politics and Policies of Restoration Following the Exxon Valdez Oil Spill

EXXON SHALL PAY . . . $900 MILLION

. . . FOR PURPOSES OF . . .

. . . RESTORING, REPLACING,
ENHANCING, REHABILITATING
OR ACQUIRING THE EQUIVALENT OF . . .

. . . NATURAL RESOURCES INJURED AS A RESULT OF THE OIL SPILL AND THE REDUCED OR LOST SERVICES PROVIDED BY SUCH RESOURCES . . .