

The *Exxon Valdez* Reopener:
Natural Resources Damage Settlements, and Roads Not Taken

Professor William H. Rodgers, Jr., and the Seminar on Natural Resource Damages, Law B585, University of Washington, School of Law, Winter 2005 (J.B. Crosetto, C. A. Holley, T.C. Kade, J.H. Kaufman. C. M. Kostelec, K.A. Michael, R.J. Sandberg & J. L. Schorr), May 2005.

Contact William H. Rodgers, Jr. via e-mail at whr@u.washington.edu, or telephone at (206) 543-5182. 408 William H. Gates Hall, University of Washington, School of Law, Box 353020, Seattle, WA 98195-3020.

The *Exxon Valdez* Reopener:
Natural Resources Damage Settlements, and Roads Not Taken

Professor William H. Rodgers, Jr., and the Seminar on Natural Resource Damages, Law B585, University of Washington, School of Law, Winter 2005 (J.B. Crosetto, C. A. Holley, T.C. Kade, J.H. Kaufman, C. M. Kostelec, K.A. Michael, R.J. Sandberg & J. L. Schorr), May 2005.

Contact William H. Rodgers, Jr. via e-mail at whr@u.washington.edu, or telephone at (206) 543-5182. 408 William H. Gates Hall, University of Washington, School of Law, Box 353020, Seattle, WA 98195-3020.

This page intentionally blank.

TABLE OF CONTENTS

I.	<u>Introduction</u>	1
	<i>Insert 1 – Spill: The Wreck of the Exxon Valdez, Alaska Oil Spill Commission Final Report, State of Alaska, February 1990, p. 62</i>	2
	<i>Insert 2 – Area of Exxon Valdez oil spill compared to the California coast.</i>	3
	<i>Insert 3 – Area of Exxon Valdez oil spill compared to the Eastern seaboard.</i>	3
II.	<u>Roads Not Taken</u>	5
	A. <u>The Third Trustee: A Missing Tribal Presence</u>	5
	1. <u>Natural Resource Damages at Common Law</u>	5
	2. <u>Federal Statutory Natural Resource Damage Regimes</u>	6
	3. <u>Tribes Left Out</u>	8
	4. <u>Alaskan Native Villages and Tribes Hardest Hit Yet Still Left Out</u>	9
	<i>Insert 4 – Native Alaskan Villages</i>	10
	5. <u>Chenega Bay Settlement</u>	11
	6. <u>Tribal Intervention to Enforce the Reopener</u>	11
	B. <u>Disapproval of 1991 Settlement</u>	14
	1. <u>The Criminal-Civil Case Confusion</u>	15
	<i>Insert 5 – Criminal Plea Agreement.</i>	17
	<i>Insert 6 – Apology Display Ad No. 4, from the New York Times, April 3, 1989, p. A5</i>	19
	2. <u>The 1991 “Baseline” Document: Settling the Unknown</u>	19
	3. <u>The Reopener Constraints as “Contrary to Law”</u>	21
	C. <u>A Reconstituted and Better-Directed Council</u>	23
	1. <u>Theoretical and Practical Problems with Any Council: Who, What, and How?</u>	23
	<i>Insert 7 – EVOS Trustee Council Membership</i>	25
	2. <u>Performance of the EVOS Trustee Council</u>	26
	a. <u>The Slow Start: “They paid themselves”</u>	26
	b. <u>Mid-Course Correction: The Tanker Blockade</u>	27
	c. <u>Natives Left Out Again</u>	29
	<i>Insert 8 – Native Alaskan Villages affected by the Exxon Valdez Oil Spill</i>	29

d.	<u>The Current Course: Reopener or Not?</u>	31
	<i>Insert 9 – Source: EVOS Status of Injured Resources</i>	
	2002	31
D.	<u>The Civil Suits: More “What Ifs”?</u>	35
1.	<u>Takeover and Domination of the Clean-Up</u>	36
	<i>Insert 10 – The Clean-up. Courtesy of Brad Marten,</i>	
	<i>Esquire, Seattle, Wash. , April 2005.</i>	36
2.	<u>Exxon Voluntary Payments</u>	37
3.	<u>Quick Settlement of the NRD Claims</u>	39
4.	<u>Strategic Settlement of the Chenega Bay Case</u>	39
5.	<u>Successful Defense of the Exclusivity of the NRD Settlement Process</u>	41
a.	<u>Alaska Sport Fishing Association v. Exxon Corp.</u>	41
b.	<u>In re Native Class</u>	42
6.	<u>The Slow Death of Punitive Damages</u>	44
a.	<u>Five Billion to Four Billion to 4.5 Billion</u>	44
b.	<u>The Seattle Seven Interlude</u>	45
	<i>Insert 11 -- Ninth Circuit: Exxon Case Law</i>	47
E.	<u>Double-Hulls and Margins of Tolerance</u>	48
III.	<u>Road to be Taken: Applying the “Reopener”</u>	48
A.	<u>Legal Conditions</u>	48
1.	<u>Have “one or more populations, habitats, or species” suffered a</u> <u>“substantial loss or substantial decline in the areas affected by the Oil</u> <u>Spill”?</u>	48
2.	<u>How Does One Measure Whether Declines in Populations, Habitats, or</u> <u>Species Are Substantial?</u>	49
a.	<u>Generally</u>	49
b.	<u>As Applied</u>	51
(i)	<u>Orcas</u>	51
(ii)	<u>Stellar Sea Lions</u>	52
(iii)	<u>Pacific Herring</u>	52
(iv)	<u>Intertidal Communities</u>	54
(v)	<u>Mussel Beds</u>	56
(vi)	<u>Sea Otters</u>	56
(vii)	<u>Common Murres</u>	57
(viii)	<u>Harlequin Ducks</u>	58
(ix)	<u>Black Oystercatchers</u>	58
(x)	<u>River Otters</u>	60
(xi)	<u>Pink Salmon</u>	62
3.	<u>These Losses Are “As a Result” of the Oil Spill</u>	63

4.	<u>Could the Long-Term Adverse Effects Reasonably Be Anticipated by the Trustees?</u>	64
a.	<u>Lingering Unweathered Oil in the Intertidal Zone</u>	65
b.	<u>1992-93 Collapse of the Pink Salmon Fishery</u>	65
c.	<u>1993 First Collapse of the Pacific Herring Fishery</u>	66
	<i>Insert 12 – Biomass estimates of Pacific herring in Prince William Sound.</i>	67
d.	<u>Other Unanticipated Consequences</u>	67
5.	<u>Restoration Projects Are Identifiable and Can Be Set Forth in a Restoration Plan</u>	68
a.	<u>National Research Council Study and Other Projects</u>	68
b.	<u>A Perpetual “Stewardship” for Alaska Natives</u>	70
6.	<u>Project Costs Are Not “Greatly Disproportionate” to the “Magnitude of the Benefits”</u>	71
IV.	<u>Conclusion</u>	71

This page intentionally blank.

The *Exxon Valdez* Reopener: Natural Resources Damage Settlements and Roads Not Taken*

"This was the largest oil spill ever to have occurred in U.S. waters and the largest anywhere this far north."

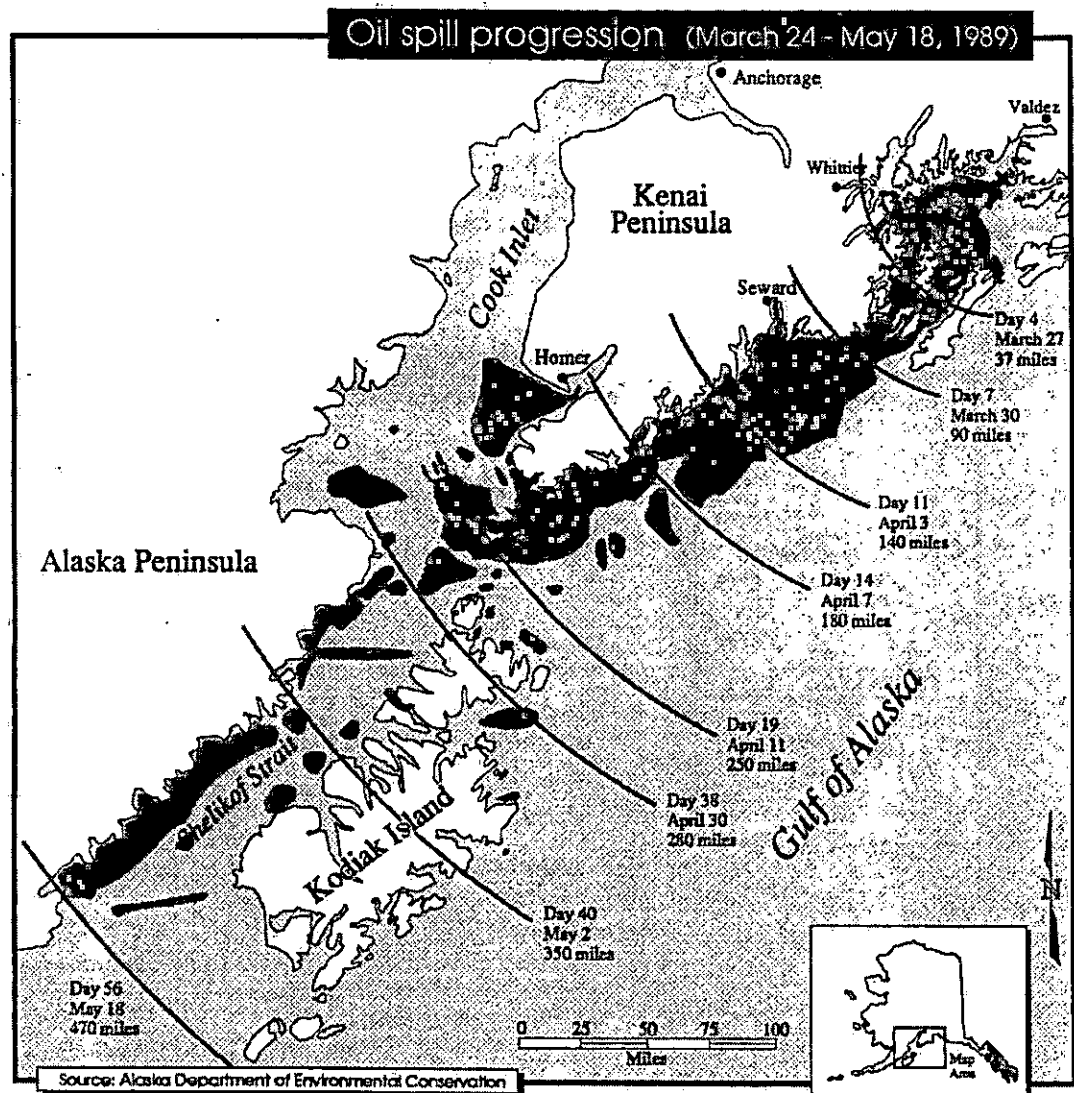
*R.B. Spies, S.D. Rice, D.A. Wolfe & B.A. Wright, 1996***

I. Introduction

Prince William Sound, Alaska, lost its innocence in March of 1989 when the tanker *Exxon Valdez* went aground on Bligh Reef. This terrible spill¹ killed more birds (350,000), contaminated more shoreline (1,244 miles), covered more water (1000 square miles), spawned more lawsuits (147), and ruined more lives (a large part of the population of Alaska was represented in the seven groups certified for class action status in the ensuing litigation)² than any oil spill in the history of the continent.

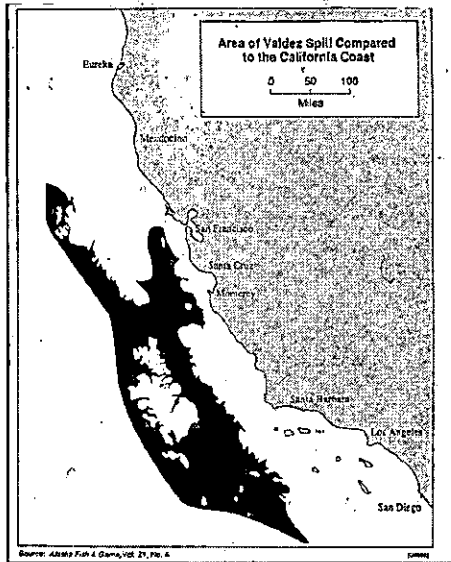
This spill was so big that critics cannot agree on the volume. It was certainly the largest spill in the U.S. Exxon's reported figure of 10.8 million gallons for the spill ranks it No. 34 in the "Top 65" Spills Worldwide but more recent calculations of 30 million gallons would move it up to No. 15 on the list, still behind the *Torrey Canyon* (No. 8), the *Amoco Cadiz* (No. 4) and the Ixtoc well blowout in the Gulf of Mexico (No. 1).³

The geographical reach of the spill is not so easily hidden. A graphic from the 1990 report at the Alaska Oil Spill Commission shows the tracks of this mishap that spread to the far corners of Prince William Sound and far down the Alaska Peninsula:⁴

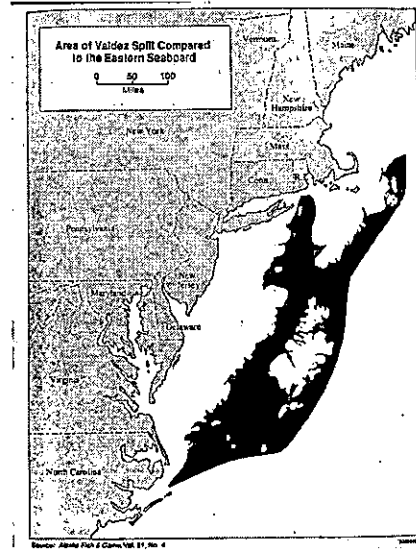


Insert 1 – Spill: The Wreck of the Exxon Valdez, Alaska Oil Spill Commission Final Report, State of Alaska, February 1990, p. 62

The giant geography of this dreadful deed is made the more stunning when superimposed on the west and east coasts of the United States:⁵



Insert 2 – Area of Exxon Valdez oil spill compared to the California coast.



Insert 3 – Area of Exxon Valdez oil spill compared to the Eastern seaboard.

Amazingly, the natural resource damage phase of this vast environmental tragedy was settled amicably. On October 8, 1991 Judge H. Russel Holland approved a settlement worked out by Exxon, the United States, and the State of Alaska. The essence of the agreement was for Exxon to pay \$900 million over time to the natural resources “trustees” – identified in the settlement documents as the United States and the State of Alaska. This sum would be spent by the Trustee Council – made up of three appointees each of the United States and the State of Alaska – to restore the damaged environment of Prince William Sound and nearby areas.

Part of the inducement for this settlement was the so-called “reopener” clause, entitled in the Agreement and Consent Decree as a “Reopener for Unknown Injury.”⁶ This clause reads:

Notwithstanding any other provision of this Agreement, between September 1, 2002, and September 1, 2006, Exxon shall pay to the Governments such additional sums as are required for the performance of restoration projects in Prince William Sound and other areas affected by the Oil Spill to restore one or more populations, habitats or species which, as a result of the Oil Spill, have suffered a substantial loss or substantial decline in the areas affected by the Oil Spill; provided, however, that for a

restoration project to qualify for payment under this paragraph the project must meet the following requirements:

- (a) the cost of a restoration project must not be grossly disproportionate to the magnitude of the benefits anticipated from the remediation; and
- (b) the injury to the affected population, habitat, or species could not reasonably have been known nor could it reasonably have been anticipated by any Trustee from any information in the possession of or reasonably available to any trustee on the Effective Date.

Resort to the Reopener is further constrained by a documentation precondition:⁷

The Governments shall file with Exxon, 90 days before demanding any payment pursuant to Paragraph 17, detailed plans for all such restoration projects, together with a statement of all amounts they claim should be paid under Paragraph 17 and all information upon which they relied in the preparation of the restoration plan and the accompanying cost statement.

This “reopener” helped seal the settlement. The governments told Judge Holland that it was an important hedge against miscalculations and excessive optimism that fueled the desire to settle quickly.⁸ Early in the settlement process, the state and federal governments announced they were looking for at least \$1 billion in damages.⁹ Mr. William Reilly, Administrator of the Environmental Protection Agency (EPA), “insisted” that the agreement contain \$300 million in a special fund to provide compensation for additional damage to natural resources.¹⁰ This demand formed the basis of the reopener clause in the final settlement agreement. During the negotiations, Mr. Lawrence Rawl, the chairman of Exxon, and Mr. Lee Raymond, Exxon’s president, stated that they wanted the settlement to immunize Exxon from any more state and federal claims. They hoped to avoid a lump sum payment. They detested the reopener clause.¹¹ In fact, the negotiations themselves nearly went aground because of Mr. Reilly’s insistence on this dreaded reopener. The deal was saved, it is said, by Mr. Samuel Skinner, U.S. Secretary of Transportation, who argued that the approval of the EPA was politically vital as President George H.W. Bush and Exxon would have a hard time justifying the settlement to environmental groups without it.¹² In the end, Exxon and Mr. Reilly accepted a diminished reopener calling upon Exxon to pay up to \$100 million after the year 2001, if necessary.¹³

This paper urges the U.S. and the State of Alaska to seek enforcement of the reopener clause. To date, the State of Alaska and the federal government have not requested any of the \$100 million Exxon may be required to pay to compensate for additional damages resulting from the oil spill.¹⁴ We offer extended comment on this most famous of all natural resource damage cases. Special attention will be paid to legal roads not taken.

II. Roads Not Taken

A. The Third Trustee: A Missing Tribal Presence

1. Natural Resource Damages at Common Law

Identifying “ownership” of the natural world that justifies the pursuit of claims for natural resource damages is nine parts history and one partchutzpah. But the question of who speaks for nature always has been a singular honor.¹⁵ Nature’s champions are expected to have a strong voice, a sympathetic heart, and a protective spirit.

The deep background of the modern natural resource damage statutes is found in the common law of the public trust and *parens patriae*. The public trust doctrine is one of more inspirational if obscure doctrines in all of environmental law. From its earliest days in the *Illinois Central* case,¹⁶ it has stood strong for the proposition that public resources are “not to be lost.” This “common ownership” finds expression in Alaska.¹⁷ In one of its most famous iterations, the California Supreme Court found in the public trust an ongoing duty to protect the waters of Mono Lake.¹⁸ The court said that “the state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect [the] public trust whenever feasible.”¹⁹

Parens patriae, “father of the country,” is a reinforcer of the public trust. It gives the state standing to bring suit as guardian of the resource. Like public trust, *parens patriae* developed at English common law, but it recognized the sovereign as guardian of the people.²⁰ An early and well known case resting on *parens patriae*, *Georgia v. Tennessee Copper*, recognized a state’s “quasi-sovereign interest” as direct and independent of the interests of individuals.²¹ *Tennessee Copper* is undeterred by fine distinctions between public and private property. Mr. Justice Holmes wrote: “the state has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air.”²²

Another powerful underpinning of natural resource protection is the Indian trust doctrine, which puts a flurry of protections around Indian properties and interests. Here is the vibrant voice of the third sovereign in the saving of natural resources. The Native

voice is often nature's voice, Rebecca Tsosie has explained.²³ Nobody has ever said it better than the Suquamish / Duwamish Indian, Chief Seattle, who surprised Governor Isaac Stevens with this verbal broadside:²⁴

Every part of this soil is sacred in the estimation of my people. Every hillside, every valley, every plain and grove, has been hallowed by some sad or happy event in days long vanished. Even the rocks, which seem to be dumb and dead as they swelter in the sun along the silent shore, thrill with memories of stirring events connected with lives of my people, and the very dust upon which you now stand responds more lovingly to their footsteps than to yours, because it is rich with the blood of our ancestors and our bare feet are conscious of the sympathetic touch. And when the last Red Man shall have perished, and the memory of my tribe shall have become a myth among the White Men, these shores will swarm with the invisible dead of my tribe, and when your children's children think themselves alone in the field, the shop, upon the highway, or in the silence of the pathless woods, they will not be alone. In all the earth there is no place dedicated to solitude. At night when the streets of your cities and villages are silent and you think them deserted, they will throng with the returning hosts that once filled them and still love this beautiful land.

The common law does not clearly isolate who can speak for nature. There are the three government voices (U.S., state, tribal), and sometimes many others. There is nothing in these common law origins of statutory natural resource damages that eschews prevention in favor of restitution. These doctrines are not on ice until the moment of destruction. They do not succumb to the "democratic" processes of formally prescribed ruination. They do not counsel abandonment of protection because the players are tired, the conflict never-ending, or a disappointing outcome pre-ordained .

2. Federal Statutory Natural Resource Damage Regimes

Congress learned a few things from the common law. The contemporary end point preferred by Congress in natural resource damages laws is three trustees – the United States, the states, and the Indian tribes. These are the three sovereigns active today in the United States. They are the three political entities that own the real estate and rule the waterways in the U.S. today. They are the three points of the environmental law triangle in North America. They are the three voices for nature.

The two giants in the NRD universe in today's environmental law are the Comprehensive Environmental Response, Compensation, and liability Act of 1980

(CERCLA or Superfund) and the Oil Pollution Act of 1990 (OPA). The tribal presence is strongly confirmed by each.

The Superfund law deals with the cleanup of hazardous substances and counts natural resource damages among recoverable response costs.²⁵ It specifies cleanup responsibilities and techniques. It defines “natural resources”:²⁶

(16) The term ‘natural resources’ means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the fishery conservation zone established by the Magnuson-Stevens Fishery Conservation and Management Act [16 U.S.C.A. § 1801 et seq.]) any State or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.

It makes clear that sums recovered as natural resource damages by the U.S. or a state (but not a tribe) are available “for use only to restore, replace, or acquire the equivalent” of natural resources.²⁷

The Oil Pollution Act (OPA) of 1990 was a direct Congressional response to the spill of the *Exxon Valdez* and it brought “oil” under the regime CERCLA extends to other hazardous substances. It has its own broad definition of “natural resources” that includes tribal interests:²⁸

(20) ‘natural resources’ includes land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the exclusive economic zone), any State or local government or Indian tribe, or any foreign government. . . .

It is also unmistakable in making clear that “subsistence use” is among the recoverable elements of damage in a cost recovery action:²⁹

(2) **Damages**

The damages referred to in subsection (a) of this section are the following:

(A) **Natural resources**

Damages for injury to, destruction of, loss of, or loss of use of, natural resources, including the reasonable costs of assessing the damage, which shall be recoverable by a United States trustee, a State trustee, an Indian tribe trustee, or a foreign trustee.

(B) **Real or personal property**

Damages for injury to, or economic losses resulting from destruction of, real or personal property, which shall be recoverable by a claimant who owns or leases that property.

(C) **Subsistence use**

Damages for loss of subsistence use of natural resources, which shall be recoverable by any claimant who so uses natural resources which have been injured, destroyed, or lost, without regard to the ownership or management of the resources.

(D) **Revenues**

....

OPA goes into detail on the extent of liability to natural resource damage trustees, their designation, and their functions.³⁰ Section 1006 uses identical language requiring all three trustees (federal, state, and tribal) to “develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent” of the natural resources under their trusteeship.³¹

The Clean Water Act, as it was amended in 1977, mentioned two trustees not three. Subsection 311(f)(4) says that recoverable costs of removal “include any costs or expenses incurred by the Federal Government or any State government in the restoration or replacement of natural resources damaged or destroyed as a result of a discharge of oil or a hazardous substance. . . .”³² Sums recovered “shall be used to restore, rehabilitate, or acquire the equivalent of such natural resources. . . .”³³

3. **Tribes Left Out**

In the 1991 settlement, tribes were left out. It was never contemplated that they would be included. There was a colorable legal reason for their exclusion. The EVOS

NRD claims were brought under the Clean Water Act (the key amendments were in 1977) that embraces not the prevailing three-sovereignty model but the older two-sovereignty model for NRD claims. They can be brought either by the federal government or the states. Legal arguments are available for including the Alaskan tribes on the EVOS Trustee Council but they certainly would not be raised *sua sponte* by any federal or State of Alaska administration. And they certainly would not have been raised in 1990.³⁴

Indeed, “tribes left out” may be the expected equilibrium in NRD actions under even the three-sovereignty models of CERCLA and OPA. Certainly no potentially responsible party wants to see them. Exxon had its hands full without these creative, informed, fiercely protective and utterly unpredictable third parties. And what part of the booty and management prerogatives are federal and state governments anxious to surrender to the tribes? None whatsoever. The State of Alaska has its own peculiar anxieties about Indian tribes³⁵ but it did not have to draw upon these arguments with settlement insiders because nobody wanted the tribes in.

Perhaps the best known NRD case in the U.S. today is the action for the destruction by mining of the resources of the Coeur d’Alene basin.³⁶ This lawsuit was launched by the tribe with the U.S. later climbing aboard.

4. Alaskan Native Villages and Tribes Hardest Hit Yet Still Left Out

“Never in the millennium of our tradition have we thought it possible for the water to die”

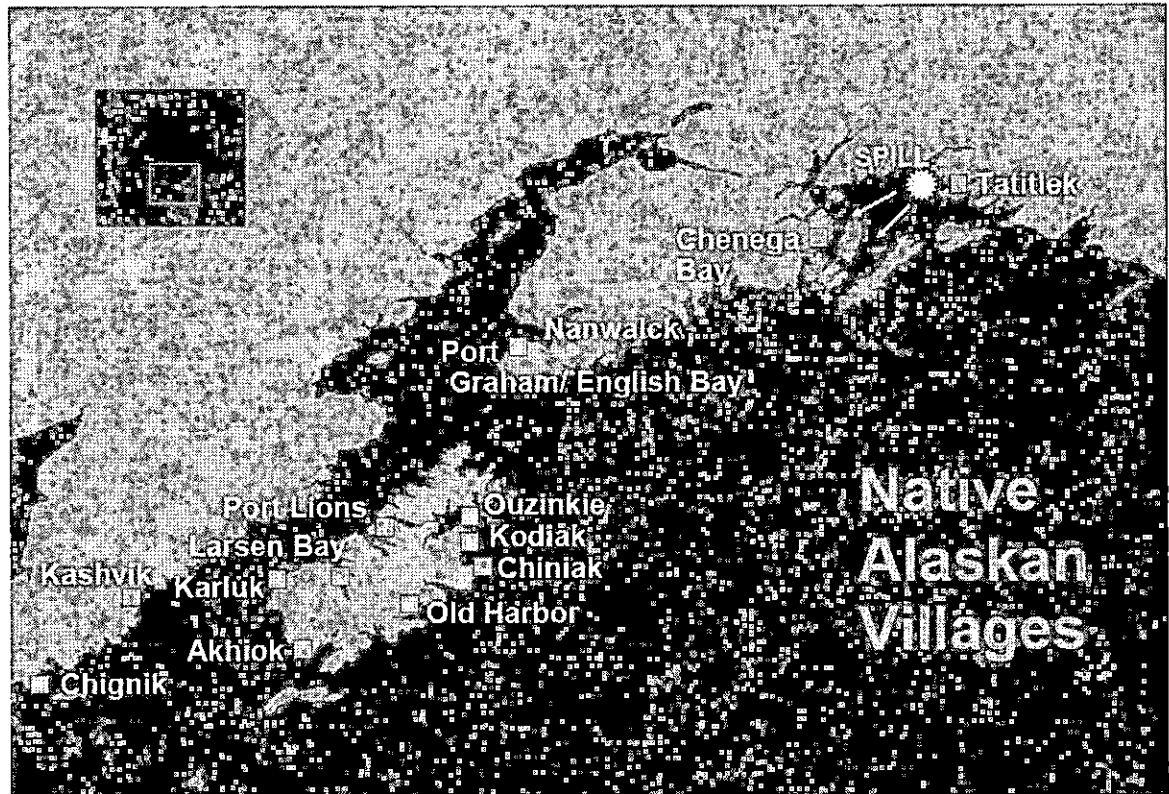
Water Meganinick, Sr., traditional village chief, Port Graham, in the wake of the spill³⁷

as the first oiled birds and otters appeared, “many of the Port Graham women went down to the beach, even though the weather was stormy. Going out in a skiff at that evening’s low tide, they collected the prized and nutritious clam-like ‘bidarkies’ in the fading light. . . . That night they shucked and cleaned the bidarkies and gave each family in the village one bagful, knowing these might be the last for years to come.”

Alaska Oil Spill Commission, 1990³⁸

Failure of a tribal presence on the EVOS Trustee Council was not due to the spill’s chance neglect of village / tribal resources, properties, and hopes. Native Alaskans are the largest private landowners in Prince William Sound. The Chugach Alaska Corporation is “owned” by approximately 2,000 Native shareholders,³⁹ and within the

region are the Native villages of Chenega Bay, English Bay, Eyak, Port Graham, and Tatitlek. The fourteen Native villages in the path of the spill are as follows:⁴⁰



Insert 4 – Native Alaskan Villages.

The massive news coverage in the wake of the spill mostly missed the Native side of the story. One study shows a lumbering mainstream press focused initially on a disaster narrative (“accidents happen”), turning quickly to the crime narrative (“Hazelwood did it”) and the environmental narrative (“the birds are dead”).⁴¹ By contrast, on the pages of the *Tundra Times*, the Native newspaper, ten of ten oil spill stories in April of 1989 sounded the subsistence narrative (“the very environment that gave them life could be dying”).⁴² Here it was made clear:⁴³

There are no stores in Tatitlek. If a person is hungry, he goes out and hunts seal or deer, catches salmon or digs for shellfish . . . [and so] villagers are worried they may starve looking for food that has not been affected.

5. Chenega Bay Settlement

As the prospects of settlement matured in 1991, Native voices were strong in opposition. Others were too. The principal objection, we are told, included the extent to which damage assessment information would be made available to the public, adequacy of the settlement, and the absence of civil penalties.⁴⁴

No Native group in 1991 sought or demanded to become party to the U.S.-Alaska-Exxon settlement. No tribes were recognized at the time. One of the most active and effective groups in opposition bowed out with a Consent Decree and Stipulation of Dismissal, lodged with the court on September 25, 1991, in the case of *Native Village of Chenega Bay v. United States*.⁴⁵ Among other things, the U.S. points out, this settlement “stipulates that the Governments [U.S. and Alaska] have the right, to the exclusion of the Native groups, to assert natural resource damage claims arising from the Spill.”⁴⁶

The *Chenega Bay* settlement was sustained by hopes and expectations that would never come to pass. In the settlement, the most conspicuous gain to the Native plaintiffs was access to the government research on spill damage that had long been held confidential in anticipation of the huge natural resource damage lawsuit that would never happen.⁴⁷ In addition to getting this information that should have been shared in the first place, the *Chenega Bay* plaintiffs won the right to sue for monetary damages for cultural and subsistence losses. This right would prove to be worthless. The *Chenega Bay* settlement also anticipated that Native interests would be protected fully by the EVOS Trustee Council. This reliance was mistaken.

These fundamental legal disappointments, in retrospect, are reasons to look more attentively at the reopener.

6. Tribal Intervention to Enforce the Reopener

Would it be possible at this late date for Alaska tribes to intervene in the NRD case for purposes of enforcing the reopener? We think so.

Attempts have been made to open this door before. In 1995, the Coastal Coalition (headed by biologist and citizen activist, Rick Steiner) sought permissive intervention for the purpose of establishing a post-decree monitor for the EVOS Council.⁴⁸ The federal government argued that:⁴⁹ (1) the motion was untimely because there was no “live” case, (2) there was no common question of law or fact as required for permissive intervention under FRCP 24(b), (3) the Coastal Coalition presented no independent basis for jurisdiction, as required by FRCP 24, to review Executive Branch restoration decisions, and (4) the Coastal Coalition had no standing to intervene because “only those deemed third-party beneficiaries have non-party rights to enforce the terms of a consent decree.”⁵⁰

Furthermore, “where the Government is a party to a consent decree, only the Government can seek enforcement of the contractual bargain it has made on behalf of the public.”⁵¹

The District Court denied the Coastal Coalition’s Motion to Intervene, but the order gives reason for optimism on the part of a potential tribal intervenor.⁵² The court found that the Coalition’s motion was filed timely, that a review of the trustee’s activities would not unduly prejudice the parties, and that a common question of law and fact existed between the motions to intervene and the main action – so far so good. With regard to jurisdiction the court held that OPA did not apply but that independent jurisdiction may exist under 28 U.S.C. § 1367 (supplemental jurisdiction). The point to emphasize is that the Consent Decree states that the Court retains jurisdiction in the *Valdez* case to enter “such further orders, direction, or relief as may be appropriate for the construction, implementation, or enforcement of this Agreement.”⁵³ Notably, the court did not address the issue of standing. Instead, the court held that it did not have jurisdiction to order the creation of a Review Commission. Still, “the court [was] not unsympathetic with the Coastal Coalition’s concerns...,”⁵⁴ which leaves hope for another party on another day.

An Alaskan tribe should be entitled to intervene as of right under FRCP 24, claiming it has an interest related to the settlement, that failure to intervene will impair its ability to protect that interest, and that the interest has not been adequately represented by the federal government or the state of Alaska. These requirements should be easy to meet. The U.S. and Alaska are in full flight from the reopener,⁵⁵ and an intervenor need only show that representation on its behalf “may be” inadequate.⁵⁶ The tribes were not recognized at the time of the settlement, and they haven’t seen the benefit of direct settlements or EVOS projects.⁵⁷ Given the low threshold for showing inadequacy, tribal intervention would at least shift the burden to the governments to show that they adequately represented tribal interests, that the arrangement with Exxon was no sweetheart deal, and that there are no scientific grounds for invoking the reopener. That alone would be worth the price of admission.

Exxon would surely challenge the timeliness of tribal intervention, but under the unique circumstances, there could hardly be a more appropriate time. The Supreme Court has said that the timeliness of a motion to intervene “is to be determined from all the circumstances.”⁵⁸ The tribe must then show that it’s not too late in the game to intervene, that Exxon and the governments will not be prejudiced by tribal intervention, and that there is good reason why the tribe did not intervene earlier.⁵⁹ As to the first element, though Exxon has made the last of its payments on the \$900 million settlement, we might consider the case still pending because the window to invoke the reopener has yet to close. Given that the unforeseen damages the reopener provides for are now upon us and will be for decades to come, there would seem no more fitting time in the proceeding to intervene.

As to the reason for and length of delay, the governments' inaction in the face of imminently losing the opportunity to invoke the reopener makes a compelling argument for granting intervention. The original consent decree is unmistakable in its design not to affect or impair the "rights and obligations, if any, of Alaska Native villages to act as trustees for the purposes of asserting and compromising claims" for NRDs resulting from the spill.⁶⁰ The burden was ultimately upon Exxon, the United States, and Alaska to join additional parties in order to ensure the binding effect of the judgment.⁶¹ If there is no independent NRD claim, the grounds for tribal intervention are made sounder. Intervention would be their last chance for a day in court.

Additionally, for a motion to intervene to succeed, the tribe would need to show that requiring the governments to invoke the reopener would in fact serve their interest. This would be easy to do. We are confident tribes could develop a restoration plan worthy of the reopener opportunity. Alternatively, a tribe could seek representation on the EVOS Council as a trustee. From that vantage point, a tribe might demand, for example, that a million dollars be spent on a National Academy of Sciences study on how to spend one hundred million dollars of reopener money.

Another alternative to intervention is a tribal suit against the U.S. under the All Writs Act (28 U.S.C. § 1651) for mandamus to enforce the terms of the consent decree. The theory would be that with the conditions for invoking the reopener fully met, the government has a duty to invoke it. A line of cases in the Sixth Circuit confirms judicial authority to enforce the terms of a consent decree against a non-party, if that party has frustrated the purposes of the decree or the administration of justice.⁶² Here, if the U.S. refuses to invoke the reopener deemed indispensable to the fairness of the settlement, its conduct would frustrate the purposes of the decree. It is not implausible that a non-party with an interest in the judgment could move the court for enforcement of its terms where a party fails to do so.

We believe, moreover, that the federal Indian trust doctrine is operative in Alaska.⁶³ The federal Indian trust responsibility, according to the Department of Interior, "is a legally enforceable fiduciary obligation, on the part of the United States, to protect tribal lands, assets, resources, and treaty rights, as well as a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes."⁶⁴ Without quibbling over details, we have difficulty imagining how any version of this trust doctrine can be reconciled with a decision of the U.S. to leave ample amounts of oil on the properties and subsistence resources of Native Alaskans while neglecting to remove from the table the money set aside to fix the problem.

B. Disapproval of 1991 Settlement

In theory, Judge H. Russel Holland could have disapproved the 1991 settlement and sent the cascade of litigation that ensued in a somewhat different direction. But this option was not practically open to him. The black-letter law for federal judicial approval of settlements is well understood. Generally, a court is asked to weigh whether a proposed consent decree is procedurally and substantively fair, reasonable, and compatible with underlying statutory goals.⁶⁵ Within these general contours hide a host of particulars on whether the settlement was a product of arms-length negotiations, was reflective of uncertainties and litigation risks, was convincing on its face, and so on.

The U.S. Justice Department is always able to make up a story about the necessity for settlement but it did not have to be particularly inventive in the case of the *Exxon Valdez*. The case was a lawyers' nightmare, as it was for everybody else. Within hours of the catastrophe, Exxon already was laying the groundwork for multiple assignments of blame that could be translated into "possible liability" for the U.S. and Alaska that would later fuel the enthusiasm for settlement.⁶⁶ The "baseline data" for a pristine Prince William Sound would never be available, despite heart-wrenching ventures to secure it.⁶⁷ The pre-litigation science became a contested landscape, replete with allegations of misleading scientific studies.⁶⁸ The rules for calculating natural resource damages were rendered dysfunctional back in the days of the Reagan administration,⁶⁹ and nobody was disposed to revive them. Contingent valuation studies were done on the natural resource damages in Prince William Sound and these would run into billions of dollars (specifically, between \$3 and \$15 billion).⁷⁰ But nobody had confidence in them, especially Exxon, but including the U.S. litigators, so these dangerous studies were never taken out of the drawer.

Far better that the case be "settled" on the back of an envelope by a few old men in Washington, D.C. The apocryphal story is that Governor Wally Hickel demanded that any settlement have a "b" in it, and it must be said that he got the math quite right. Potentially massive civil and criminal penalties would all go away for the bargain price of four misdemeanors and \$25 million (perhaps 2-1/2 days of cleanup costs) with the money going to the victims of crime and the North American Wetlands Conservation Fund. Of the \$1.125 billion "in fines, restitution and civil damages" celebrated in the Department of Justice press release,⁷¹ \$100 million simply vanished in an accounting gesture called "remitted" because the Exxon Companies stood tall as corporate citizens and did the astonishing thing of "[recognizing] their responsibilities." Another \$125 million was celebrated as "restitution" (visions of the thief returning the purloined wallet) and paid over to the state and federal governments for "restoration projects" in Alaska. This

would be subtracted from the NRD part of the settlement, leaving the EVOS Trustee Council with \$900 million.

The overall "settlement" was jeopardized by three particulars deserving further elaboration – the inadequacy of the criminal law disposition and its encroachment on the natural resource damages fund; the vacuity of the description of injuries that were being forgiven and resolved; and the invention of conditions on the reopener that had no basis in law.

Only one of these three objections was presented forcefully to Judge Holland.

1. The Criminal-Civil Case Confusion

Felonies were first on the scene. As an immediate result of the spill, the Exxon Shipping Company and the Exxon Corporation faced five criminal charges. On February 27, 1990, the two entities were indicted and charged with felony violations of the Ports and Waterways Act and the Dangerous Cargo Act and with misdemeanor violations of the Clean Water Act, the Refuse Act and the Migratory Bird Treaty Act.⁷² By including claims under the Refuse Act and the Migratory Bird Treaty Act, it was said, the government was able to make Exxon strictly liable for the spill. This would encourage the parties to reach a settlement.⁷³ In March of 1991, Exxon Shipping agreed to plead guilty to all three misdemeanor charges and the Exxon Corporation agreed to plead guilty to the Migratory Bird Treaty Act misdemeanor. The parties concluded that a \$100 million criminal penalty was appropriate.⁷⁴

On April 24, 1991, Alaska District Court Judge H. Russel Holland rejected the \$100 million criminal plea agreement as inadequate.⁷⁵ Judge Holland stated, "[the fines] do not adequately achieve deterrence. I'm afraid these fines send the wrong message, suggesting that spills are a cost of business that can be absorbed."⁷⁶ The parties in the settlement discussions feared that the disapproval of the criminal settlement would affect adversely the \$900 million civil settlement with the \$100 million reopener provision.⁷⁷ The Judge heard sharp criticism on the size of the penalty. Of particular concern was Exxon's lack of remorse regarding the impacts of the spill and the adverse impacts an approved settlement would have on the claims of the Alaska Natives.⁷⁸

As part of the discovery process designed to determine if Exxon planned to use the government settlement to hinder potential claims by Alaska Natives, Exxon Corporation Chairman Lawrence Rawl asserted that Exxon had not considered these claims while negotiating the settlement.⁷⁹ In an effort to resolve the disputes surrounding the settlement negotiations, the Alaska and Federal governments negotiated a settlement with the *Chenega Bay* plaintiffs and other Native groups on September 24, 1991.⁸⁰ The agreement gave the governments the exclusive right to recover for damages to natural resources on public lands, including those used for subsistence living, and the Natives

maintained their right to pursue all other private claims against Exxon.⁸¹ On September 25, 1991, Exxon and the governments signed a new settlement agreement that was subsequently approved by the Alaska legislature and by Judge Holland.⁸²

The approved settlement was “strikingly similar” to the earlier proposal that was rejected as inadequate.⁸³ The \$100 million for restitution was twice the original proposed settlement and was split between state and federal governments.⁸⁴ Exxon only paid \$25 million in fines (\$125 million being remitted for good behavior); that money was actually paid into the North American Wetlands Conservation and the Victim Compensation and Assistance Act Account.⁸⁵ This time, Judge Holland commended Exxon for its efforts, saying that “Exxon has been a good corporate citizen.”⁸⁶ In consideration of the estimated \$2.5 billion spent by Exxon in cleanup, the Court forgave another \$125 million in criminal fines.⁸⁷ Concurrently, the Judge also approved the civil settlement where Exxon agreed to pay \$900 million over ten years, plus an additional \$100 million, if warranted, for the damage to natural resources.

The civil and criminal components of the case were closely linked. Nine days after Judge Holland rejected the initial criminal settlement agreement, Exxon and the State of Alaska withdrew from the civil settlement negotiations.⁸⁸ The Alaska House of Representatives supported Judge Holland’s decision, voting 27-13 to reject the settlement and seek \$1.2 billion – \$700 million for the civil claims, and \$500 million as a criminal penalty.⁸⁹ While it is difficult to identify motives, some people were concerned about the impact of the settlement on the claims of non-participating parties, the Native Alaskans in particular.⁹⁰ Additionally, from a legal strategy perspective, it made sense for Exxon to settle the criminal and civil penalties concurrently. All in a bundle – with trades and exchanges freely crossing civil and criminal boundaries. This conclusion is evidenced by the settlements being referred to as a single “\$1.125 billion deal.”⁹¹

Criminal Plea Agreement⁹²

Defendant	Charge	Fine	Remitted*	Actually Paid	Notes
Exxon Shipping Company	<p>Violation of CWA – 33 U.S.C. §1311(a), 33 U.S.C. §1319(c)(1)(a) [discharged a pollutant from a point source into navigable waters without a permit]</p> <p>Refuse Act – 33 U.S.C. §407, 33 U.S.C. §411 [unlawfully threw, discharged, and deposited and did cause, suffer, and procure to be thrown, discharged and deposited, oil from a ship, into navigable water of the U.S., without a permit]</p> <p>Migratory Bird Treaty Act – 16 U.S.C. §703, 16 U.S.C. §707(a) and 50 C.F.R. §21.11 [killed migratory birds without a permit]</p>	\$125 million	\$105 million	\$20 million (\$7 million attributed to the Migratory Bird Treaty Act violation)	<p>\$7 million to be deposited into the North American Wetlands Conservation Fund to be used solely by the U.S. Department of Interior to carry out approved wetlands conservation projects in the United States, Canada and Mexico.</p> <p>\$13 million to go to Victim Compensation and Assistance Act Fund</p>
Exxon Corporation	Migratory Bird Treaty Act – 16 U.S.C. §703, 16 U.S.C. §707(a) and 50 C.F.R. §21.11 [killed migratory birds without a permit]	\$25 million	\$20 million	\$5 million (all for MBTA violation)	All of the \$5 million to be deposited into the North American Wetlands Conservation Fund.
Criminal fines		\$150 million	\$125 million	\$25 million	
Restitution**		\$100 million		\$100 million	\$50 million to State of Alaska; \$50 million to U.S.; to be used exclusively for restoration projects related to EVOS.
TOTAL		\$250 million	\$125 million	\$125 million	

* For "good behavior (e.g. recognizing responsibility for the grounding and oil spill; money spent in clean-up response; payment of \$300 million to claimants; cooperation with federal criminal investigation; updated environmental policies; support of environmental codes of conduct; environmental expenditures not related to oil spill; contribution of \$50 million into fund for improvement of oil industry response capability; new Environmental and Safety Department for Exxon's U.S. oil and gas division; new Environmental Affairs Group at Exxon Shipping; improved vessel operating safety, personnel training, and oil spill response capability, environmental and safety research expenditures).

** The \$100 million in restitution is twice the amount agreed to in the previous criminal settlement on 3/13/91.

Insert 5 – Criminal Plea Agreement.

While Exxon compiled a record of resounding victories in negotiations, Captain Hazelwood's fate was certainly less remarkable. He was charged criminally with four counts – driving a watercraft while intoxicated, reckless endangerment, criminal mischief, and negligent discharge of oil. He was acquitted of three charges and convicted of only negligent discharge of oil. Ultimately he was sentenced to a \$1000 fine, \$50,000 in reparations, and ninety days in jail. The sentence was suspended in lieu of completing 1000 hours of community service.⁹³

Originally, Judge Karl Johnstone wanted Hazelwood to spend his community service hours hand-scrubbing rocks in the affected areas. Once the eight-year appeals process was completed, however, and his sentence finally approved in 1999, the clean-up effort had been abandoned.⁹⁴ To fulfill his community service, Hazelwood, whose master's license was also revoked for nine months, spent weeks picking up litter along the side of Seward Highway, a 125 mile stretch of road linking Anchorage and Seward.⁹⁵ In addition, Hazelwood worked at "Bean's Café," a soup kitchen for the homeless in Anchorage.⁹⁶ The Dodge Globe reported on June 23, 1999, "Capt. Joseph Hazelwood put on an apron and gloves Tuesday to help prepare salad at a soup kitchen as part of his community service over the Valdez oil spill . . . [and] worked silently at the soup kitchen Bean's Cafe, emptying lettuce into a container for salad."⁹⁷ He spent several weeks at a time in Anchorage over three summers and completed his 1000 hours of community service in the summer of 2001.⁹⁸ Hazelwood finished paying his \$50,000 restitution fine in May of 2002.⁹⁹

Hazelwood never sailed again as master of a vessel.¹⁰⁰ Since the Valdez Spill, Hazelwood has been employed as an investigator, consultant, and claims adjuster, primarily for the law firm that represented him in his trial and appeals.¹⁰¹ He also teaches at his alma mater, the New York State Maritime Academy.¹⁰²

The Exxon companies did not get their hands as dirty in contrition. They published advertisements in leading newspapers saying how sorry they were.¹⁰³

AN OPEN LETTER TO THE PUBLIC

On March 24, in the early morning hours, a disastrous accident happened in the waters of Prince William Sound, Alaska. By now you all know that our tanker, the Exxon Valdez, hit a submerged reef and lost 240,000 barrels of oil into the waters of the Sound.

We believe that Exxon has moved swiftly and competently to minimize the effect this oil will have on the environment, fish and other wildlife. Further, I hope that you know we have already committed several hundred people to work on the cleanup. We also will meet our obligations to all those who have suffered damage from the spill.

Finally, and most importantly, I want to tell you how sorry I am that this accident took place. We at Exxon are especially sympathetic to the residents of Valdez and the people of the State of Alaska. We cannot, of course, undo what has been done. But I can assure you that since March 24, the accident has been receiving our full attention and will continue to do so.


L. G. Karl
Chairman



Insert 6 – Apology Display Ad No. 4, from the New York Times, April 3, 1989, p. A5.

2. The 1991 “Baseline” Document: Settling the Unknown

Anyone intent upon activating the reopener must look closely at the description of known effects at the time of the 1991 settlement. The reason for this is that the reopener is denominated “Unknown Injury.” It disavows responsibility for injury that could not have been reasonably known nor “reasonably have been anticipated by any Trustee from any information in the possession of or reasonably available to any trustee.” Thus inquiry turns to what was known and what could have been anticipated.

The 1991 “Summary of Injuries” document does not say clearly what was known and what could be anticipated. It specializes in vacuity and refines indecision. The question is raised whether such a nonreport on the effects of the spill might preclude judicial approval of the settlement. Offenders are not customarily given walking papers until they own up to what was done.

The document used as a preliminary estimate of damages and the foundation of the settlement was a summary of studies compiled by NOAA in 1991.¹⁰⁴ Creating this document would be a difficult feat in the best of times and this was not the best of times. It was published a short two years after the largest oil spill in American history. While NOAA no doubt accurately counted the number of oiled and dead animals collected in its freezers, the vast number of species that exist in the Prince William Sound's ecosystems were not even mentioned in this summary report. Further, most of the studies were inconclusive as to the numbers killed and the possible long-term effects. In many respects, investigation had barely begun and this report had the task of summarizing what was learned more than nine months prior.

Of course, NOAA explains several times that the document is merely preliminary. Its hesitancy implies an insufficiency of information that could be relied on in litigation or settlement. Perhaps more importantly, it shows that a settlement in a case covering a vast area with a plethora of resources must be a purely political one considering the problem of valuation and lack of information or human understanding. The Summary of Injury also brings the validity of the settlement into question because of how much was unknown at the time. In the same way, it reinforces the logic behind the Reopener Clause. The logic was that the governments could recover for injury that was known approximately at the time and be able to revisit the claim later after years of studies were done. In that way, the offender Exxon, through payments to the Trustee Council, would fund the studies that would later be used as evidence of further injury not known when the governments settled in 1991.

If the Summary says anything conclusively, it is that it will take more time to evaluate the damages of the spill. The Summary discusses 32 species, in addition to the intertidal and subtidal ecosystems (although very briefly), and archaeological resource damage. Of the 32 species mentioned, 25 would need further assessment to determine the extent of damage. The Summary explains the difficulty of knowing how many animals died as a result of the spill, especially during the initial impact. Its predictions are extreme acts of faith. For example, "preliminary analyses provided by computer models...estimate that the total number of birds killed ranges from 260,000-580,000."¹⁰⁵

More importantly, there is no indication in the Summary that any long-term effects were anticipated, even though they were regarded as a possibility. In the Summary conclusion NOAA states, "many studies will likely need to continue for additional years before a full understanding of injuries is developed."¹⁰⁶ With the benefit of hindsight, a National Academy committee would say in 2003:¹⁰⁷

One of the more profound outcomes of the 1989 *Exxon Valdez* oil spill was the recognition of our limited ability to realistically predict the effects of an oil spill on marine resources. The ongoing debate over long-term damages further highlights just how inadequate previous knowledge was in attempting to discern cause and effect in natural environments. This lack of knowledge was, on one level, an incomplete understanding of what resources were present. But even more fundamental was a lack of understanding of the structure and functioning of complex ecosystems.

The 1991 settlement was approved in the deepest of ignorance. The shock waves of the unexpected soon would be revealed in the direst of circumstances. This highly speculative reopener (the governments had said they did “not believe that they will ever need to invoke” it)¹⁰⁸ has now become a providential opportunity.

3. The Reopener Constraints as “Contrary to Law”

The refinements of the reopener with respect to “detailed plans” and “grossly disproportionate” costs are contrary to law and never should have been approved by the court. The one is borrowed from the 1990 OPA that was not in effect at the time of the spill. The other was a sheer invention of legal minds. The Clean Water Act speaks of “restoring, replacing, or acquiring the equivalent” of natural resources. It counsels no cost-benefit relaxation when the going gets tough.

These “cost-benefit” and “grossly disproportionate” limitations on the reopener are a creative misreading of the famous oil spill decision in *Puerto Rico v. SS Zoe Colocotroni*.¹⁰⁹ In that case, a 1973 spill off the Southwestern coast of Puerto Rico came ashore at Bahia Sucia, contaminating approximately 20 acres of mangroves. When the case got to the court of appeals, the First Circuit did articulate the standard that was misapplied in the 1991 *Exxon Valdez* settlement:¹¹⁰

the appropriate primary standard for determining damages in a case such as this is the cost reasonably to be incurred by the sovereign or its designated agency to restore or rehabilitate the environment in the affected area to its pre-existing condition, or as close thereto as is feasible without grossly disproportionate expenditures.

Notice that this restriction is conceived as applying to efforts to “restore or rehabilitate.” Not a word about “acquire the equivalent thereof.” The latter qualifier enters federal law in 1977. It is explained this way in the legislative history of the Clean Water Act:¹¹¹

New subsection (f)(4) and (5) make governmental expenses in connection with damage to or destruction of natural resources a cost of removal which can be recovered from the owner or operator of the discharged source under section 311. For those resources which can be restored or rehabilitated, the measure of liability is the reasonable costs actually incurred by Federal or State authorities in replacing the resources or otherwise mitigating the damage. Where the damaged or destroyed resource is irreplaceable (as an endangered species or an entire fishery), the measure of liability is the reasonable cost of acquiring resources to offset the loss.

Exxon and the governments have explaining to do about how they will replace the “irreplaceable”. The transient AT1 pod of orcas is likely gone forever as a result of the

spill. We are not sure what “equivalent resources” are. But we are confident that efforts to acquire them are not burdened by some cost-benefit test.

The *Zoe* ruling is important in other particulars. The District Court had rejected plaintiff’s \$7 million plan to “remove the damaged mangrove trees and oil-impregnated sediments from a large area and replace them with clean sediment and container-grown mangrove plants.”¹¹² The court of appeals said: “The district court sensibly and correctly rejected this plan as impractical, inordinately expensive, and unjustifiably dangerous to the healthy mangroves and marine animals still present in the area to be restored.”¹¹³

We note, initially, that this careful calculation of costs and benefits applied to this restoration project was not applied to the bulk of the response costs in the spill of the *Exxon Valdez*. The beach cleanings, dispersant distributions, and mob-like clean ups were compensable response costs notwithstanding that they were “impractical, inordinately expensive, and unjustifiably dangerous” to healthy resources. More importantly, the First Circuit in *Zoe* applies its cost-benefit thinking to a single mangrove restoration project. The *Exxon* reopener, on the other hand, divides a single restoration effort into two distinct temporal phases – the first 15 years, and everything after – and only applies a cost-benefit analysis to the later phase. This distinction is important because any restoration project is subject to the law of diminishing returns. That is, initial clean-up efforts may yield substantial gains, but 15 years after their inception the clean-up efforts may yield smaller returns. They may nonetheless be absolutely necessary in order to complete the task. Under *Zoe* the appropriate question is to ask whether the *total* payment from Exxon – \$900 million plus \$100 million – would fund restoration projects with benefits grossly disproportionate to costs. Given the magnitude of destruction caused by the *Exxon Valdez* spill in Prince William Sound, that question can only be answered in the negative.

The *Zoe* case is instructive in another way. In the district court, replacement value of marine organisms was calculated at \$5.5 million, using certain assumptions of injured organisms per acre (4,605, 486) and value per organism (6 cents to \$4.50).¹¹⁴ The First Circuit disapproves this technique, saying the trustee should not be allowed to “recover money damages for the loss of small, commercially valueless creatures which assuredly would perish if returned to the oil-soaked sands, yet probably would replenish themselves naturally if and when restoration – either artificial or natural – took place.”¹¹⁵

The lesson the trustee governments took away from *Zoe* is that they would not attempt to calculate losses, acre by acre, that would quickly reach 92 million epibenthic and infaunal animals for a 20-acre zone of contamination. We understand “biota” in the NRD laws to embrace the micro-organisms as well as the macro-fauna. We are confident that *Zoe* stands not for the confirmation of a “gross proportionality” cost test in the present context but for a repudiation of it. The First Circuit directly undermines any attempt to limit reopener funds to restoration:¹¹⁶

[W]here direct restoration of the affected area is either physically impossible or so disproportionately expensive that it would not be reasonable to undertake such a remedy, [s]ome other measure of damages might be reasonable. . . . The legislative history of the Clean Water Act

amendments, quoted above, suggests as one possibility 'the reasonable cost of acquiring resources to offset the loss.'

In sum, although restoration of Prince William Sound is still the preferred target of reopener funds, acquisition of equivalent habitat should be an option.

C. A Reconstituted and Better-Directed Council

It is trivial, perhaps, to suggest that a different council might have gone in other directions. But it might be useful to explore what is potentially a highly creative force for restoration of long-term environmental damage. Can natural resource trustees fulfill the potential for which they are acclaimed?

1. Theoretical and Practical Problems with Any Council: Who, What, and How?

As representatives of myriad competing interests, it is not surprising that NRD trustees are the frequent focus of accusations of inefficiency, ineptitude, and self-dealing. Some of the main criticisms of the NRD trustee system are: (1) the inefficient use of recovered funds; (2) the abuse of settlement authority for the benefit of PRPs; (3) the preclusion of private claims; (4) open conflicts where trustees are PRPs, and (5) problems inherent in concurrent trustee jurisdiction.¹¹⁷ The EVOS Trustee Council has been criticized on each of these grounds.

NRD trustees frequently are taken to task for spending too much on administrative costs, and not enough on restoration, rehabilitation, and acquisition of the equivalent of damaged resources. For example, in 1995 the Cantara Trustee Council, formed to oversee funds recovered from a train derailment that had spilled 19,000 gallons of herbicide metam sodium into the upper Sacramento River, announced that it would spend the \$14 million it recovered as damages to natural resources on a variety of projects not affecting the upper Sacramento River.¹¹⁸

The EVOS Trustee Council has gone astray in a similar manner, diverting \$4.5 million in settlement funds to "restore and protect waterways across the U.S."¹¹⁹ These funds were used to plant forest buffers along waterways in Chesapeake Bay – an admirable endeavor, to be sure, but completely unrelated to the restoration of Prince William Sound.

The EVOS Trustee Council also acquired several large parcels of land in and around Prince William Sound at a cost 56 percent greater than their appraised value. Through 1997, the trustees had acquired nine large parcels at a cost of \$234 million, but with an appraised value of only \$150 million.¹²⁰ In addition, three of the parcels were already protected under ANCSA, which offered a degree of protection from development and some restrictions on how the land could be used. DOI officials believed those protections and restrictions were difficult to act upon.¹²¹ Thus the contested outcome: buy again that which is already owned.

A second criticism of the NRD trustee system is that trustees, as government actors, face a conflict of interest when seeking a settlement with a PRP that makes significant contributions to a state's economy. There can be little doubt that the federal and state governments took into account Exxon's importance to the American and Alaskan economies in reaching a settlement. Every tremulous step of the process shows an attempt to avoid offense to oil. Conspicuous silence on the reopener is utterly predictable.

Third, government trustees are often accused of working hard to protect their exclusive authority to assert claims for natural resources damages.¹²² The *Exxon Valdez* litigation confirms the two governments' complete monopoly in this regard and further restricts the remedies to "equitable initiatives" through the friendly vehicle of the EVOS Trustee Council.

Fourth, in some instances the federal or state government will simultaneously be a PRP and a trustee. This is often the case when the federal government is responsible under CERCLA for cleanup of military facilities. The Exxon spill produced a similar conflict for the state of Alaska, which faced potential liability from thousands of fishermen, property owners, and Alaska Natives.¹²³ The plaintiffs argued that:¹²⁴

the State when negotiating its settlement, not only had a legitimate variety of divergent public interests such as cost and economic concerns, past and future dealings with the oil industry and these settling defendants, and employment, budgetary and political objectives, but it also, most critically, had its own potential liability exposure in these cases, and thereby obtained important individual monetary and nonmonetary benefits for itself, not its citizens, as part of the Exxon settlement and Plea Agreement.

Finally, the statutory scheme establishing multiple NRD trustees has built-in coordination and cooperation difficulties.¹²⁵ The EVOS Trustee Council, comprised of three state and three federal nominees, labors under a unanimity requirement for all Trustee Council actions.¹²⁶ This is a version of the impossibility theorems known in game theory. What chance is there to pursue the reopener through the Kyber Pass of council unanimity?

EVOS TRUSTEE COUNCIL MEMBERSHIP

		STATE OF ALASKA			UNITED STATES		
Executive Director		Dept of Fish & Game	Dept of Env Conserv	Attorney General	Dept of Interior	NOAA	Dept. of Agriculture
pre-1994		Carl Rosier	John Sandor	Charles Cole	Curt McVee	Steve Pennoyer	Michael Barton
1994	James Ayers	Carl Rosier	John Sandor	Bruce Botelho	George Frampton, Jr.	Steve Pennoyer	Michael Barton
1995	Molly McCammon	Frank Rue	Gene Burden	Bruce Botelho	George Frampton, Jr.	Steve Pennoyer	Phil Janik
1996	Molly McCammon	Frank Rue	Michele Brown	Bruce Botelho	George Frampton, Jr.	Steve Pennoyer	Phil Janik
1997	Molly McCammon	Frank Rue	Michele Brown	Bruce Botelho	Deborah Williams	Steve Pennoyer	Phil Janik
1998	Molly McCammon	Frank Rue	Michele Brown	Bruce Botelho	Deborah Williams	Steve Pennoyer	Phil Janik
1999	Molly McCammon	Frank Rue	Michele Brown	Craig Tillery	Marilyn Heiman	Steve Pennoyer	Dave Gibbons
2000	Molly McCammon	Frank Rue	Michele Brown	Craig Tillery	Marilyn Heiman	Steve Pennoyer	Dave Gibbons
2001	Molly McCammon	Frank Rue	Michele Brown	Craig Tillery	David Allen	Jim Balsiger	Dave Gibbons
2002	Molly McCammon	Frank Rue	Michele Brown	Craig Tillery	Drue Pearce	Jim Balsiger	Dave Gibbons
2003	Molly McCammon	Kevin Duffy	Ernesta Ballard	Gregg Renkes	Drue Pearce	Jim Balsiger	Joe Meade
2004	Gail Phillips	Kevin Duffy	Ernesta Ballard	Gregg Renkes	Drue Pearce	Jim Balsiger	Joe Meade
2005	Gail Phillips	Wayne Regelin	Kurt Fredriksson	vacant	Drue Pearce	Jim Balsiger	Joe Meade

Insert 7 – EVOS Trustee Council Membership.

The Memorandum of Agreement between Exxon, the state of Alaska, and the federal government asserts that the EVOS Trustee Council is intended to act for the benefit of natural resources injured, lost or destroyed as a result of the Oil Spill.¹²⁷ Many argued that the sole purpose of the trust was to restore natural resources. People of good will necessarily differ on where help for natural resources stops and where assistance for people dependent upon them starts. The Council pushed for a definition of national resources that included the “services” provided by the natural resources on which the villages and local economy depended.¹²⁸ The truth is, no matter how expansively the EVOS Trustee Council tries to interpret its mandate, it is ill equipped to address many of the everyday problems facing Alaskans.

In November of 1989, the National Wildlife Federation (NWF), along with other wildlife and natural resource conservation organizations, conducted a series of public hearings with Alaska residents. The NWF compiled the findings from 1200 pages of testimony and published *The Day the Water Died*.¹²⁹ The compilers noted many aspects of Alaskan life that could not simply be measured or restored by the trustees.

“The impacts of the *Exxon Valdez* oil spill reached every corner of family and community life.”¹³⁰ The testimony disclosed increased drug and alcohol abuse, a rise in child neglect and abuse, overloaded mental health facilities, and increased suicide rates.¹³¹ Communities were divided between long-term residents and those who came to Alaska in search of high-paying cleanup jobs. Businesses lost employees who abandoned their longtime positions to profit from the cleanup effort. With the increase in people came an

increase in crime, waste, and traffic.¹³² In short, any attempt the EVOS trustees made to restore natural resources could not alleviate the suffering of local communities.

Moreover, residents often perceived the cleanup and restoration attempts as doing more damage than good. One resident argued, "I have found the clean-up activities deploying thousands of people, heavy equipment, and an armada of thousands of boats, to be damaging to the wildlife and the environmental quality of Prince William Sound."¹³³ Over and over, residents noted their distrust of untested and misused technologies. Machinery used during the cleanup consumed and released into the atmosphere a tremendous amount of fuel. Non-biodegradable plastic bags were used to dispose of cleanup materials.¹³⁴ Again, efforts of the EVOS Trustee council and restoration officials did little to ease the minds of the local residents.

Dramatically, the Native populations suffered harm not only to their economies and way of life, but also to their subsistence culture. The EVOS Trustee Council lacks a permanent voice advocating for the Native peoples.¹³⁵ The Council's reliance on government agency representation has left Natives in a largely unprotected limbo. At the hearings, Meganack, Chief of the Port Graham Native Village, testified that the Natives' story is different from the white man's because their culture is based on the environment. What the white man sees as sport, the Natives see as subsistence. To the Natives, "the water died."¹³⁶ Yet the mandate of the EVOS Trustee Council is to act simply for the benefit of natural resources injured, lost or destroyed as a result of the Oil Spill. This, according to the Natives, overlooks an intangible value that cannot be replaced by simple cleanup efforts.

The Council mandate was glossy enough on the outside to satisfy the governments and corporations that created it. Nonetheless, a look into the lives of those most affected by the spill shows that the Council was then and is now simply incapable of restoring that which was taken from Alaska residents and Natives.

2. Performance of the EVOS Trustee Council

a. The Slow Start: "They paid themselves"

The EVOS Trustee Council did not distinguish itself in the early going. Between 1989 and 1991, the Trustee Council published three versions of its assessment plan to identify the natural resource damages of the *Exxon Valdez* oil spill.¹³⁷ The plans were prepared pursuant to CERCLA regulations that allow the government to sue for recovery of damages to natural resources. CERCLA mandates that the Department of the Interior develop appropriate procedures for assessing natural resource damages.¹³⁸ Consequently, the Department of Interior published regulations that fix procedures for simplified assessments (Type A) and procedures for more complex injuries (Type B).¹³⁹ In establishing two methodologies, Congress "envisioned generally that type A rules would cover most minor releases and type B rules would cover large or unusually damaging releases."¹⁴⁰ Based on the magnitude of the *Exxon Valdez* oil spill, the Trustee Council was obviously correct in adopting a Type B assessment methodology.¹⁴¹

The first assessment plan proposed by the Trustee Council was published in 1989. It consisted of nine economic studies that sought to quantify the economic value of the damaged resources.¹⁴² Only one of these studies examined the market value of lost services to humans.¹⁴³ At about this time, the court in *Ohio v. United States Department of the Interior* handed down its decision reviewing the Type B regulations. The court held that “market prices are not acceptable as primary measures of the use values of natural resources.”¹⁴⁴ The plan proposed in 1990 reflected the influence of this *Ohio* decision, as the Council sought to evaluate the intrinsic value of natural resources impacted by the Exxon spill.¹⁴⁵ In revising the studies, the Council included measures that would assess the cost of restoring, replacing, or acquiring the equivalent of the damages natural resources.¹⁴⁶ The 1991 plan reiterated the methods of the 1990 studies and looked further at the increases in the market price of petroleum on consumers. By responding to the *Ohio* decision, this plan better approximated the total value of natural resource damages caused by the oil spill.¹⁴⁷ As recalculated, the 1991 assessment plan estimated that damages were in excess of \$3 billion, a figure that couldn’t help but facilitate the settlement for one-third that amount.¹⁴⁸

Through 1992, Exxon paid two annual installments, totaling \$240 million, of the \$900 million owed under the civil settlement agreement. Of this amount, \$107 million was returned to federal and state agencies as reimbursement for presettlement cleanup and damage assessment costs. An additional \$40 million was offset against Exxon’s payments for cleanup costs that Exxon incurred in 1991.¹⁴⁹ This was a blue-ribbon reimbursement for the most chaotic, worst-managed, frenzied and destructive clean-up in history.¹⁵⁰ Clean-up workers sat around on the beaches and rode around in boats and the EVOS Council paid for it. Clean-up workers looted archaeological sites and the Council paid for it. Beaches were gravely damaged by hot-water scouring and the Council paid for it. Beaches were further contaminated by dispersants and the Council paid for it. Government agencies invented research they chose not to do themselves and the Council paid for it. Even the General Accounting Office could see room for improvement. The GAO recommended that “the three federal trustees proactively work with the three [state of Alaska] trustees to better ensure that the \$1 billion being received as a result of the *Exxon Valdez* oil spill settlements is expended as intended.”¹⁵¹

b. Mid-Course Correction: The Tanker Blockade

It is tempting to embrace the conclusion that the “Eureka” moment for the EVOS Trustee Council occurred when Alaska’s salmon commercial fishing fleet blockaded tanker access to Valdez.¹⁵² This happened in the fall of 1993. A GAO report that arrived in August of 1993 contained a scathing account of the Trustee Council’s procedures and outlays.¹⁵³ This was not news to the local fishers, who were painfully aware of the lack of progress on restoration and quite familiar with the shell-game features of Council expenditures. The collapse of the pink salmon fishery was well underway. Knowing that Secretary of the Interior Bruce Babbitt was in Alaska and that Exxon’s ship *SeaRiver Baton Rouge* was due to come into the Port of Valdez, the seine fleet on August 19 set up a blockade across the inlet with an intent to escort the ship to the terminal. The fishing

people hoped to raise awareness of their concerns. With advance knowledge of the blockade, Exxon delayed the ship's approach. Other tankers also delayed their arrivals, not wanting to take the heat originally intended for Exxon. For possibly the first time since the opening of the Trans-Alaska pipeline in 1977, there were no tankers within Prince William Sound. Sympathy was definitely in the fishers' favor; even pro-oil Governor Walter J. Hickel said: "if I were a fisherman, I'd probably be out there too." Three days after the blockade began, Secretary Babbitt flew to Valdez to meet with the fishers. He convinced them to end the blockade; in exchange he would look into their concerns with the Trustee Council and their stalled civil litigation against Exxon. The Trustee Council was responsive. It began to finalize agreements for purchase of land and conservation easements on important forest habitat.¹⁵⁴

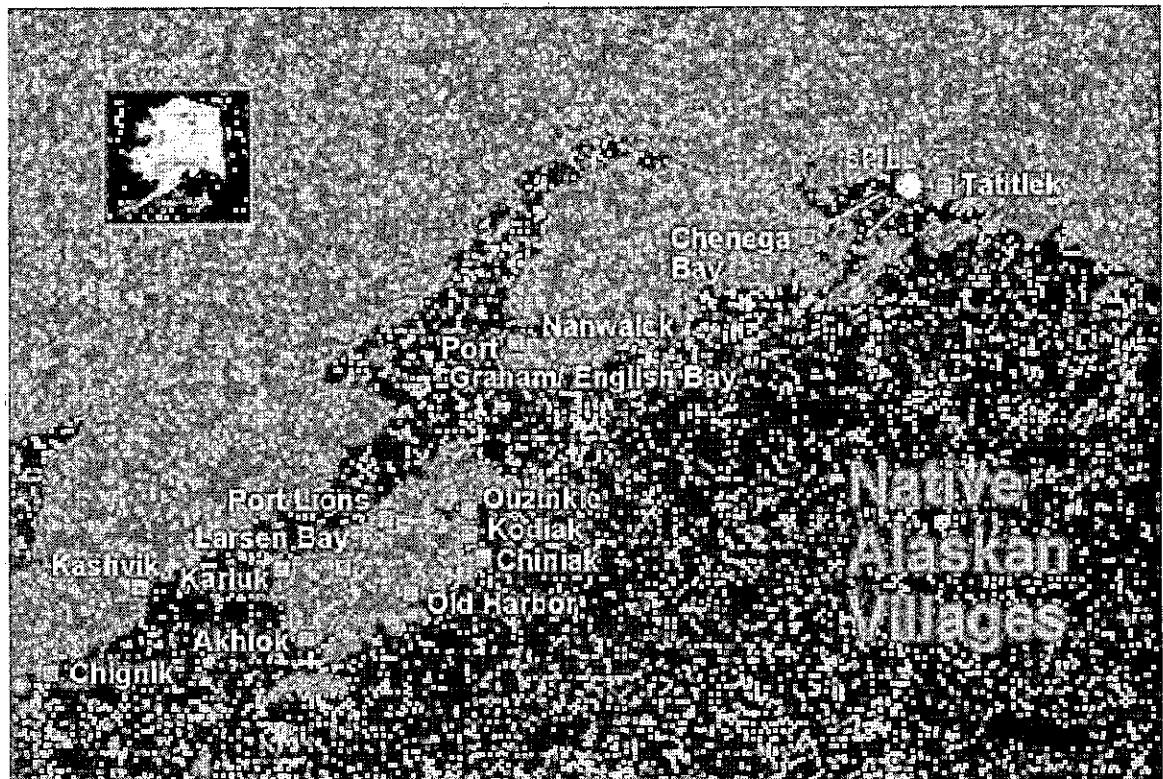
The EVOS Council also commenced a monitoring and research program that has grown in scope and intensity over time. The Council says that it has invested approximately \$170 million to date on "hundreds of research, monitoring and general restoration projects."¹⁵⁵ These projects have investigated the impact of the spill on a wide variety of species, recreation, archaeological resources, and subsistence uses, among other resources.¹⁵⁶

The EVOS Council also has encouraged large-scale ecosystem studies, funding three long-term projects to assess ecosystem health and function. The Sound Ecosystem Assessment (SEA) project is the most ambitious of these studies, focusing on the impact to the herring and pink salmon fisheries and funded at \$22.4 million over a seven-year period.¹⁵⁷ The EVOS Council also funded the Alaska Predator Ecosystem Experiment (APEX), a five-year, \$10.8-million project beginning in 1996.¹⁵⁸ The APEX project investigated the general hypothesis that low food abundance contributes to the decline of seabird and marine mammal populations in Prince William Sound.¹⁵⁹ Finally, in order to study the continuing impact of oil on mammal and bird species, in March 1995 the trustees approved a \$6.5 million Nearshore Vertebrate Program (NVP), to be conducted over a period of six years.¹⁶⁰ The NVP project focused on four species: two species that feed on fish (river otters and pigeon guillemots) and two species that feed on shellfish (sea otters and harlequin ducks).

The Council never could escape criticism of its spending priorities. It could only study a fraction of the 128 species killed in the *Exxon Valdez* spill,¹⁶¹ and there would be no follow-up of the uncelebrated marine invertebrates. No study means there will be no accounting, either in 1991 and certainly not fifteen years later in the context of the reopener. Additionally, the most conspicuous "restoration" the Council engaged in was the acquisition of a number of Native corporation properties around Prince William Sound that were slated for clear-cutting.¹⁶² The impetus for these actions came mostly from environmentalists¹⁶³ and there are advantages to the Native entities from less-than-fee transfers. But strong and cogent objection was raised to whether a twentieth-century environmental catastrophe should serve to divest Natives of their properties as efficiently as the much-maligned nineteenth-century Indian General Allotment Act.¹⁶⁴

c. Natives Left Out Again

Not surprisingly, an EVOS Trustee Council consisting exclusively of state and federal employees was less than extravagant in its consignment of funds towards enhancement of Native resources. Several Native villages were in the middle of this disaster:¹⁶⁵



Insert 8 – Native Alaskan Villages affected by the Exxon Valdez Oil Spill

The spill interfered dramatically with subsistence harvests.¹⁶⁶ Alaska Natives were a firm afterthought to the EVOS Trustee Council. Five years passed before the first acknowledgement that Tribes and Alaska Natives were more than just “community involvement.” In 1994, the Council made an initial foray into the realm of Traditional Ecological Knowledge (TEK). EVOS developed a handbook illustrating how their biologists can integrate TEK into their data collection. They also interviewed tribal elders to document historical distribution patterns of various species. Between the years 1995 and 2001, the Council engaged community facilitators (who typically were tribal government employees) from ten affected communities to facilitate communication between the Council and community members. The Council declares that a total of \$6,219,611 was appropriated from the criminal settlement with Exxon to the Alaska Department of Community and Economic Development (DCED) to implement a grant program “with the purpose of restoring, replacing, or enhancing subsistence resources or

other services damaged or lost as a result of the *Exxon Valdez* oil spill.” The grants went to the nine non-incorporated communities of Tatitlek, Chenega Bay, Port Graham, Nanwalek, Karluk, Chignik Lake, Chignik Lagoon, Perryville, and Ivanof Bay. The three Alaska state representatives on the Trustee Council have the ultimate say on whether grants are awarded. As of 2002, 24 projects had been funded through this grant program.¹⁶⁷

For the most part, tribes are an afterthought in Council procedures. They are included along with the masses under the heading of “community involvement.” While TEK is supposedly embraced by the Council, it serves as public relations dressing rather than a legitimate source of knowledge. More effort goes into producing videos, a handbook and workshops than incorporating TEK into scientific studies and qualitative analysis. Tribal governments are barely recognized except perhaps as a conduit of information. In Alaska, they are not one of three sovereigns outlined in the U.S. Constitution.

The crucial subsistence issue of oiled food was addressed directly not by the EVOS Trustee Council but by The Society of Environmental Toxicology and Chemistry (SETAC). Nothing could happen without the pervasive influence of Exxon. In July of 1989 Exxon and NOAA entered into a Memorandum of Understanding related to the “Sampling and Analysis of Subsistence Food Resources.”¹⁶⁸ This crucial information on food warnings for subsistence users fell victim to the general embargo on litigation-sensitive studies, and was not released in preliminary form for two years (March 1991).¹⁶⁹ Public review wouldn’t happen until 1993.¹⁷⁰ And it would not happen without the ubiquitous influence of Exxon, explained this way by the Oil Spill Health Task Force (OSHTF) convened by SETAC:¹⁷¹

. . . . Exxon Command decided to form its own team, including a medical doctor and an industrial hygienist, to hold a series of meetings in all the spill-area villages and with Native organizations about subsistence food impacts, toxicity of oil to residents, and health threats to cleanup workers. These meetings were two months before the OSHTF-sponsored community meetings would begin. Exxon proceeded to arrange with the board of directors of the North Pacific Rim, the Native tribal organization for the Prince William Sound and Lower Cook Inlet Villages, and the Kodiak Island Borough and the [Kodiak Area Native Association] to hold a series of village meetings. Exxon also wanted to present the early risk-assessment results from the [U.S. Food & Drug Administration] and the sensory test results from the [Alaska Department of Environmental Conservation] in Palmer. However, the downside of this initiative by Exxon was that these Exxon-sponsored meetings undermined the OSHTF’s attempts to serve as a unified communication team while fueling the villagers’ suspicions that they were being manipulated by competing parties.

The truly independent experts in this story reported with regrets on “Crisis, Confusion, and Uncertainty Among Alaska Native Communities in the Oil Spill Area.”¹⁷² They said “there was no existing agency or group with a clear mandate to address the questions of subsistence food safety and develop an adequate response to people’s concerns and fears. This void of responsibility initially resulted in the perception on the part of many in the Native community that no one took their concerns seriously.”¹⁷³ Natives were never convinced that anything but politics stood behind the infamous “double standard”: zero-tolerance policy for commercial fisheries if oil was present in quantities sufficient to foul gear; any food for subsistence fisheries was “likely safe to eat” if it had no smell, taste, or appearance of oil.¹⁷⁴

d. The Current Course: Reopener or Not?

Over time, the EVOS Trustee Council managed to achieve a modicum of independence from its political sponsors. It did develop a classification scheme for expressing progress towards the goal of complete restoration. It tracked thirty species and resources and characterized them as “Not Recovering”, “Recovering”, “Recovered” and “Recovery Unknown.” A “recovered” species is one that has returned to pre-spill conditions,¹⁷⁵ or perhaps it is one that meets recovery objectives.¹⁷⁶ There has been no extended discussion of whether conditions and species not monitored are “fully recovered” because nothing otherwise is known. All are aware that the general lack of “baseline data” plays completely into the cynical hands of those who can detect no lingering consequence.

The Council’s most recent “Status of Injured Resources” is as follows:¹⁷⁷

Recovered	Recovering	Not Recovered	Recovery Unknown
Archeological resources	Clams	Common loon	Cutthroat trout
Pink salmon	Marbled murrelet	Harlequin duck	Dolly Varden
River otter	Mussels	Cormorants (3 species)	Kittlitz’s murrelet
Sockeye salmon	Wilderness areas	Pacific herring	Rockfish
Bald eagle	Sea otter	Harbor seal	Subtidal communities
Black oystercatcher	Fish-eating killer whale pod AB	Pigeon Guillemot	
Common mure	Sediments		

Insert 9 – Source: EVOS Status of Injured Resources 2002

In this document, the EVOS Council defines “recovered” as species for which recovery objectives have been met. “Recovering” is defined as “substantive progress is being made toward recovery objectives.” The “amount of progress and time needed to achieve recovery vary depending on the resource.” Resources that are “not recovered” demonstrate “little or no clear improvement since spill injuries occurred.” Resources that are labeled “recovery unknown” are those for which “limited data is available on life history or extent of injury; current research is inconclusive or not complete.”¹⁷⁸

In addition to the resources categorized above, the EVOS Council recognizes that certain human services were impaired by the spill. These services include recreation and tourism, commercial fishing, subsistence, and passive uses.¹⁷⁹ The Council notes that each of these human services is “considered to be recovering until the resources on which they depend are fully recovered.”¹⁸⁰

Additionally, two key Council staffers have written revealingly on the status of recovery and the pursuit of the reopener. In 2003, Chief Scientist Phil Mundy advised the Council that Prince William Sound was an “impaired water body” under EPA criteria and thus conditions for triggering the reopener were “clearly met.”¹⁸¹ Formally, an “impaired water body” is a water body that has not attained and maintained water quality standards even after point sources of pollution have installed the required levels of pollution control technologies.¹⁸² The Clean Water Act requires states to develop lists of impaired water bodies and then develop and implement total maximum daily loads (TMDLs) for these waters. TMDLs specify the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards.¹⁸³

Prince William Sound is listed in Alaska’s 2002/2003 Integrated Water Quality Monitoring and Assessment Report, required by the Clean Water Act, as “impaired but not needing a TMDL.” The justification offered is that a TMDL process would duplicate efforts of the *Exxon Valdez* Trustee Council and restoration projects specified in the *Exxon Valdez* Restoration Plan.¹⁸⁴ Impairment of Prince William Sound is due to the presence of petroleum hydrocarbons, oil and grease from the *Exxon Valdez* Oil Spill.

Water quality standards are developed based on the uses for which a waterbody is allocated. Marine water uses in Alaska include aquaculture, seafood processing, industrial uses, water recreation, contact recreation, growth and propagation of fish, shellfish, other aquatic life, and wildlife, and harvesting of raw mollusks or other raw aquatic life. Prince William Sound is impaired because the presence of petroleum hydrocarbons, oil and grease are not low enough to satisfy the standards linked to those uses. In order to meet water quality standards Prince William Sound would have to be free of concentrations of petroleum hydrocarbons in shoreline or bottom sediments that cause deleterious effects to aquatic life; surface waters and adjoining shorelines would have to be virtually free from floating oil, film, sheen, or discoloration; surface water could not exceed concentrations that individually or in combination impart odor or taste as determined by organoleptic tests; raw aquatic life organisms could not exceed concentrations that individually or in combination impart undesirable odor or taste as determined by bioassay or organoleptic test.¹⁸⁵

Bureaucratic wizardry alone is unable to save Alaska from the logic of the reopener. Sixteen years after the spill, Prince William Sound is still “impaired” based on

the presence of Exxon's petroleum hydro-carbons, oil and grease. The State of Alaska justifies avoidance of expensive TMDL analysis and implementation by reference to the Trustee Council's "pollution control requirements."¹⁸⁶ But acquisition of habitat monitoring and assessment, which is what the EVOS Trustee Council does, are not "pollution control requirements" at all. The Council instead celebrates a strategy that "relies on natural recovery."¹⁸⁷ Who will tell the TMDL planners that the state is prepared to leave \$100 million on the table because it does not know what to do with it?

In 2003, the Executive Director of the EVOS Trustee Council, Molly McCammon, made it clear that she thought there were sufficient grounds for invoking the reopener.¹⁸⁸ In a memo to the Trustee Council in which she discusses additional injuries to natural resources from the oil spill that have been discovered since the 1991 settlement, some notable comments include:

For some species, and for the ecosystem itself, it is likely that we will never know precisely if or when recovery has occurred. Hence, the Trustee Council decided in 1999 to create the [Gulf Ecosystem Monitoring] Program as its final restoration tool – a means of ensuring and enhancing restoration and recovery well into the future.

[T]he best judgment of the scientists most closely familiar with oil spill injury determined that the potential for additional unknown injury falls into two categories: probable injury, but difficult to prove cause and effect, and probable injury with strong linkage to oil spill.

Probable injury unknown at time of settlement, but difficult to prove cause and effect: Pacific herring..., AB pod of killer whales..., effects of residual oil on sea birds: harlequin ducks, pigeon guillemots, cormorants, and common loons...

Probable injury unknown at time of settlement, with stronger linkage to oil spill: injury to subsistence uses ..., pink salmon had more damage than expected..., more oil remaining in the environment in a toxic state for a longer period of time than originally expected ..., effects of residual oil on sea otters..., harlequin ducks..., mussel beds data in 1999 indicate that oil is still being accumulated in mussels and several other invertebrate prey species.

From the beginning, the State of Alaska and the United States have never supported the idea of invoking the reopener.¹⁸⁹ These two sovereigns have many reasons to be circumspect in proclaiming continuing damage. Nonetheless, they also understand that any decision to forego the reopener will attract intense public scrutiny.¹⁹⁰ The EVOS Trustee Council has hired a consultant to help its thought process on these matters. This small step has produced its own stumbles.

In contracts worth over \$850,000 Integral Consulting, Inc., will be conducting "a series of evaluations using available scientific data to provide an independent analysis of

recovery status of key resources and to define any linkage to residual oil.”¹⁹¹ The work includes a re-survey of sediment quality to assess in situ levels of toxicity of sediments in areas most likely to remain oil impaired and a synthesis of scientific information relevant to injury from lingering oil that is intended to provide information on the status of injured resources and options for future restoration.¹⁹²

According to Integral’s website, the firm has developed a “conceptual exposure model” (CEM) to provide a “pictorial representation of the relationship between oil and injured resources, including fate processes that affect the persistence and distribution of oil and exposure pathways that address bioavailability and bioaccessibility. The CEM also provides the framework for assessing those resources currently classified as ‘recovering’ or ‘not recovered.’”¹⁹³

Familiar concerns about the Council’s conflicts of interests¹⁹⁴ have arisen over this contract with Integral. Ernesta Ballard (Commissioner of the Alaska Department of Environmental Conservation until October 2004 when she went to work for Weyerhaeuser),¹⁹⁵ who initially recommended Integral for the project, admitted in February 2005 to having worked with Integral on a project for Ketchikan Pulp Co. prior to her joining state government.¹⁹⁶ The impartiality of Integral when it comes to developing projects for which the reopener money could be applied is also questionable. The website for the company notes that “Integral scientists provide the technical knowledge, regulatory understanding, and communication skills needed to assist potentially responsible parties and their counsel in addressing natural resource damage liability.”¹⁹⁷ Why would the Trustee Council go to a PRP consultant for its reopener advice? We recommend, instead, that questions about ongoing restoration be referred to a committee of the National Research Council. We are confident that this is the way to get unbiased advice, the best available, at reasonable cost.

Apparently even the Council doesn’t think Integral’s work will completely answer all questions.¹⁹⁸ The EVOS Trustee Council issued a Request for Proposals on February 15, 2005, for study of possible remediation projects to address the problem of lingering oil:¹⁹⁹

Based on NOAA’s most recent published findings, approximately 28 acres (approximately 56 tons) of lingering oil is estimated to persist in intertidal sediments of beaches in PWS. Although this is a small fraction of the total area oiled in 1989, it nevertheless remains a potential concern for ongoing exposure to resources that have not recovered from injury caused by the initial spill.

[L]ingering oil in surface sediments occurs primarily in the form of highly weathered, solid asphalt-like material sporadically present in the upper-intertidal of sheltered areas. This form of oil is not the target for potential remedial efforts. In contrast, *Exxon Valdez* oil (EVO) that penetrated the intertidal matrix of cobbles, gravel and finer sediments to subsurface depths is less susceptible to weathering processes and is generally more persistent. In addition, unlike surface EVO, subsurface EVO was not

directly subjected to sustained cleanup efforts performed by Exxon. This form of oil is considered more bioavailable than surface weathered oil and, where accessible, has resulted in ongoing exposure to intertidal resources. This oil is the focus of potential remedial efforts. Subsurface EVO appears particularly evident in moderate to highly sheltered shorelines that were heavily oiled soon after the initial spill.

Given the recent findings on lingering oil, it is an appropriate time to identify potential options for further clean up, evaluate them for effectiveness, economic cost, environmental benefits and environmental impacts. The fundamental question: Is there is a clean up strategy that can feasibly be implemented for the 28 acres of sub-surface oil in Prince William Sound that would be better than natural recovery?²⁰⁰

Proposals are due March 16, 2005, and a final report is due January 2006.²⁰¹ With the problem defined as “28 acres of subsurface oil,” sweeping remedies are not in the offing.

On February 15, 2005, the EVOS Trustee Council also issued a Request for Proposals for “the synthesis of information relevant to Pacific herring and the determination of the status of this species.”²⁰² The Trustee Council “is seeking an independent evaluation of [the 18 previously conducted monitoring and research projects of Pacific herring populations in Prince William Sound (PWS)] to assess the recovery status of Pacific herring in PWS in relation to EVOS and other possible causative factors.”²⁰³ Proposals are due March 16, 2005, and a final report is due January 2006.²⁰⁴

D. The Civil Suits: More “What Ifs”?

In the immediate wake of the spill, the Exxon Corporation faced enormous potential liabilities for natural resource damages. The common law was impressive, in anticipation of broad protections under the theories of public trust, *parens patriae* and public nuisance.²⁰⁵ Statutory definitions of “natural resources” protected all resources.²⁰⁶ Popular economic theories for measuring damage – notably, contingency valuation – would put liabilities in the many billions of dollars.²⁰⁷ The grim economic reality of “restoring” the ecological treasures smashed in Prince William Sound offered no solace. What does it cost to “save” a sea otter or a bald eagle? Ninety thousand and forty-two thousand dollars, respectively.²⁰⁸ At these rates, the company was facing astronomical out-of-pocket costs.

Before the spill, Exxon faced vast liabilities for natural resource monetary damages and injunctive relief initiated by many public and private parties. After the spill (and now in 2005), Exxon faces only a narrow and stilted version of injunctive relief completely monopolized by a hesitant State of Alaska and a reluctant United States. How was this transformation in liability achieved?

Exxon’s legal defensive strategy was brilliantly conceived and effectively implemented. It consisted of (1) takeover and domination of the clean-up; (2) voluntary

payments to most-injured parties; (3) quick settlement of the NRD claims; and (4) aggressive resistance of all other claims for natural resource damages. Exxon went out and got the law it wanted.

1. Takeover and Domination of the Clean-Up

"After they left, they would not be heard from again,"²⁰⁹

*commenting on the experience of the residents of English Bay
on the departure of VECO [Exxon contractor]*



Insert 10 – The Clean-up. Courtesy of Brad Marten, Esquire, Seattle, Wash. , April 2005.

This clean-up was a disaster on the ground and a smashing legal success for the company. All were swept up in the “crisis” and the bickering, mistakes, and regrets were bundled into a manageable package of “we did the best we could.”²¹⁰ This tactic allowed Exxon to assume the “good citizen” mantle that would prove enormously beneficial over the longer haul.

As a “good citizen” Exxon would win extravagant reimbursement for the funds it would contribute in the natural resources settlement. As a “good citizen,” it would win “forgiveness” (just what is this?) of a \$125 million fine in the criminal case. As a “good citizen,” the NRD settlement would sail through with a wink and a nod. As a “good citizen,” Exxon would win reduction of the punitive damage awards against it.

This "good citizen" with the help of its good lawyers managed to pass a good share of the costs onto its insurers. After six years of arbitration and litigation, Exxon and a consortium of more than 100 international insurers settled the coverage dispute arising from the spill in 1996.²¹¹ The total settlement was for \$780 million.²¹² Exxon claimed coverage under various sections of its policies. The claims included first-party property coverage for removal of debris, marine liability to cover cargo-owners' losses, and general liability for pollution cleanup costs.²¹³ The settlement provided relief for a large portion of the expenses Exxon incurred in the cleanup effort, which Exxon claims to be in excess of \$2.5 billion.²¹⁴

The outer limits of "good citizen" cost recovery were reached only in the takings case the company filed against the Congressional decision to banish the *Exxon Valdez* from the waters of Prince William Sound. In a truly medieval gesture, Congress declared in the 1990 OPA that any tank vessel that spilled more than one million gallons of oil into the marine environment of Prince William Sound after March 22, 1989 was excluded from the Sound.²¹⁵ This provision effectively banned only the *Exxon Valdez* from operating in Prince William Sound, as no other tank vessel had spilled more than one million gallons of oil into the marine environment.²¹⁶ The court was not impressed with Exxon's arguments that this was the first bill of attainder ever directed at an inanimate object. The court held that the relevant provision of OPA was not an unconstitutional bill of attainder because it did not punish the plaintiffs, and that the provision did not violate the Due Process Clause of the Fifth Amendment because it furthered a rational legislative purpose.²¹⁷ The court noted that it is "rational for Congress to use this past disaster as a measure of future performance to specifically bar the *Exxon Valdez* from transporting oil through Prince William Sound, an area that Congress has accorded special statutory protection."²¹⁸

2. Exxon Voluntary Payments

The payment / settlement strategy also was well conceived and highly successful. It soaked up the private claims and undercut the broader litigation strategies of the private bar that was breathing fire in the wake of the spill.²¹⁹ Of course, Exxon cannot take all the credit; Judge Holland did his part by ruling that plaintiffs in federal court must exhaust the 100 million dollar Trans-Alaska Pipeline Authorization Act (TAPAA) fund before pursuing their claims.²²⁰ TAPAA cushioned the initial blow for Exxon across a broad spectrum of claimants because the fund did not pay out on a first-come, first-served basis. Total claims far exceeded the 100 million dollar cap on the fund. The fund paid out proportionately on all accepted claims, leaving claimants to settle with or fight against Exxon for their remaining balance.²²¹

In the first year of litigation Exxon faced 52,000 plaintiffs filing more than 200 suits in federal and state court. While claimants argued amongst themselves whether individual or class action was the best way to proceed, Exxon continued whittling away at the ranks, settling with over 10,000 claimants for a total of \$235,000,000.²²² Exxon encouraged settlement by making litigation as complicated and intimidating as possible, consistently challenging who could sue or be sued. Typical defenses included:

- the “who me?”: Bligh Reef wasn’t well marked, or government officials are to blame for damages resulting from cleanup decisions and priorities because we (Exxon) were just following orders,
- the “why are you whining?”: fishermen and cannery workers’ claims for lost wages should be offset by money earned for spill cleanup,
- the “haven’t we suffered enough?”: punitive damage awards in one case should bar them from another,
- and the “stiff arm” of precedent: *Robins Dry Dock & Repair Co. v. Flint* precludes recovering economic losses “absent physical damage to a proprietary interest.”²²³

Exxon picked the low hanging fruit by establishing a Claims Program for fishermen with clear courtroom winners. For them, Exxon paid the net average income over the preceding three fishing seasons prior to the spill.²²⁴ In 1994, Exxon settled with various municipalities and with a class of Native Alaskan subsistence users for just over \$24 million.²²⁵

Exxon strategically employed a divide-and-conquer strategy for compensatory damages, but pushed for and won a broad mandatory class certification for punitive damages.²²⁶ Without the bothersome opt-out clause of b(3) class certification, Exxon could gather all the potential punitive awards in a single net and then hang it out to dry, which is precisely what it did. To date, no one has seen a nickel of the five-billion-dollar award. Even better, Exxon continues to earn about 18% on investments while the unpaid punitive damage award accrues interest at only 6%.²²⁷ At that rate, it appears that the punitive damage award, as well as the tax-deductible legal expenses for the endless stream of motions challenging the award, could soon pay for themselves.

Exxon’s voluntary payment strategy was successful on many levels. Its early Claims Program immediately handed cash to the highly visible candidates such as fishermen and was therefore an effective public relations tool to show the corporation’s willingness to make things right. Early settlement also saved everyone the headache of further litigation, and in some cases it was a gamble that paid off well for Exxon.²²⁸ The real coup, however, was entrenching a standard for damages before anyone had a clue what the extent of the damage would be. Alaska governor Tony Knowles wrote to Exxon just after Christmas of 2001, offering his office and resources to facilitate resolution of litigation and outstanding claims by Alaskans in the wake of the Ninth Circuit decision on damages.²²⁹ Exxon responded a month later, clarifying the difference between actual and punitive damages. Exxon was keen to point out that all compensation for actual damages had been paid. The Ninth Circuit simply had laid out a course for solving punitive damages.²³⁰ Faced only with the punitive damages question, Exxon could wash its hands of the mess of actual damages left in Alaska.

Certainly, a most valuable asset to any capitalistic venture is predictability. Exxon sought to buy it as cheaply as possible. Recognizing the enormity of the disaster, Exxon was simply proactive in setting the price of its own liability. Losing control of that price would have been a bad business decision. Everyone knows that the reopener’s

100 million dollar price tag is not what is at stake for Exxon; the reopener represents open-ended liability for future spills. This is a dangerous proposition that Exxon is likely to resist.

3. Quick Settlement of the NRD Claims

The successful settlement of the NRD claims only can look better to Exxon with each passing year.

In March 1991, the United States and the State of Alaska, acting as trustees for the public, sued Exxon.²³¹ As mentioned above, the three parties reached a civil and criminal settlement agreement that was approved on October 8, 1991 by Judge Holland. The Consent Decree states that the compensatory and remedial relief is being recovered by the state and federal governments "in their capacity as trustees of Natural Resources on behalf of the public for injury."²³² The inclusion of this clause in the Consent Decree invokes the doctrine of *res judicata* and purports to bar any claims brought by other plaintiffs due to damage to natural resources caused by the oil spill.²³³ Thus, after the approval of the 1991 settlement agreement between Exxon and the state and federal governments, the only actionable claims could be those by trustees not represented or by parties suffering damages different from those incurred by the general public.

From Exxon's perspective, the quick settlement of the natural resource damage claims with the State of Alaska and the United States is best characterized as a legal triumph. While the amount of the settlement was unprecedented at the time, it did not match Exxon's \$5 billion annual profits. More importantly, the true value of the civil settlement was that it would insulate the company from any and all natural resource damage claims above and beyond the \$900 million. Exxon bet at the moment of settlement (Oct. 8, 1991) that it could hold its NRD liabilities to those prescribed. Over time, it has won this bet against many takers.

The \$100-million reopener was a small if unwelcome concession in Exxon's broader strategy. It was a sweetener that would facilitate the approval of the settlement. The Exxon lawyers who worked on it in 1991 had reason to believe that the contingencies it anticipated were remote and unlikely; and if for some reason they came to pass, they could be blocked by the fine print of the better lawyers captured in the drafting. Today the \$100 million doesn't look that impressive.²³⁴ Chances for collecting it don't look that good.

4. Strategic Settlement of the Chenega Bay Case

The tribes were the missing third trustee. They were a grave threat to the NRD settlement but were repelled in the *Chenega Bay* case.

After learning about the pending settlement between the Governments and Exxon, and after unsuccessful attempts to participate in those negotiations,²³⁵ in March 1991, the Native Village of Chenega Bay and other Native villages and Native corporations²³⁶ sued in the District Court for the District of Columbia to enjoin the settlement.²³⁷ In the consolidated cases, the Native Interests asserted that the pending settlement between the

Governments and Exxon would compromise the plaintiffs' rights to seek relief themselves against Exxon and Alyeska. Specifically, the Native Interests asserted that they had a right to act as trustees for purposes of claiming, recovering and using natural resource damage recoveries for the benefit of resources that they depended upon for subsistence, and that they had the right to require that the Governments consult with and seek consent from them prior to commencement of any damage assessment or restoration activities performed on their lands. The Governments made representations that "resolution of the [United States'] natural resource damages should not impair rights or claims of third parties." Judge Stanley Sporkin took this to mean that "Exxon and Alyeska may be liable to the plaintiffs for damages to natural resources and/or lands they have an interest in, even if it is claimed the same natural resources and/or lands are covered by the settlement agreement among [the Governments] and Exxon and Alyeska." Judge Sporkin denied the plaintiffs' motion for a preliminary injunction based on the Governments' representations. He retained jurisdiction to "ensure that the defendants' representations are carried out so that plaintiffs' rights are protected."²³⁸ In April 1991, the court found that the proposed settlement between the Governments and Exxon might interfere with the natural resources rights of the Alaska Natives. Judge Sporkin ordered discovery to ascertain if Exxon intended to use the civil settlement against the Alaska Natives' interests.²³⁹ In deposition, Exxon's Chairman revealed that the interests of Alaska Natives were not even considered in the proposed settlement.²⁴⁰

After successfully delaying the settlement between the Governments and Exxon for seven months, and possibly influencing a slightly higher criminal penalty against Exxon in that settlement,²⁴¹ the Native Interests entered into their own settlement with the Governments on September 24, 1991.²⁴²

In the consent decree between the Governments and the Native Interests, the Governments retained all rights to act as trustees for natural resources (including those used for subsistence), to the exclusion of the Native Interests.²⁴³ The Native Interests gave up any right to act as co-trustees with the Governments or to receive or control the use of any natural resource damage recoveries arising out of the oil spill.²⁴⁴

The Governments recognized that the Native Interests retained the right to pursue private claims for all private harms resulting from injuries caused by the oil spill.²⁴⁵

Although the Governments promised to "endeavor to restore the natural resources injured by the Oil Spill, including those resources used for subsistence," nothing in the Decree required "either Government to take any action which, in its judgment, is unnecessary or inappropriate in light of statutory or other legal standards applicable to damage assessment or restoration process or to allocate, set aside, or expend any portion of any natural resource damage recovery received by the Governments for the specific purpose of restoring natural resources used for subsistence."²⁴⁶

The Governments also agreed to obtain the consent of the appropriate ANCSA Corporation Class prior to conducting damage assessment or restoration activities on the corporations' lands,²⁴⁷ and "to the extent required by federal and state law," to consider the views of the Corporation Class prior to making decisions regarding damage assessment or restoration activities on lands which the corporations had selected but

which had not yet been conveyed to the corporation.²⁴⁸ The ANCSA Corporation Class agreed to provide the Governments access to their land for those activities.²⁴⁹

The Native Interests were allowed to include one or more representatives on any future public advisory group that might be established.²⁵⁰

The United States and the Native Interests agreed to undertake a joint study of the impact of the oil spill on the natural resources used for subsistence by Alaska Natives. Although the state did not have to participate in the study, it retained the right to have access to the study and monitor its progress. The Governments agreed to provide scientific information needed for the study to the Native Interests.²⁵¹ This was also considered a success for the Native Interests, as the Governments had until that point not been willing to share results of any studies it had conducted in anticipation of litigation with Exxon. The Native Interests intended to use this information in their pending Exxon litigation.

Finally, and probably most importantly with respect to the reopener clause, the settlement between the Native Interests and the Governments resulted in dismissal of the complaints filed in the D.C. District Court. The dismissal would “forever discharge the Governments from any and all liabilities, claims, demands, causes of action and obligations, based on federal or state statute, admiralty, or on common law, that in any way are based upon, arise out of, or have any connection whatsoever with any act, omission, cause or matter relating to the Governments’ joint or separate efforts to obtain natural resource damage recoveries, including claims that were asserted or could have been asserted within the scope of the complaints filed in [the D.C. District Court]...”²⁵²

Any Alaskan tribe intervening to enforce the reopener will have to overcome the preclusive effect of this decree. Interestingly, the word “tribes” does not appear in the definition of the “Alaska Native Class.” Also, any reopener claim did not exist at the time of this *Chenega Bay* settlement (Sept. 24, 1991) and would not exist until the principal case was settled on Oct. 8, 1991. If Native representatives in this case actually “settled” future claims for unknown injury to natural resources, then nice questions arise over public trust or federal Indian trust limitations on authority of trustees to dispose of their patrimony in this way.

5. Successful Defense of the Exclusivity of the NRD Settlement Process

Exxon’s proudest litigation moments had to be the transformation of the NRD process from a regime where many parties could sue for money damages and broad injunctions to one where only the U.S. and Alaska could seek the narrowest of injunctions. This happened in two steps.

a. Alaska Sport Fishing Association v. Exxon Corp.

In June 1989, the Alaska Sport Fishing Association (“ASFA”) filed an action in Alaska Superior Court on behalf of a class of an estimated 130,000 recreational sport fishers who used Prince William Sound and other areas affected by the *Exxon Valdez* oil

spill.²⁵³ The plaintiffs sought injunctive relief and monitoring damages “to provide for an environmental mitigation and monitoring fund.”²⁵⁴ In August 1989, a suit was filed by the National Wildlife Federation, Natural Resources Defense Council, and Wildlife Federation of Alaska.²⁵⁵ These plaintiffs sought to establish a conservation trust fund to restore the ecology of the oil impact area, to protect the area from further environmental harm, to restore wildlife populations on land and in the sea, to fund scientific studies and monitoring of the area, and to acquire resources equivalent to those lost in the spill.²⁵⁶

The ASFA and conservation trust plaintiffs’ actions were later consolidated.

In October 1991, the United States and Alaska entered into their civil settlement with Exxon. The Consent Decree defined “natural resource damages” to include “remedial relief recoverable by the Governments’ in their capacity as trustees of Natural Resources on behalf of the public for injury to *all* natural resources resulting from the oil spill, . . . under *any* federal or state statute or maritime *or common law* relating to the environment.”²⁵⁷ One month later, Exxon filed for removal of the consolidated ASFA and conservation trust plaintiffs’ case to federal court and moved for summary judgment, arguing that the suit was in derogation of the federal settlement.²⁵⁸ The district court (Judge Holland) granted Exxon’s motion, ruling that: (1) the plaintiffs were in privity with the governments in entering into the Consent Decree; and (2) the doctrine of *res judicata* precluded further claims for public relief.²⁵⁹ The district court’s approval of the removal action was affirmed by the Ninth Circuit in 1994.²⁶⁰ The district court allowed the ASFA to amend its complaint to “better allege their uniquely private claims.”²⁶¹ But the court ultimately was “convinced that the sport fishermen were unable to allege private claims because these plaintiffs suffered no private injury.”²⁶² On appeal, the Ninth Circuit upheld the district court; the court found that the October Consent Decree was *res judicata*, that it covered all lost use damages, and that plaintiffs were in privity with the governments under the *parens patriae* doctrine and as such the governments had already represented the ASFA when they entered into the Consent Decree.²⁶³

The plight of the Alaska sport fishermen and the environmental groups exemplifies how Judge Holland and the Ninth Circuit took an aggressively anti-plaintiff stance in private suits brought as a result of the oil spill. Some commentators have argued that there is a substantial difference between active and passive loss of use.²⁶⁴ But the holding in this case confirms that anytime the government enters into a settlement decree, the doctrines of *res judicata* and *parens patriae* can be used to quash all remaining NRD claims, even in the face of allegations that the government did not act in the best interest of private parties or the public resource.²⁶⁵

b. In re Native Class

There were hard questions raised about the Alaskan Natives’ claim for damages to their “subsistence way of life” attributable to the *Exxon Valdez* oil spill.²⁶⁶ But the courts were sympathetic to none of them.

Following the oil spill and the settlement agreement between the United States, Alaska and Exxon, Alaska Natives brought their own class action seeking damages for loss of their subsistence way of life. Originally, the class was composed of “all Alaska

Natives and Native organizations including but not limited to, individuals, Native villages, incorporated and unincorporated Native entities and associations and tribal entities, who engage in, rely upon, promote or preserve, wholly or in part, a subsistence way of life.²⁶⁷ Subsequently, changes were made to the class excluding all Native villages and government entities and limiting the claim to 3455 individual Alaska Natives.²⁶⁸ The cause of action was originally brought in state court and was later removed. After removal, the Alaska Native class split their action into two parts: one for economic damages due to loss of harvest, and one for noneconomic damages due to injury to their subsistence way of life. Native Class settled with Exxon for the economic damages.²⁶⁹ The court then granted Exxon's motion for summary judgment on all noneconomic injury claims asserted by the Class.²⁷⁰

In his decision dismissing the case, Judge Holland declared that "[t]he law remains that a private litigant cannot recover damages for a public nuisance unless he or she can show a special injury different in kind from that suffered by the general public." The Class argued that the "unique nature of their subsistence lifestyle is the keystone to their culture."²⁷¹ This "special injury" rule is a regrettable relic that restricts private standing to correct public nuisances "ostensibly . . . to protect defendants from a multiplicity of actions, to discourage trivial lawsuits, and to prevent interference with the discretion of public authorities."²⁷² It was applied in this case to protect defendants from the only meaningful action that would ever be brought by anyone to correct the subsistence injury.

A private claimant who suffers an injury "different" from the public at large can bring suit to correct a public nuisance. Judge Holland chose the narrow version of this rule – the difference must be not only in degree but in kind – and then declared that this subsistence-cultural claim is common to everybody: "The court takes notice of the fact that hunting and fishing for the family table is traditional throughout all of rural America." Taking heart in the idea that subsistence lifestyle is no different than traditional hunting and fishing a la Daniel Boone, the court held: "All Alaskans, and not just Alaska Natives, have the right to obtain and share wild food, enjoy uncontaminated nature, and cultivate traditional, cultural, spiritual, and psychological benefits in pristine natural surroundings."²⁷³

Neither the length of time in which Alaska Natives have practiced a subsistence lifestyle nor the manner in which it is practiced makes the Alaska Native subsistence lifestyle unique: "These attributes of the Alaska Native lifestyle only make it different in degree from the same subsistence lifestyle available to all Alaskans. The Alaska Natives do not have a viable, maritime, public nuisance claim, as their claim is only different in degree, but not in kind, from that suffered by the general population of Alaska."²⁷⁴

In dicta, the court drove the final nail in the coffin of Alaska Native subsistence claims by summarizing the many other impacts on Native culture beyond the oil spill: "We are powerless to prevent change; and accidents are no stranger to human existence . . . However, one's culture – a person's way of life – is deeply embedded in the mind and heart. Even catastrophic cultural impacts cannot change what is in the mind or in the heart unless we lose the will to pursue a given way of life. If (and we think this is not the case) the Native culture was in such distress that the *Exxon Valdez* oil spill sapped the

will of the Native peoples to carry on their way of life, then a Native subsistence lifestyle was already lost before March 24, 1989.”²⁷⁵

This last observation is Judge Holland’s take on Paul Bohannon’s expert testimony in the case that culture is something embedded in the mind.²⁷⁶ A useful abstraction perhaps. The devastation of the Native economies and hopes had another side of healthy resilience and determined defiance. But the injury complained of had its concrete and identifiable particulars. Judge Holland might have seen it had the oil – and the “cleanup” vandals who followed it – come into his house, taken his food, removed his table, crushed his heirlooms, scattered his memories, seized his records, and killed his companions.

But the Ninth Circuit affirmed Judge Holland’s dismissal of the Native claims in all particulars and without a twinge of hesitation. Those “noneconomic” cultural claims were “potentially different in degree” but not “different in kind” from the injuries suffered by other Alaskans.²⁷⁷ Natives could not sue to correct the cultural wrongs any more than the EVOS Trustee Council could move to correct them. All dissent was buried in the law journals²⁷⁸ and in the disappointments of the Native people who had been turned away. Exxon won millions for its remorse; the Natives got nothing for their distress. Judge Holland was resoundingly correct in one particular – Alaska Native culture that is “embedded in the mind and heart” is not easily destroyed even when the Ninth Circuit tries its hardest.

6. The Slow Death of Punitive Damages

a. Five Billion to Four Billion to 4.5 Billion

The punitive damages phase of the *Exxon Valdez* case was born in a creative flourish that gives high hope to students of law.²⁷⁹ It has slowly succumbed to the more cynical details of the legal process.

The proceedings to assess punitive damages began with the certification of a mandatory punitive damages class in 1994 under the direction of Judge Holland.²⁸⁰ The class included all persons who possessed or asserted claims for punitive damages against Exxon. The formation of one punitive damages class was done primarily for legal efficiency and equality. It insured that Exxon would not be punished numerous times and that all plaintiffs could recover damages.²⁸¹ On May 2, 1994, the federal trial commenced. In Phase 1 of the three-part trial, the jury unanimously found that both Captain Hazelwood and Exxon recklessly caused the accident. In Phase 2, the jury returned a verdict awarding compensatory damages of \$287 million for losses relating to the spill.²⁸² On September 16, 1994, the verdict for Phase 3, assessing punitive damages, resulted in an award of \$5 billion.²⁸³ After the verdict was announced, the plaintiff’s lawyer hugged his 3-year old son as an attorney for Exxon whispered “he’ll be in college before you get any of that money.”²⁸⁴ So far, those words have been prophetic as Exxon has not paid any of the punitive damages awarded.

The punitive damages case reached the Ninth Circuit in 1999. In the intervening time, Exxon filed “more than 60 petitions and appeals, sought 23 time extensions and

filed more than 1,000 motions, briefs, requests and demands. It has asked for a reduction in the award, a reversal and a new trial. It has claimed jury misconduct and jury tampering.²⁸⁵ On Exxon's appeal of the jury's punitive damage award, the Ninth Circuit vacated and remanded the award.²⁸⁶ The District Court was ordered to apply the standards put forth by the Supreme Court in *BMW of North America v. Gore and Cooper Industries, Inc. v. Leatherman Tool Group, Inc.*²⁸⁷ In applying the standards, the Ninth Circuit found that because the spill was an accident and Exxon acted promptly to mitigate the effects, the reprehensibility was reduced. Also, the ratio of punitive to compensatory damages was seventeen to one, which exceeded the four to one ratio that the Supreme Court called "close to the line" in *Pacific Mutual Life Ins. Co. v. Haslip*.²⁸⁸ Finally, the Court determined that the punitive damage award exceeded the other comparable penalties and those allowable under the Oil Pollution Act.²⁸⁹ Based on these factors, the District Court was ordered to reduce the amount of punitive damages.

The District Court reevaluated the amount of punitive damages awarded and determined that \$5 billion did not violate due process as describe in *BMW v. Gore*.²⁹⁰ In applying the *Gore* factors, the District Court found that Exxon's conduct was highly reprehensible. Also, the ratio of punitive harm to quantifiable damages was 9.85-to-1, which does not exceed the 10-to-1 ratio upheld in *TXO Production Corp v. Alliance Resources Corp.*²⁹¹ The court determined the amount of quantifiable damages by adding up all the payments made by Exxon to get an amount of "actual harm" of \$507,509,094. Judge Holland reached this amount by totaling twenty-one awards, payments, and settlements.²⁹² Finally, the Court determined that the penalty was appropriate based on comparable misconduct. Despite the ratio of punitive to actual harm falling within an acceptable limit, the court found that the award had to be reduced to \$4 billion to comply with the Ninth Circuit's mandate.²⁹³ Exxon again appealed the amount of the award.

In August 2003, the Ninth Circuit vacated the \$4 billion punitive damages judgment and remanded the case to the District Court to reconsider the punitive damages award in light of the Supreme Court's decision in *State Farm Mutual Automobile Ins. Co. v. Campbell*.²⁹⁴ In reassessing actual harm yet again, Judge Holland considered twenty-four awards, payments, and settlements to find a total of \$513,147,740.²⁹⁵ In January 2004, the District Court held that the imposition of \$5 billion in punitive damages would not violate the *State Farm* principle that punitive damages could not be used to punish and deter defendant for conduct that happened in another jurisdiction (court may not consider extra-territorial conduct that has no nexus to the harm suffered by plaintiffs). Also, the award of \$5 billion in punitive damages would not violate the oil company's due process rights. Finally, the award would be reduced to \$4.5 billion in order to comply with the Ninth Circuit's remand order.²⁹⁶

b. The Seattle Seven Interlude

A telling component of this litigation involves claims brought by the "Seattle Seven," a group of seafood processors. On January 8, 1991, the Seattle Seven entered into a settlement agreement with Exxon for damages caused by the oil spill. Exxon agreed to pay the Seattle Seven approximately \$70 million in exchange for a release of all

claims and certain other agreements, including an agreement that the group “take all reasonable, lawful and ethical . . . actions to assist Exxon so that Exxon may recapture or obtain a credit or offset for any punitive damages, awards, settlements, and claims.”²⁹⁷ On January 11, 1996, Exxon and the Seattle Seven entered into a second agreement for an additional \$6 million. The Seattle Seven agreed to challenge the Plan of Allocation of punitive damages and reimburse Exxon for their share of the award (about \$733 million). In exchange, if successful, the Seattle Seven would keep an additional \$12 million.²⁹⁸

After the Court upheld the jury’s \$5 billion punitive damages verdict in 1995, the plaintiffs were obliged to develop a plan for the appropriation of the awarded amount. The Seattle Seven formally objected to the allocation plan. They claimed that because they settled with Exxon for a sum of 15 percent of the damages, they were entitled to 15 percent of the punitive damage award, or approximately \$745 million.²⁹⁹ The District Court strongly rejected this secret agreement and found that “public policy will not allow Exxon to use a secret deal to undercut the jury system. . . .”³⁰⁰ On appeal, the Ninth Circuit vacated the District Court’s decision. The Court found that cede-back provisions were enforceable, they should not be disclosed to the jury, and that there were no circumstances in the case that would have warranted disclosing the terms of the cede-back provision to the jury.³⁰¹ Therefore, the Court concluded that the cede-back provision did not preclude the Seattle Seven from sharing in the punitive damage award.³⁰²

As the description of the punitive damage litigation indicates, Exxon has done everything legally possible to delay its payment of the awarded punitive damages. This litigation effort can best be characterized as being tortured by the appellate process and by Exxon’s ‘brilliant and cynical’ moves. Six times to the U.S. Court of Appeals. Six wins for Exxon. Currently, Judge Holland’s most recent determination that punitive damages be set at \$4.5 billion dollars is pending a hearing before the Ninth Circuit. By delaying its payment, Exxon continues to accrue interest on its debt to society, limiting the impact of the punitive damages as a means of punishing and deterring reckless behavior.

THE NINTH CIRCUIT . . . EXXON-FRIENDLY		
Case	Opinion Writer / other panel members	
<i>Eyak Native Village v. Exxon Corp.</i> , 25 F.3d 773 (1994)	Procter Hug, Jr. (Nevada) / Herbert Y.C. Choy (Hawaii), Edward Leavy (Oregon)	“Trust” plaintiffs composed of environmental organizations-- National Wildlife Federation (“NWF”), Wildlife Federation of Alaska (“WFA”), Natural Resources Defense Council (“NRDC”) asserted that they were entitled to sue as trustees for public users of the natural resources as a supplement to the damages secured by the State and the United States in the consent decree because (1) the State had a conflict of interest in negotiating the decree because of its own potential liability exposure and (2) the settlement did not provide sufficient funds for environmental injuries. Exxon removed the case to federal court (alleging that the complaints represented a collateral attack on a federal court judgment). The Ninth Circuit upholds District Court’s decision granting removal.
<i>Alaska Sport Fishing Ass’n v. Exxon Corp.</i> , 34 F.3d 769 (1994)	<i>Per Curiam</i> : Alfred T. Goodwin (California), Dorothy W. Nelson (California), & Cynthia H. Hall (California)	Class of 130,000 sport fishers assert individual, private claims for loss of use of natural resources. The Ninth Circuit affirms District Court’s decision that the Governments’ (U.S. and Alaska) had the authority to recover all lost use damages; the Consent Decree between the Governments’ and Exxon specifically said it covered all lost use damages; and when the state is acting as <i>parens patriae</i> , it is presumed to work in the public interest. The Governments had already represented ASFA when they entered into the Consent Decree; therefore, <i>res judicata</i> prevented the ASFA suit.
<i>In re Native Class</i> , 104 F.3d 1196 (1997)	Senior District Judge (N.D. Calif.) William H. Schwarzer / Alex Kozinski (California) & Edward Leavy (Oregon)	The Ninth Circuit holds that cultural damage – damage to the Alaska Native Class’ subsistence way of life – may not cause compensable injury.
<i>In re Exxon Valdez</i> , 229 F.3d 790 (2000)	Mary M. Schroeder (Arizona) / James R. Browning (California) & Andrew J. Kleinfeld (Alaska)	Exxon’s settlement with a group of Seattle seafood processors (“the Seattle Seven”) included a “cede back” provision that required the group to give back to Exxon any portion of punitive damages allocated to the group. The Ninth Circuit reverses District Court and holds that the cede back provisions were not unenforceable as against public policy, the provisions did not have to be disclosed to the jury, and the settlement agreement did not preclude the group sharing in the punitive damages award.
<i>In re Exxon Valdez</i> , 270 F.3d 1215 (2001)	Andrew J. Kleinfeld (Alaska) / Mary M. Schroeder (Arizona) & James R. Browning (California)	The Ninth Circuit holds that although there was substantial evidence to support the \$5 billion jury verdict, a punitive damages award must pass “muster under federal due process analysis” in addition to reviewing whether the evidence is sufficient as a matter of law to support the award. Court holds that the \$5 billion punitive damages award is too high to withstand the review court is required to give it under <i>BMW v. Gore</i> and <i>Cooper Industries, Inc. v. Leatherman Tool Group, Inc.</i> [Due Process review]. It must be reduced. [On remand, Dist. Ct. holds that \$5 billion punitive damage award does not violate Due Process but reduces award to \$4 billion in light of Ninth Circuit’s mandate – 236 F.Supp.2d 1043 (D.Alaska Dec. 9, 2002)]
<i>In re Exxon Valdez</i> , Ninth Circuit dkt 03-35166 (August 18, 2003)		The Ninth Circuit vacates the District Court’s \$4 billion punitive damages judgment and remands the case to reconsider the award in light of <i>State Farm Mutual Automobile Ins. Ass’n v. Campbell</i> . [On remand, Dist. Ct. holds that <i>State Farm</i> supports \$5 billion punitive damage award but reduces award to \$4.5 billion in light of previous remand – 296 F.Supp.2d 1071 (D.Alaska Jan.28, 2004)]

Insert 11 -- Ninth Circuit: Exxon Case Law

E. Double-Hulls and Margins of Tolerance

The OPA of 1990 was a law fashioned by the horror, chagrin, and tears of the 1989 oil spill. Congress did much to fix the deficiencies that were on conspicuous display post-EVOS. It even took steps to redesign these tanker tubs of petroleum by the simple expedient of mandating double-hulls in the design and construction.

The EVOS proved yet again to the most cynical of observers that there is no clean-up strategy to repair the damage after-the-fact. Effective clean-up cannot be done and will not be done. The most decisive destruction is that which is cumulative, ongoing, and relentless.

In a world “resistant” to silver-bullet solutions, Congress thought it had discovered one in the 1990 OPA – a technological change to “double hulls.” Exxon thought so too. It fought the requirement throughout the legislative process. In the Senate, efforts to mandate double hulls “lost quite narrowly.” The House version “contained a double hull provision to be phased in over 15 years.”³⁰³ A phase-out of single hull tankers was to begin in 1995. By 2010, all vessels over 5,000 gross tons with single hulls are prohibited from operating “until they are converted to double hulls.”³⁰⁴ Twenty years was the Congressional margin of tolerance for double hulls. This requirement has had zero impact on Exxon traffic in Prince William Sound since the 1989 spill.³⁰⁵

Double-hulls was a road “not taken” in the 1990 OPA, and it is a road that beckons again during this 2002-06 “reopener” window. All talk of “futility” in making future “project” investments to help Prince William Sound escape its well-oiled past is nonsense. The Sound could be protected significantly if every penny of this \$100 million were sent back to Exxon with instructions to invest it in putting double-hulls on the tanker fleet moving Valdez oil.

III. Road to be Taken: Applying the “Reopener”

A. Legal Conditions

To trigger the reopener, it is necessary to demonstrate that (1) “populations, habitats, or species” have suffered losses or declines in the area of the spill; (2) these losses must be “substantial”; (3) they must be “as a result” of the oil spill; (4) they could not be reasonably known nor anticipated by the trustees; (5) restoration “projects” must be identifiable and set forth in a “restoration plan”; and (6) costs of any project “must not be grossly disproportionate to the magnitude of the benefits anticipated from the remediation.”

1. Have “one or more populations, habitats, or species” suffered a “substantial loss or substantial decline in the areas affected by the Oil Spill”?

The short answer to this question is that many “populations, habitats or species” have suffered losses and declines in Prince William Sound, and these downturns have

been substantial. An impressive summary of these consequences appears in the 2003 Science article by C.H. Peterson et al., entitled "Long-Term Ecosystem Response to the *Exxon Valdez* Oil Spill."³⁰⁶ Hundreds of studies and numerous uncertainties did not prevent Peterson and colleagues from reaching powerful general conclusions.³⁰⁷

oil persisted beyond a decade in surprising amounts and in toxic forms, was sufficiently bioavailable to induce chronic biological exposures, and had long-term impacts at the population level. Three major pathways of induction of long-term impacts emerge (i) chronic persistence of oil, biological exposures, and population impacts to species closely associated with shallow sediments; (ii) delayed population impacts of sublethal doses compromising health, growth, and reproduction; and (iii) indirect effects of trophic and interaction cascades, all of which transmit impacts well beyond the acute-phase mortality.

Understand, then, that populations, habitats, and species continue to be exposed to toxic oil in toxic amounts in Prince William Sound; that these exposures compromise the health, growth, and reproduction of individual animals with population consequences; and that these effects show up at different trophic levels.

Documentation of these losses extends across the populations, habitats and species that populate Prince William Sound. Further elaboration of a few species and environments is supplied immediately below. This is neither an exhaustive list nor even the worst cases of spill-impacted populations.

2. How Does One Measure Whether Declines in Populations, Habitats, or Species Are Substantial?

a. Generally

This question of whether the state of the world has sunk beneath a legally acceptable norm is inescapable in environmental law and crucial to resolution of the *Exxon Valdez* reopener. The common law of nuisance³⁰⁸ and public trust³⁰⁹ measures violation by reference to whether injury is "substantial." The Endangered Species Act and the Superfund Law, to mention two disparate examples, demand somewhat different levels of improvement to the environmental "baseline" – the one at which listed species are fully "recovered,"³¹⁰ the other at which human health is fully protected.³¹¹

Another impressive article in Science casts further light on this elusive "baseline."³¹² This study of historical fishing practices hypothesizes that the kelp forest ecosystem in Alaska developed during the past twenty million years, with the evolution of kelp, sea urchins and the Steller's sea cow (hunted to extinction by 1768) leading to a flourishing kelp habitat.³¹³ Since then, the hunting of sea otters – by humans until the 20th century and now increasingly by killer whales – has significantly altered the ecosystem and has led to the collapse of kelp forests in some areas.³¹⁴ Studies in the wake of the spill of the *Exxon Valdez* did not focus on kelp.

Contestants in the *Exxon Valdez* litigation have used different standards of recovery at different times. The *Exxon Valdez* Trustee Council has defined recovery as “a return to pre-spill conditions or to conditions comparable to those of un-oiled areas.”³¹⁵ Alan W. Maki of Exxon has invoked indicators such as no-effects exposure levels, and successful survival, reproduction, and re-colonization of oiled areas to confirm that “biological recovery is rapidly taking place.”³¹⁶

The 1991 settlement, of course, rests upon the Clean Water Act that directs public trustees to “restore, rehabilitate or acquire the equivalent” of natural resources.³¹⁷ “Restore” means, by dictionary definition, to “bring back into an original condition” or to “bring back into existence or use.”³¹⁸ “Rehabilitate” means “to restore to a useful life” or “to restore to a former state or condition.”³¹⁹ “Equivalent” means something that is “practically equal” or something “virtually identical or corresponding parts.”³²⁰

Formally, recovery has been defined as “the return of an impacted ecosystem to its pre-spill state, structurally and/or functionally, within the limits and constraints of natural variability and statistical significance, respectively.”³²¹ The key elements of this definition are further broken down into structural recovery (return of physical and chemical habitat characteristics to pre-spill conditions within the limits of natural variability), functional recovery (return of biological processes and species assemblages to pre-spill conditions within the limits of natural variability), and resource services recovery (return of services provided by public resources – fisheries productivity, beach use, shoreline stabilization – to pre-spill levels within the limits of expected variability).³²²

We will follow this approach. We are confident that a resource must meet pre-spill conditions to be “recovered”; and that there are five criteria (health, habitat, numbers, diversity and ecological functions)³²³ for determining whether pre-spill conditions are met.

We recognize that any attempt to define recovery using a pre-spill baseline is inherently problematic because of: (1) the grossly inadequate state of our knowledge of environmental baseline conditions, and (2) the inability to define such a thing as “pre-injury” conditions given that change, variability, disturbance and succession are parts of every environment, whether influenced by humans or not.³²⁴ Therefore, whether we look for recovery by comparing oiled versus non-oiled area conditions or whether we attempt to compare pre- and post-spill indicators such as health, habitat, numbers, diversity and ecological function, we may in either case find ourselves assuming too much (in terms of what the baseline actually was) or questioning the causation of the changes we are observing (natural or human-made).

The 2002 EVOS Restoration Plan Update on Injured Resources and Services³²⁵ identifies recovery objectives for spill-impacted resources and services. The objectives are intended to be measurable conditions that signal recovery (i.e. “yardsticks against which the success of the program is measured”). For each of the species and habitats of concern, the Plan uses these “yardsticks” to determine whether recovery has been achieved. Would these same results be found using more specific indicators such as health, habitat, numbers, diversity and ecological function for these species or communities?

b. As Applied

(i) Orcas

No better example of the enduring – and thus “substantial” – ecological loss that is the legacy of EVOS can be found than the tragedy of the transient killer whales in the AT1 pod. Extinction, they say, is forever, and forever is a long time to wait for “restoration.”

This group of orcas does not appear on the Trustee Council’s “Status of Injured Resources.”

The AT1 pod of transient (mammal-eating) killer whales has declined by at least 50% since the Exxon oil spill. Originally numbering twenty-two animals, the pod currently consists of seven whales and has not produced a viable calf in over twenty years.³²⁶ Prior to the oil spill, the twenty-two AT1 transients had been sighted on an annual or biennial basis and appeared in Prince William Sound year-round, a sighting regularity that is rare for transient animals.³²⁷ Despite this dramatic decline and the fact that it coincides with the same time as the oil spill, and despite the fact that killer whale researchers state in a report for the EVOS Council that the majority of the deaths were caused by the oil spill,³²⁸ the EVOS Council insists that “there is no evidence linking the oil spill to the AT1 group.”³²⁹

Killer whales are long-lived, with females having an average life span of fifty years and typically giving birth for the first time between eleven and fifteen years of age.³³⁰ The average male life span is thirty years.³³¹ Transients normally travel in small groups of two to six whales. This behavior is tied to their practice of hunting marine mammals.³³² Transients from the AT1 group in Prince William Sound feed mainly on harbor seals and Dall’s porpoises.³³³ The basic social unit of transient killer whales is the maternal group, consisting of a mother and her offspring.³³⁴

Following the oil spill, several members of the AT1 group were photographed swimming through oiled waters near the *Exxon Valdez*.³³⁵ In a report prepared for the EVOS Trustee Council, killer whale researchers Craig Matkin and Eva Saulitis state:³³⁶

Most of the missing AT1 whales apparently disappeared during the 1989-90 winter. We suspect that they died from the protracted effects of either inhaling oil or oil vapors or as a result of extensive feeding on heavily oiled harbor seals. Oiled seals were lethargic and may have provided an easy source of food for these whales following the spill.

Additional impacts from the oil spill may include the decline in harbor seal numbers, meaning that the AT1 group has less available prey. In addition, studies have found extremely high levels of contaminants in the blubber of the AT1 whales.³³⁷ The contaminants consist of assorted PCB compounds as well as DDT and its breakdown components. Scientists are concerned that the contaminants affect reproductive success and, combined with the decreased availability of harbor seals, prevent the AT1 group from recovering.³³⁸ Unfortunately, the oil spill likely triggered a decline to the point

where recovery is not possible. As stated by Alaska Regional Fisheries Administrator of NOAA Fisheries, Dr. James Balsiger, "The number of animals in this group has dramatically decreased since 1989 to the point where this particular stock of killer whales may disappear from the ocean."³³⁹

To sum up, the AT1 orca pod fails all criteria for recovery because it is on its way to extinction. The EVOS Trustee Council lists the harbor seal as "not recovering"³⁴⁰ and the orca that prey on the seal are "not recovering" either. This sad story is a regrettable residue of the 1989 oil spill.

(ii) Stellar Sea Lions

The EVOS Council does not include the Steller sea lion as an "injured resource."³⁴¹ However, the western stock of Steller sea lions has declined drastically since the 1970s; it is estimated that the population declined 40% between 1990-2000, and it is listed as endangered under the Endangered Species Act.³⁴² Although Prince William Sound does not contain rookeries (terrestrial breeding and pupping sites), there are two haulout sites used on a year-round basis and three used on a seasonal basis.³⁴³ Another roughly twenty-five haulouts outside of Prince William Sound were in the path of the spilled oil.³⁴⁴

Direct impacts to Steller sea lions from the Exxon oil spill appeared to be minimal, and scientists did not find conclusive evidence of an effect from the oil spill on the population.³⁴⁵ There are also fisheries interactions that impact the Steller sea lion population.³⁴⁶ Nonetheless, recent research demonstrates that herring are the most important winter forage item for Steller sea lions in Prince William Sound.³⁴⁷ As discussed below, the herring fishery in Prince William Sound has not recovered from the oil spill. It is probable that the decline in herring availability combined with other ecosystem changes resulting from the oil spill have contributed to the decline of the Steller sea lion in Prince William Sound. Regardless of the precise cause or combination of causes, the Steller sea lion population continues to decline, and should be recognized as "not recovered" by the EVOS Council.

(iii) Pacific Herring

Pacific herring are deemed "not recovered" by the Trustee Council,³⁴⁸ and this crucial species fails each of our five tests for recovery. Its numbers are down. Its habitat is poisoned. Its health is bad. Its distribution and diversity is in jeopardy. And it cannot do the job expected of it as the main prey item in many complex food webs.

More particularly, the EVOS recovery objective for Pacific herring is that "the species will have recovered when the next highly successful year class is recruited into the population and when other indicators of population health (such as biomass, size-at-age, and disease expression) are within normal bounds in Prince William Sound."³⁴⁹ Dr. Riki Ott has identified health and habitat factors that originated with the spill.³⁵⁰

The Sound's herring population has had problems since the spill. At a minimum, oil exposure in 1989 killed lipid-rich eggs, incubating along oiled beaches; maimed and killed embryos adrift in surface waters; and reduced fertility in survivors of the 1989-year class. PAH exposure also may have wreaked havoc with the immune system of surviving 1989-year class and adults, making them more susceptible to diseases. . . . The herring stocks collapsed in Prince William Sound and nowhere else in the state in 1993, the year that survivors of the ill-fated 1989-year class matured and joined the adult stocks. Viral outbreaks decimated the Sound's remaining herring stocks again in 1998 and 2001. . . .

According to the Alaska Department of Fish and Game ("ADFG"), "herring disease assessment has been included as part of the annual age, sex, and size assessment the department completes each spring since 1993. In April, 2004 ADFG examined herring for prevalence of focal skin reddening and the pathogen *Ichthyophonus hoferi*. Prevalence of focal skin reddening associated with viral hemorrhagic septicemia virus (VHSV) was low. However, prevalence of *I. hoferi* was relatively high (14%) and is consistent with the increasing age of the dominant 1999 age-class. If this trend continues, mortality of the dominant age class may increase significantly."³⁵¹

The herring habitat was contaminated by the spill and remains so. In the opinion of one herring research scientist, because herring depend on the edge zone of Prince William Sound they will remain at risk for as long as there is toxicity from oil in that region.³⁵² The continued presence of residual oil and the role of oil in initiating *Fucus* population instability (see discussion of intertidal communities below) the habitat for herring continues to impact this species negatively.³⁵³

Herring numbers are dramatically down. There have been no "very strong" year classes recruited into the Prince William Sound herring population since 1988.³⁵⁴ Numbers of spawning herring in Prince William Sound remained depressed through the 1995 season. In 1997 and 1998 the spawning biomass was about double that of 1994, the season following the crash, and there were limited commercial harvests for herring in the sound. The increased biomasses in 1997 and 1998 were signs that recovery had begun. For that reason, in 1999, Pacific herring were considered to be recovering from the effects of the oil spill. Regrettably, however, in the last several years the population has yet to recruit a highly successful year class.³⁵⁵ In fall 2003 80% of the stocks were composed of three-year-old fish. At one time it was thought that if these juveniles could successfully recruit into the adult stocks in 2004 without triggering another disease outbreak, they could start to rebuild PWS' herring population, then at 30,000 tons (less than a quarter of pre-spill population).³⁵⁶ However, the fishery remains closed through 2005.³⁵⁷

A study of genetic differences in herring was commissioned by the EVOS Trustee Council in 1994 and a final report was issued in 1998.³⁵⁸ The scientists tested for genetic heterogeneity among spawning aggregations of Pacific herring within Prince William Sound, adjacent to Prince William Sound in the Gulf of Alaska and in the Bering Sea, and between year classes within and adjacent to the Sound. The results revealed a large

genetic discontinuity between herring from the Gulf of Alaska and the Bering Sea and between specific locations within PWS, the Gulf of Alaska and the Bering Sea in 1995 and 1996. The study also revealed significant inter-annual variation at locations sampled in successive years within Prince William Sound.³⁵⁹

A question remains: did the spill effectively remove certain herring stocks whose loss will be felt much later?³⁶⁰ Pacific herring are a keystone species (i.e. a species whose activities and abundances can determine the integrity and stability of a complex community).³⁶¹ “Few species are of greater combined ecological and economic importance in Prince William Sound (and in many other coastal ecosystems). Herring of all life stages are central to a marine food web that includes humpback whales, harbor seals, a large variety of marine and shore birds, bald eagles, jellyfish and other invertebrates, and an array of other fishes, such as pollock. In addition, herring – especially their eggs – provide a multi-million dollar resource that is available to commercial fishers in the spring, before the main salmon seasons open.”³⁶² The delay in recovery of Pacific herring may be a factor in the delayed recovery of other species. Given the importance of Pacific herring in the recovery of many other species, and recognizing the continued poor health and depressed population, it is clear that this species cannot be considered recovered from the pre-1989 conditions.

(iv) Intertidal Communities

The EVOS Council says that “Intertidal Communities” are “recovering” in the wake of the spill,³⁶³ and it has its own criteria for determining when they will be fully “recovered.”³⁶⁴ There are, of course, thousands of species in the intertidal zone. If this regime is not “recovered” – and it is not – the legal case for the reopener is established.

Ironically, the investigation that confirmed ongoing substantial losses among intertidal communities proceeded with the help of the Alaska Natives from Chenega and Tatitlek, who excavated the sampling pits on the beaches that had been oiled. This study was done under the auspices of the Alaska Fisheries Science Center and it found, quite amazingly, that the oil left behind by EVOS was highly persistent: “Although the volume of oil has declined considerably, our study suggests the area of oiled beach has probably changed little since 1992.” The summary of this oil persistence study is as follows:³⁶⁵

We estimated the amount of oil remaining in Price William Sound, Alaska, 12 yr after the 1989 *Exxon Valdez* spill to assess its importance as a long-term reservoir of toxic hydrocarbons. We found oil on 78 of 91 beaches randomly selected according to their oiling history. Surface oiling was recorded for randomly placed quadrants, which were then excavated and examined for subsurface oil. The cumulative area of beach contaminated by surface or subsurface oil was estimated at 11.3 ha. Surface oil varied little with tide height, but subsurface oil was more prevalent at the middle tide heights. The mass of remaining subsurface oil is conservatively estimated at 55 600 kg. Analysis of terpanes indicated

that over 90% of the surface oil and all of the subsurface oil was from the *Exxon Valdez* and that Monterey Formation oil deposited after the 1964 Alaska earthquake accounted for the remaining surface oil. These results indicate that oil from the *Exxon Valdez* remains by far the largest reservoir of biologically available polycyclic aromatic hydrocarbons on beaches impacted by the spill and that biota dependent on these beaches risk continued exposure.

Health/Habitat: Portions of 1,400 miles of coastline were oiled by the spill in Prince William Sound, on the Kenai and Alaska peninsulas, and in the Kodiak Archipelago. Both the oil and intensive cleanup activities had significant impacts on the flora and fauna of the intertidal zone. In the lower and middle intertidal zones on oiled rocky shores, algal coverage and invertebrate abundances had returned by 1991 to coverages and abundances similar to those observed in unoiled areas. Yet, large fluctuations in the algal coverage have taken place in the oiled areas since the spill. This pattern is consistent with continued instability due to the original spill impact and the subsequent cleanup. More recently, instability of *Fucus gardneri* populations (a perennial brown seaweed that dominates the intertidal) during the last 12 years probably results from a combination of spill- and naturally-induced changes, with a greater influence of natural events in the later years. In studies of the effects of cleanup activities on beaches, invertebrate molluscs and annelid worms on oiled and washed beaches were still much less abundant than on comparable unoiled beaches through 1997.

Numbers/Diversity: Many species of algae and invertebrates were less abundant at oiled sites than at unoiled reference sites. Some more opportunistic species, including a small species of barnacle, oligochaete worms, and filamentous brown algae, colonized shores affected by the oil spill and cleanup activities. The abundance and reproductive potential of the common seaweed, *Fucus gardneri* (also known as rockweed or popweed) was reduced following the spill.

Ecological function: Intertidal communities are intrinsically important and are resources for subsistence users, sea and river otters, and a variety of birds, including black oystercatchers, harlequin ducks, and pigeon guillemots. On the sheltered, bedrock shores that are common in Prince William Sound, full recovery of *Fucus* is crucial for the recovery of intertidal communities at these sites, since many invertebrate organisms depend on the cover provided by this seaweed. *Exxon Valdez* oil that penetrated the intertidal matrix of cobbles, gravel and finer sediments to subsurface depths is less susceptible to weathering processes and is generally more persistent. In addition, unlike surface EVO, subsurface EVO was not directly subjected to sustained cleanup efforts performed by Exxon. This form of oil is considered more bioavailable than surface weathered oil and, where accessible, has resulted in ongoing exposure to intertidal resources.³⁶⁶

Conclusion: Based on the lack of full recovery of some soft-sediment intertidal invertebrates, as well as the continued presence of residual oil and the role of oil in initiating *Fucus* population instability, the intertidal communities are not recovered.

(v) Mussel Beds

Mussels and clams are listed as “recovering” in the August 2002 Status Report. They sit in the intertidal zone and on the very table that beckons subsistence users. Mussels “will have recovered,” according to the EVOS Council, “when concentrations of oil in the mussels reach background concentrations and mussels do not contaminate their predators.”³⁶⁷ Subsistence users are told to this day to avoid mussels that seem “oily” and thus “recovery” is something that might happen later.

Health/Habitat: In 1991, high concentrations of relatively unweathered oil were found in the mussels and in underlying byssal mats and sediments in certain dense mussel beds. About 30 mussel beds in Prince William Sound still contained *Exxon Valdez* oil residue when last sampled in 1995. Twelve of these beds had been cleaned on an experimental basis in 1993 and 1994. In 1995, oil hydrocarbon concentrations in mussels at half the treated beds were lower than would have been expected if the beds had not been cleaned. In 1996, however, limited sampling indicated that several of the cleaned beds had been recontaminated from surrounding or underlying oil residue. Mussel beds along the outer Kenai Peninsula coast, the Alaska Peninsula, and Kodiak Archipelago were surveyed for the presence of oil in 1992, 1993, and 1995. In 1995, hydrocarbon concentrations in mussels and sediments at these Gulf of Alaska sites were generally lower than for sites in Prince William Sound, but at some sites substantial concentrations persisted. While several sites in Prince William Sound still contained high concentrations of oil in 1995, over half the sites surveyed demonstrated significant natural declines that suggest background concentrations should be reached in the next few years. Data from 1999 indicate that oil is still being accumulated in mussels.³⁶⁸ One study sponsored by the Trustee Council reports that mussel condition was adversely affected by oil; prevalence of digestive gland metaplasia, brown cells, and hemocytic infiltrates in gonads increased, and storage cell abundance decreased.³⁶⁹

Numbers/Diversity: no information. Ecological function: The biological significance of oiled mussel beds is not known precisely, but they are potential pathways of oil contamination for bird and mammal populations (e.g., harlequin ducks and sea otters) that include mussels and other prey in and around mussel beds in their diets.³⁷⁰ Mussels are also locally important for subsistence. Conclusion: Oil contamination in mussels will likely persist for many years at certain sites that are well protected from wave action or where oil penetrated deeply into underlying sediments.

(vi) Sea Otters

Sea Otters are listed as “recovering” in the August 2002 Status Report. They are not “recovered.”

Although the total number of sea otters killed by the Exxon oil spill is unknown, acute loss is estimated in the range of several thousands.³⁷¹ And although the sea otter population is increasing in general in Prince William Sound, sea otters in areas that were

the most heavily oiled still face significant recovery problems. Knight Island, the area which suffered heavy oiling and the highest otter mortalities after the spill, showed no increase in the population as of 2000.³⁷²

Studies indicate that although birth rates at Knight Island are normal as compared to non-oiled populations, juvenile survival rates are low.³⁷³ Oil persists on the beaches and is released and ingested by the otters during foraging activities. Scientists “conclude that progress toward recovery of sea otters in Prince William Sound is evident, but that in areas where initial oil effects were greatest, recovery may be constrained by residual spill effects, resulting from elevated mortality and emigration.”³⁷⁴ Until the sea otter populations begin to recover in the areas most severely impacted by the spill, the population should not be listed as “recovered” by the EVOS Council.

The EVOS recovery objective is that sea otters “will have recovered when the population in oiled areas returns to its prespill levels and distribution, and when biochemical indicators of hydrocarbon exposure in otters in the oiled areas are similar to those in otters in unoiled areas. An increasing population trend and normal reproduction and age structure in western Prince William Sound will indicate that recovery is underway.”³⁷⁵ Through 2000, researchers have continued to find biochemical evidence of oil exposure in sea otters around northern Knight Island. Results from biochemical samples from 2001 are not yet available.³⁷⁶ The sea otter is an important species for determining structures and dynamic relations in nearshore communities, especially with respect to their ability to keep the population of sea urchins under control. It is considered a keystone species.³⁷⁷ Given the importance of the intertidal community to the health of sea otters, and the critical importance of sea otters in the PWS ecosystem, it is clear that this species cannot be considered fully recovered from the effects of the oil spill.

(vii) Common Murres

Common murres were devastated by the spill. It was thought their recovery would be delayed for a half century or more.³⁷⁸ They have been declared “recovered” though we do not understand why.

The EVOS recovery objective is that “common murres will have recovered when populations at index colonies have returned to prespill levels and when reproductive success (productivity) is sustained within normal bounds. Increasing population trends at index colonies [Barren Islands, Chiswell Islands, Triplet Islands, Puale Bay and Ugiaushak Island] will be an indication that recovery is underway.”³⁷⁹ Health: In addition to direct losses of murres, there is evidence that the timing of reproduction was disrupted and productivity reduced. Habitat: As a fish-eating bird, the murre will likely continue to be impacted until their forage fish have recovered.³⁸⁰ Numbers: Based on surveys of index breeding colonies, the spill area populations may have declined by about 40 percent following the spill.³⁸¹ As late as 2000, common murres continued to show negative effects, and this despite the fact that it is more difficult to detect effects on a bird with a large home range like the murre.³⁸² Conclusion: Despite the Trustee Council finding that the common murre has recovered,³⁸³ this conclusion is based solely on recovery of the

bird on the Barren Islands. The common murre continues to show negative effects, most likely due to the continuing negative impacts on its prey species.

(viii) Harlequin Ducks

These beautiful ducks live and breed in the “intertidal” area. They are not “recovered” by anybody’s estimate.

The EVOS Recovery Objective for harlequin duck is that they “will have recovered when breeding – and nonbreeding – season demographics return to prespill levels and when biochemical indicators of hydrocarbon exposure in harlequins in oiled areas of Prince William Sound are similar to those in harlequins in unoiled areas.”³⁸⁴

Health: Biopsies from harlequin ducks continue to show differences in an enzyme indicative of exposure to hydrocarbons between birds from oiled versus unoiled parts of the sound. These differences are consistent with continued exposure to spill-derived hydrocarbons in the western sound. Winter surveys from 1995-1998 found that adult female survival was lower in oiled versus unoiled areas. A similar survival scenario is suggested from data collected in 2000 to 2002. Habitat: Harlequin ducks feed in intertidal and shallow subtidal habitats where most of the spilled oil was initially stranded. Oil remained in the subsurface of the intertidal zone through 2001, including under some mussel beds where harlequin ducks could be feeding. Because recovery will depend largely on recruitment and survival from within injured populations, this recovery may be compromised if exposure to lingering hydrocarbons reduces fitness and survival of harlequin ducks. Numbers: The current overwintering population of harlequin ducks in Prince William Sound is on the order of 18,000 ducks. The summer population is about half that number. Diversity: Although some harlequin ducks make major seasonal movements, they exhibit high site fidelity to summer breeding sites and to molting and wintering sites during non-breeding seasons. Strong site fidelity may limit population recovery by immigration. A genetic analysis of harlequin ducks indicates that the spill area population is homogeneous. Ecological function: In contrast to the Pacific herring, which is considered a keystone species in that it serves a critical niche in the ecosystem, harlequin ducks are considered a “sentinel species” (also referred to as indicator species).³⁸⁵ They are sensitive early indicators of systemic change. Therefore, the lack of recovery of the harlequin ducks in particular areas is an indication of continued effects of the EVOS. Conclusion: The population census trends, survival measures and indicators of exposure suggest that the harlequin duck has not recovered from the effects of the oil spill.

(ix) Black Oystercatchers

Black Oystercatcher is a permanent resident of the rocky Pacific Coast of North America, where it sometimes associates with Surf-bird, Black Turnstone, and Rock Sandpiper. With a relatively small population size, it is especially at risk from the effects of oil spills and other coastal pollution. This species is also extremely sensitive to the

presence of humans on potential nesting islands. It is estimated that there are about 9800 individuals worldwide.³⁸⁶

Black Oystercatcher is one of the most distinctive birds in all of North America: a large, all-black shorebird, with the heavy, bright-red bill typical of oystercatchers.

The U.S. Shorebird Conservation Plan lists Black Oystercatcher as a "Species of High Concern," based on relative abundance, threats on breeding grounds, and non-breeding distribution. The species' small population size places it at risk to large-scale disturbances, such as oil spills. The 1989 *Exxon Valdez* oil spill in Prince William Sound, Alaska, had a major impact on breeding oystercatchers in that area: 20% of the population in the spill area was directly killed by the spill; breeding activity was disrupted in 39% of the oystercatcher pairs attempting to nest on heavily-oiled shorelines; and the survival of chicks was reduced. Human activities also pose a threat to this species on a smaller scale. The presence of humans on potential nesting islands will often inhibit nesting attempts by Black Oystercatcher. In addition, the introduction of predators such as foxes and rats on nesting islands can create a major threat to breeding Black Oystercatchers.³⁸⁷ Oystercatchers are completely dependent upon a narrow coastal area throughout their life cycle, where they are highly susceptible to oil spills. Their strong fidelity to breeding territories, easy accessibility, conspicuous behavior, and limited reproductive potential (at most three young raised per pair per year) also make them particularly vulnerable to local extirpation through persistent disturbance by foxes and humans.³⁸⁸

Black oystercatchers spend their entire lives in or near intertidal habitats and are highly vulnerable to oil pollution. It is estimated that 1,500-2,000 oystercatchers breed in south-central Alaska. Only nine carcasses of adult oystercatchers were recovered following the spill, but the actual number of mortalities may have been several times higher.

In addition to direct mortalities, breeding activities were disrupted by the oil and cleanup activities. When comparing 1989 with 1991, significantly fewer pairs occupied and maintained nests on oiled Green Island, while during the same two years the number of pairs and nests remained similar on unoiled Montague Island. Nest success on Green Island was significantly lower in 1989 than in 1991. In 1989, chicks disappeared from nests at a significantly greater rate on Green Island than from nests on Montague Island. Disturbance associated with cleanup operations also reduced productivity on Green Island in 1990.³⁸⁹

According to David Irons of USFWS, the Black Oystercatcher population is experiencing a steady increase in numbers.³⁹⁰ It is not a dramatic increase but it was better than most of the other injured species. He based his conclusions on at-sea surveys conducted between 1989 and 2004. While oil was still in evidence in the environment, he posed the theory that perhaps because they subsist on benthic organisms rather than fish that at least they have a sufficient amount of food unlike those birds and other animals that subsist on fish such as herring. Pre-spill numbers of Black Oystercatcher are unknown. Their habitat is still impacted by visible oil on the beaches, human encroachment on the islands where they prefer to nest, and the introduction of foxes and other predators. The effects of persistent oil on recruitment are unknown. In addition,

little information exists on long-term cumulative effects of oil ingestion in free-living birds that consistently occupy contaminated sites.³⁹¹

EVOS finds that the Black Oystercatcher has recovered. Boat-based surveys of marine birds in Prince William Sound indicate that there are increases in numbers of oystercatchers in both the oiled and unoiled areas through 2000.³⁹² Given the fact that only 9 carcasses of this species were recovered in 1989 after the spill, it is likely that the population of the sound is probably as large or larger than previous to the spill.

In 1998 the Trustee Council sponsored a study to reassess the status of this species in Prince William Sound. The data indicated that "oystercatchers have fully reoccupied and are nesting at oiled sites in the sound. The breeding phenology of nesting birds was relatively synchronous in oiled and unoiled areas, and no oil-related differences in clutch size, egg volume, or chick growth rates were detected. A high rate of nest failures on Green Island are likely attributed to predation, not lingering effects of oil. Given general agreement between these results and those of the earlier work, which indicated that the effects of the spill on black oystercatchers had largely dissipated by 1991, black oystercatchers are considered to be recovered from the effects of the oil spill. This does not mean that oystercatchers are still not exposed to some oil in the intertidal zone, but the amounts are so insignificant that it would not cause an effect on this species."³⁹³

We disagree with EVOS's conclusion. The long-term health of the Black Oystercatcher is unknown. The habitat remains oiled. Numbers are increasing but pre-spill levels are unknown. Diversity is not known. The ecological functions are not well known. Thus, the Black Oystercatcher fails to meet recovery criteria.

(x) River Otters

River otters have a low population density in Prince William Sound. Twelve river otter carcasses were found following the spill, but the actual total mortality is not known. Studies conducted during 1989-91 identified several differences between river otters in oiled and unoiled areas in Prince William Sound, including biochemical alterations, reduced diversity in prey species, reduced body size (length-weight), and increased home-range size. Because there were few pre-spill data, it is not certain that these differences are the result of the oil spill.³⁹⁴

When river otters were first studied, immediately after the spill and the three years following, researchers found enzymes in the otters' blood indicating stress that could be caused by ingesting crude oil. Otters that lived near oil-fouled beaches showed high levels of the enzyme; otters in areas without oil showed much lower levels.

Nine years after the spill, the otters living near shores that were soaked by oil are still showing elevated levels of the stress enzyme. Though crude oil is no longer visible, otters may yet be suffering from its effects.³⁹⁵

Investigations in Prince William Sound following the 1989 spill revealed that coastal river otters (*Lontra canadensis*) on oiled shores had lower body mass compared with otters living on nonoiled shores. Otters from oiled shores had higher levels of several liver enzymes and blood proteins (i.e., biomarkers), than did otters from nonoiled

habitats. In addition, otters from oiled areas selected different habitat characters, had larger home ranges, and less diverse diets than those in nonoiled areas. These observed differences between river otters from oiled shores and those from nonoiled areas suggested that oil contamination had an effect on physiological and behavioral processes in these coastal otters.³⁹⁶

More importantly, results of scientific studies suggested that opposing physiological processes were concurring in the oiled otters. Elevated production of some enzymes resulted in reduction in others and masked the direct effects of crude oil.

Scientists also were able to determine that ingestion of oil influenced the function of the otters' gut. Data indicated that oil ingestion reduced the retention time of food in the gut (i.e., shorter time between consumption and defecation). This reduction in retention time resulted in lower absorption of the fat portion of the diet in the oiled otters, including the petroleum hydrocarbons. Thus, it seems that the ingestion of large quantities of weathered crude oil could reduce absorption of oil hydrocarbons causing a reduction in their toxic effects. While this is a positive effect, reduction in retention time of food and reduction of fat absorption is likely negatively to affect body condition of animals in the wild. This may explain scientists' observations that coastal river otters on oiled shores of Prince William Sound had lower body mass compared with otters living on nonoiled shores.

To establish the effects of the physiological damage on exercise physiology and diving ability, scientists measured oxygen consumption in captive otters exercising on a motorized treadmill. They also observed diving and foraging behavior of otters offered live fishes. It was hypothesized that the oiled otters would perform poorly compared with the controls because the exposed otters became anemic relative to controls (i.e., suffered from reduction in hemoglobin levels). Findings showed that exercising river otters with decreased hemoglobin levels consumed more oxygen than ones with normal hemoglobin levels did. These otters could not transport as much oxygen in their blood and had higher breathing and heart rates than unoiled otters. This translated to a nearly 40% increase in energetic cost of their terrestrial locomotion. Oiled otters also performed fewer dives when chasing fishes, representing a potential decrease of 64% in capture rate of prey. For wild free-ranging river otters, such increases in energetic costs and decreases in capture success of prey may tip the scale between life and death. Data strongly supports the idea that changes in behavior of oiled river otters following the *Exxon Valdez* oil spill in 1989 were influenced by oil induced reduction in hemoglobin, the associated increases in energetic costs, and reduced diving ability. Oiled river otters from Prince William Sound included more slow intertidal fishes and crabs in their diet. These prey types would be easier to catch for otters that suffer from reduced diving ability.

Otters were rescued from Prince William Sound after the oil spill and rehabilitated. At the end of the rehabilitation period (i.e., 100 days) the otters were deemed in good health and ready for release. On February 22-24, 1999, the otters were surgically implanted with radio-transmitters that were fitted with mortality sensors. Animals were kept in the facility for 4 additional weeks until they fully recovered from the surgery. On March 21, 1999, the animals were released at the site of their original

capture in Prince William Sound, and aerial monitoring began 5 days after release and continued on a biweekly bases until June, 2000.

Of the 15 adult male river otters, 2 animals survived, 10 died, and 3 were missing at the end of 442 monitoring days. This translates to a 17% survival rate, which is significantly lower than that of wild river otters that were monitored between 1997 and 1999 (76%). Causes of mortality in the newly released otters were mainly accidents, predation, and starvation, while the wild otters succumbed mainly to starvation. Oiling group, age, location of release, or body condition (i.e., % body fat), did not influence the fate of the otters. Hemoglobin, however, seemed an important factor. Animals with lower hemoglobin levels died sooner after release compared with animals with higher hemoglobin levels, although all animals had what veterinarians established to be normal levels for captive river otters. This result fits well with the conclusion regarding the effects of hemoglobin levels on energetic costs and diving ability. It is possible that animals with lower hemoglobin levels expended more energy, became weak, and thus were more prone to encounter predators and experience accidents. Alternatively, it is possible that the extended period the animals spent in captivity made them less wary of natural hazards.³⁹⁷

According to the EVOS Council: "although some of the differences (e.g., values of blood characteristics) between river otters in oiled and unoiled areas in Prince William Sound persisted through 1996, there were few differences documented in 1997 and 1998. Thus, there are no indications of possible lingering injury from the oil spill, and the Trustee Council's recovery objective has been met. River otters were considered to be recovered in 1999."³⁹⁸

Due to the secretive nature of river otters in the wild much is unknown. The Council's conclusions, however, do not fit with the scientific studies released by the River Otter Alliance in 1999. These conclusions do not account for the 17% survival rate of rehabilitated otters released back into Prince William Sound. The habitat is still impaired. The long-term health of the River Otter is unknown. Numbers are unknown and pre-spill levels are unknown. The River Otter fails to meet recovery criteria.

(xi) Pink Salmon

Pink salmon are declared "recovered." This population, according to the Trustee Council, is recovered "when population indicators, such as juvenile growth and survival, are within normal bounds and when ongoing oil exposure, which may cause injury to pink salmon embryos, is negligible."³⁹⁹ Pink salmon is a good illustration of how a firm standard of recovery to "pre-spill conditions" slips imperceptibly to a standard of a "close approximation to what used to be" to a standard of "no ongoing exposure to toxics" to a standard of no more than "negligible injury to pink salmon embryos."

Trustee Council-sponsored studies documented two primary types of injury due to oil exposure at early life stages: 1) growth rates in both wild and hatchery-reared juvenile pink salmon from oiled parts of the sound were reduced; and 2) there was increased embryo mortality in oiled versus unoiled streams. Reduced juvenile growth rates in Prince William Sound occurred only in the 1989 season. Since then, juvenile

growth rates have been within normal bounds. Higher embryo mortality persisted in oiled compared to unoiled streams through 1993. No statistically significant differences in embryo mortalities in oiled and unoiled streams were detected in 1994 through 1996, but in 1997 there was again a difference. This may be due to lingering oil in intertidal spawning areas.⁴⁰⁰

Habitat: Wild pink salmon spawn in streams on intertidal beaches where the stream meets the sea. As with herring, pink salmon depend on the edge zone of PWS and thus will remain at risk for as long as there is toxicity from oil in that region.⁴⁰¹

Numbers: Since the spill, returns of wild pinks have varied from a high of about 12.7 million fish in 1990 to a low of about 1.9 million in 1992. In 2001 the return of wild stock fish was estimated to be 6.7 million fish. Population levels appear to be within normal bounds.⁴⁰²

Diversity: Laboratory experiments have shown a continuing genetic effect for only one generation of pink salmon (two years). There is also a well-known phenomenon of lethality for most mutations that would lead to elimination of the genetic defects in a generation. That leaves continued exposure to oil as the remaining pathway for any continuing embryo mortality.⁴⁰³ A Genetic Structure study for pink salmon is identified on the EVOS Trustee Council website as on-going.⁴⁰⁴ Ecological function: fishery has recovered since 1993.⁴⁰⁵

Conclusion: Although pink salmon health, numbers and function appear to have recovered, lingering oil in intertidal habitat poses a continuing detriment to pink salmon embryos.

3. These Losses Are “As a Result” of the Oil Spill

All losses depicted above are linked to the oil spill. The Peterson study shows how far the science of oil-spill causation has progressed since 1989. For some species, lingering consequence shows up as health effects. For others, population numbers are down. For the orcas of pod AT1, the “result” of the oil spill is expected to be a crash towards ultimate extinction.

For many species, the habitat that was lost to the oil spill remains lost. The EVOS Trustee Council sponsored a study to evaluate the persistence of oil from the *Exxon Valdez* on beaches originally impacted by the spill. Results were published in 2004 and are referenced above.⁴⁰⁶ The study used a random sampling approach to provide a quantitative, probability-based estimate of the amount of oil remaining. Three categories of beaches were sampled: Category I were beaches that were described as heavily oiled at any time during the period from 1990 to 1993; Category II were beaches that were described as moderately oiled at any time during the period from 1990 to 1993; and Category III were beaches that were described as heavily oiled in 1989 but that had only light to no oil impact during subsequent years. The total length of beach sampled in the study was 116.6 km (approximately 72.5 miles). A grid would be laid out on the beach and each grid would be searched visually for evidence of surface oil; each surface oil patch was classified according to type: asphalt pavement/mousse, surface oil residue, tar balls, coat, or oil film. Oil visually evident within the uppermost 5 cm (2 in.) of a beach

surface was considered surface oil. Test pits were dug to a depth of 0.5 m (1.6 ft.) to evaluate the presence of subsurface oil. Chemical analyses of oil sampled were compared to chemical "fingerprints" of *Exxon Valdez* oil and asphalt originating from known sources of other contamination released during the 1964 earthquake ("Monterey Formation" asphalt).

The results of the study show that the distribution of detected oil among the sampled beaches was highly variable. The most heavily oiled segments are within sheltered embayments that received the brunt of the initial oil landfall. Persistent oil was found on beaches with boulder/cobble surface armoring, nearly level slopes of the middle intertidal, or a thick sediment veneer over a bedrock platform. Some form of oil was found at 86% of the beaches visited and on 93% of the combined beaches of Categories I and II. Surface oil was found in all three beach categories. The estimate of beach area contaminated by subsurface oil was 7.8 ha (19.3 acres). Subsurface oil was most often found in the lower tidal elevations of the sampling grid. The total estimate of area contaminated by either surface or subsurface oil is 11.3 ha (27.9 acres). The estimate of oil mass is 55,600 kg (61.3 tons), although it may be twice this amount if surface oil and subsurface oil in the lower intertidal areas are included.

All of the subsurface oil was consistent with *Exxon Valdez* oil and was usually less weathered than surface oil samples. The Monterey Formation oil was usually found above +3 m (9.8 ft) tide height and typically occurs as flattened tarballs firmly adhered to cobbles and boulders and infrequently as small tar mats. Petroleum derived from the Monterey Formation was estimated to account for less than 10% of the surface oil encountered. The researchers did not encounter evidence that the oil found during the study was from any other anthropogenic sources.

The area of oil-contaminated beach was thought to be underestimated because it excluded (i) tidal elevations lower than +1.8 m (5.9 ft), (ii) beaches described as lightly or moderately oiled in 1989 but not thereafter, (iii) pit depths deeper than 0.5 m (1.6 ft), and (iv) oil not evident visually or by odor. The increasing frequency of oil encountered from the upper (+4.8m, 15.8 ft) to the mid-tidal (+1.8 m, 5.9 ft) elevation grids, suggest that subsurface oil may be encountered within the lower intertidal nearly as often as in the upper intertidal.

Although the volume of oil has declined, the study suggests that the area of oiled beach has probably changed little since 1992. Although the oil remaining is only about 0.14-0.28% of the volume originally beached, the decline was most rapid during the first few years. Losses during the first 3.5 years are estimated to be 58% per year. The annual loss after that is estimated to be 20-26%, "substantially slower than anticipated."

4. Could the Long-Term Adverse Effects Reasonably Be Anticipated by the Trustees?

The state of the knowledge at the time of the settlement in 1991 is best confirmed by the actions of the principals. Beach clean-up officially ceased in 1992. At the time of the settlement in 1991, Judge Holland was assured by Exxon: "I understand that the Sound is well on the way to recovery."⁴⁰⁷ The reopener was only a hedge against the

improbable. This problem was soon going away. Books would yet be written on how nature could quickly repair deeds as dastardly as the spill of the *Exxon Valdez*.⁴⁰⁸

How soon this confidence unraveled. Post-settlement came the cascades of unanticipated consequences. These included the 1992 and 1993 collapse of pink salmon runs, the first collapse of the herring in 1993, the 2001 documentation of the extent of the buried oil, and a number of other developments.

The Trustee Council has admitted that many of the long-term effects of the oil spill were not known (and could not have been known) at the time of the settlement:⁴⁰⁹

Many of the resources affected by the spill had limited or no recent data on their status in 1989. In addition, some of the available pertinent data was the result of limited sampling and had wide ranges in the population estimates. Having such patchy data on resources made it difficult to accurately assess initial injury

Since the *Exxon Valdez* oil spill affected an area rich in wildlife and was so well studied, it would not be surprising that there are findings without precedent in the scientific literature on oil effects. One example of such an unprecedented effect is the sensitivity of Pacific herring and pink salmon to low concentrations of weathered oil.

a. Lingering Unweathered Oil in the Intertidal Zone

The study of the persistence of oil from the *Exxon Valdez* oil spill described above is one of the most dramatic examples of environmental impacts that were unexpected at the time of the settlement. In the words of the authors of that study:⁴¹⁰

The unexpected persistence of subsurface *Exxon Valdez* oil, often only moderately weathered and extending into the more biologically productive middle and lower intertidal confirms the potential for long-term biological effects after 1992 on beaches most heavily impacted by the spill.

Those “biological effects” have been most obvious in pink salmon and Pacific herring.

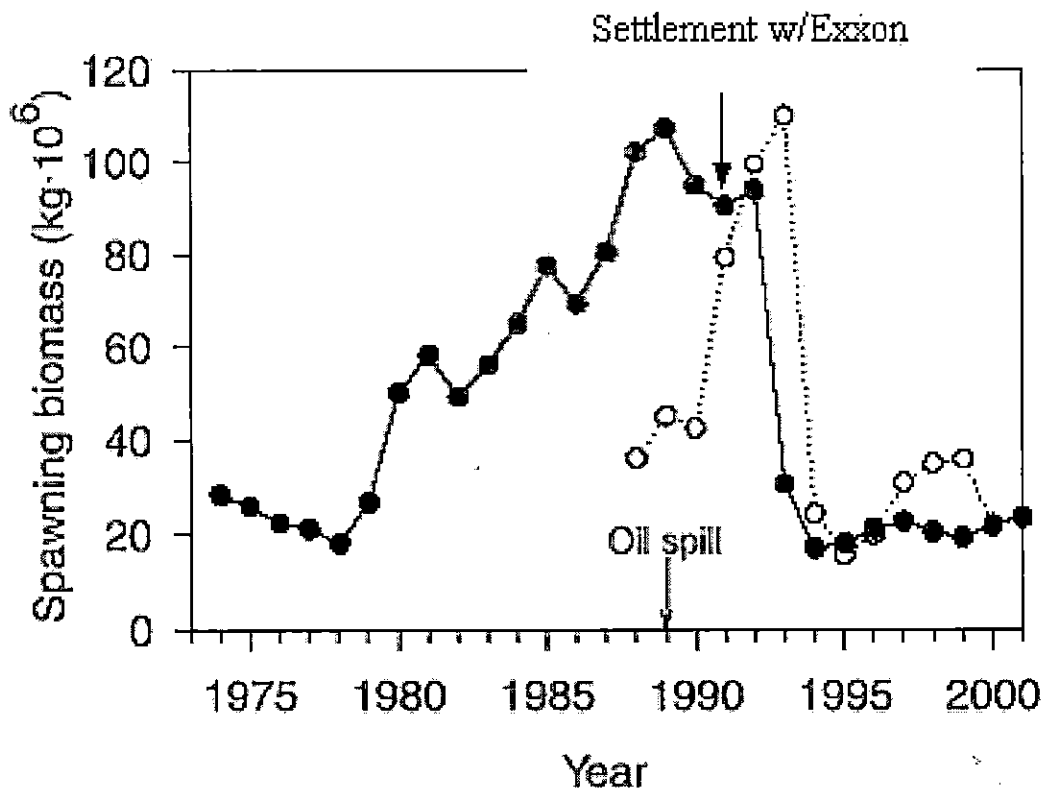
b. 1992-93 Collapse of the Pink Salmon Fishery

Although there had been record harvests of pink salmon in the Sound in 1990, in the summer of 1991 an unprecedented thing happened. The adult salmon returned to PWS, but instead of returning to their birth streams or hatcheries over a two-month period, the fish milled and ripened in deep water. Then, in a two-week period in August, millions of pink salmon bolted for the streams and hatcheries. This completely unexpected behavior overwhelmed the capacity of the fishing industry to catch, transport, and process the fish. Many of these fish likely had been exposed to oil either in the streams in 1989 or in the nearshore environments in 1990.⁴¹¹ In 1992 and 1993 the pink

salmon runs were the lowest in history. The settlement between the Governments and Exxon, which was finalized in September 1991, did not take into account the possibility of this type of impact to the pink salmon fishery.

c. 1993 First Collapse of the Pacific Herring Fishery

Within a week of the *Exxon Valdez* oil spill in March 1989, Pacific herring and eggs deposited on beaches were exposed to the spreading oil slick in open water and along the shoreline of Prince William Sound (PWS). Although egg mortality and larval deformities were documented, the population level effects of these injuries were not clearly established. Suddenly, in 1993, the Pacific herring population in Prince William Sound declined dramatically. In that year Pacific herring suffered an outbreak of viral hemorrhagic septicemia disease and fungus, which is thought to have resulted from depressed immune response. The fish looked horrible, swam around in circles, were covered with lesions, and the females were reabsorbing their eggs. The herring population went from a 20-year high to a 20-year low (see figure below). The fact that in 1992 all funding was cut for herring research is evidence that this population crash was completely unexpected and therefore was an unanticipated effect at the time of the EVOS settlement. Although there were small harvests in 1997 and 1998, the herring fisheries have been closed since 1999 to allow the stocks to recover. As a keystone species, this has had an impact on the entire Prince William Sound ecosystem, as well as on the economic health of the human community.⁴¹²



Biomass Estimates of mature Pacific herring (*Clupea pallasii*) in Prince William Sound, Alaska. Unexploited spawning biomass projected in the year before spawning (○; source, Alaska Department of Fish and Game, Cordova, Alaska) and calculated after spawning (best estimate, ●) using an age-structured assessment model modified by a disease index after 1993. The *Exxon Valdez* oil spill occurred in Prince William Sound in 1989.⁴¹³

Insert 12 – Biomass estimates of Pacific herring in Prince William Sound.

d. Other Unanticipated Consequences

Since the oil spill, numerous unforeseen consequences related to the effect of oil on the marine environment have emerged. These consequences have led to recognition of new paradigms and a call for new practices to assess ecological risks from oil in the oceans.⁴¹⁴ Most importantly, prior to the spill risks from oil were believed to be primarily short-term and direct.⁴¹⁵ Following the spill, however, the long-term impacts became apparent as oil persisted in unexpected amounts, and as indirect effects caused significant damage.⁴¹⁶ In addition, the oil was sufficiently bioavailable to induce long-term impacts to marine species at the population level.⁴¹⁷

One of the most important paradigm shifts implicated the toxicity of oil and the persistence of its harmful effects. In 1999, twenty-two polycyclic aromatic hydrocarbons (PAHs) were identified as persistent, bioaccumulative, and toxic pollutants – along with such substances as mercury and PCBs.⁴¹⁸ PAHs are described by the EPA as “highly toxic,” and researchers have discovered that oil had previously unknown, persistent, harmful effects to both humans and wildlife.⁴¹⁹

Oil affects the environment on many levels: it can kill marine organisms, reduce their fitness through sublethal impacts, and disrupt the functioning of marine ecosystems.⁴²⁰ Originally, impacts from oil on the marine habitat and species were believed to be primarily short-term and caused by acute exposure. A 1985 study prepared by the National Research Council, *Oil in the Sea*, summarized the current known impacts of oil on development and reproduction of marine species as follows:⁴²¹

It is important to reemphasize that significant reproductive impairment in oiled field conditions has seldom been observed, although few field studies have been performed. Based on available studies at the population level, annelids, gastropods, and copepods seem to suffer no long lasting damage. Macrophytes, barnacles, and birds may sometimes be affected. However, corals, bivalves, and decapod crustacean can suffer marked and sometimes long term (years) reproductive damage at oiled sites.

In contrast, recent research recognizes both acute and chronic effects at low concentrations of oil, as well as impacts at the population level. A 2003 National Research Council study, *Oil in the Sea III*, states the following about the toxic effects of

petroleum hydrocarbons: "Impairment of behavioral, developmental, and physiological processes may occur at concentrations significantly lower than acutely toxic levels; such responses may alter the long-term survival of affected populations."⁴²² Oil is harmful to fish and wildlife at 1,000 times lower levels than the toxic thresholds thought to be accurate in the 1970s.⁴²³

This recognition of indirect effects and impairment at lower levels of contamination has led to paradigm shifts related to shoreline habitat, oil toxicity to fish, marine mammals and seabirds, and the impact of oil on coastal communities.⁴²⁴ Regarding physical shoreline habitat, the old paradigm held that oil on shorelines other than marshes dominated by fine sediment would be rapidly dispersed, and degraded microbially and by weathering of oil by ultraviolet light (photolysis). The emerging paradigm is that oil degrades at different rates depending on the environment, and that subsurface sediments physically protected from disturbance, oxygenation, and photolysis retain contamination by only partially weathered oil for years.⁴²⁵ The old paradigm related to fish toxicity was that oil effects occurred only through short term (~4 day) exposure at parts per million. The emerging paradigm is that fish embryos exposed to parts per billion of weathered oil will show population impacts through indirect effects on growth, deformities, and behavior with long-term impacts on mortality and reproduction.⁴²⁶

The old paradigm regarding marine mammals and seabirds was that oil impacts occurred solely through short-term acute exposure resulting in death from hypothermia, drowning, or ingestion of oil during preening.⁴²⁷ The emerging paradigm is that substantial effects occur over the long term due to chronic toxic exposure from ingesting contaminated prey, through interactions between environmental stressors and the compromised health of exposed animals, and through disruption of vital reproductive behavior in socially organized species. Regarding coastal communities, the old paradigm held that the only significant losses of shoreline plants and invertebrates occurred through short-term toxic exposure to oil deposited on the shoreline and shallow seafloor or via smothering.⁴²⁸ The new paradigm reflects an understanding that clean-up efforts can be more damaging than the oil itself, with impacts continuing for the duration of the clean-up, and with indirect impacts that may expand the injury well beyond the initial direct losses.⁴²⁹

5. Restoration Projects Are Identifiable and Can Be Set Forth in a Restoration Plan

a. National Research Council Study and Other Projects

demonstrating "achievable goals for restoration and management of coastal ecosystems that could not even be contemplated based on the limited perspective of recent observations alone"

Jeremy B.C. Jackson et al., 2001⁴³⁰

We believe the first thing the EVOS Trustee Council should do is to hire the National Research Council to do a study entitled "Long-Term Oil Spill Restoration Plan for Prince William Sound." The NRC can bring to bear top scientific expertise that can spell out the whethers, wheres, and oughts growing out of the reopener restoration "plan."

There is no shortage of ideas that the NRC could be asked to review. EVOS Trustee Council has now completed hundreds of studies assessing and monitoring the impact and recovery of species and ecosystems of Prince William Sound. The Council should hire the NRC to evaluate the Sound's situation, review all of the studies to date and help formulate a restoration plan. NRC will have an informed opinion about the effectiveness of projects undertaken and what actions should be continued, in addition to contributing new ideas.

The NRC should also be asked to comment on the vast number of species that have not been priorities to the EVOS Council. In Council's Summary of Restoration Strategies and Projects, they list only 22 species. Due to the interconnectedness of marine habitats and species, a broader look at the entire ecosystem by the NRC would be appropriate.

The NRC is often called the "Supreme Court of Science" and it has completed studies on thousands of complex scientific topics since it was established by Executive Order in the administration of Abraham Lincoln. It borders on the bizarre for the EVOS Trustee Council to choose the Integral Corporation⁴³¹ over the NRC for its swan-song studies. No better confirmation exists for the Council's opinion that the work remaining to be done is not grand and challenging but small and technical.

In his January 2002 letter to Governor Tony Knowles, the Exxon CEO said he was "troubled" by the suggestion that there were grounds for invoking the reopener because he didn't see any restoration projects that had not been implemented for lack of funding; in fact, there was (and still is) a cash reserve.⁴³² In the letter, Exxon was advancing two ideas: (1) the EVOS Council is an efficient and effective means of fulfilling the NRD mandate of the CWA (to restore, rehabilitate, or acquire the equivalent) and (2) all the environment needs is a few good projects of limited scope, duration, and cost. Taking the company at its word, there are a number of possible roads to be pursued.

Citizens have their own ideas, and some of them are plausible. Rick Steiner of the Coastal Coalition has urged a herring buy-back program. Buying all the commercial herring fishing permits would give an immediate boost to the herring population. Even at pre-spill prices, the Coastal Coalition estimates the permits could be had at a total cost of only 30 million dollars. Given that the price of a permit has dropped from around \$300,000 to \$28,000 since the spill,⁴³³ fishermen could reasonably be expected to accept the offer. Rick Steiner also has advocated a K-12 educational program on the environment, but the suggestion has been summarily rejected by the Department of Justice as outside the scope of NRDs for the spill.

Another viable project would be to identify marine protected areas and establish a system to monitor them; all that needs to be acquired is an administrative infrastructure – boats, and the people to run them. Marine protected areas (MPAs) or marine reserves ("no-take" areas) are increasingly recognized as effective management tools to preserve

and restore marine resources. Potential benefits of marine reserves include enhancing reproductive potential of marine species, maintaining species diversity, preserving habitat, preserving ecosystem function, and supporting fisheries.⁴³⁴ Marine reserves benefit not only the ecosystem within the reserve, but also generate a “spillover” effect into adjacent areas. Studies demonstrate that the size and abundance of exploited species increases in areas adjacent to marine reserves, and other evidence demonstrates that reserves replenish larger regional populations as well.⁴³⁵

MPAs and marine reserves could be used as restoration projects to assess the recovery from the Exxon oil spill, as well as to limit ongoing damage from human impacts. Two possibilities include designating no-take marine reserves, permitting only scientific research, and designating MPAs that permit only subsistence use. MPAs could be designated in state waters (within three miles of the coastline) and managed by the State and Alaska Native organizations. An ecosystem management approach could also be implemented, via designation of MPAs or marine reserves in conjunction with terrestrial protected areas.

b. A Perpetual “Stewardship” for Alaska Natives

The EVOS Trustee Council is going out of business and it should be replaced by a Perpetual “Stewardship” Council in which Alaska Natives have a strong voice. The Natives were hardest hit and least represented in the frantic response to the spill.⁴³⁶ They will live with the consequences into the foreseeable future. “They promised us that when they left they would leave it as clean as before the oil hit,” says Gail Evanoff, now the village president of Chenega Bay. “I’m sorry, but those are extremely dirty beaches out there, and life continues to die because of that oil on the beaches.”⁴³⁷

The reopener funds make it possible for the Natives to do for themselves what no promises could do for them. An ongoing administrative structure is necessary to carry restoration into the future. Some entity will have to oversee continuation of the EVOS studies, establishment of marine preserves, distribution of buy-back monies if that is undertaken, and new duties of monitoring, oversight, and restoration.

We are not sure how a Native restoration plan for future stewardship would be put together or what its details might be. We suspect there would be participation by Chugachmiut (the tribal consortium of seven Native communities in the Chugach Region), Cook Inlet Tribal Council, Kodiak Area Native Association, and the Alaska Native Science Commission.⁴³⁸ The Eyak Preservation Council (EPC) has a record worthy of attention. EPC was created in 1989 following the oil spill and is working to preserve ecosystems and cultures found in the entire Copper River watershed, the Chugach National Forest and in Prince William Sound. EPC is a grassroots consortium of dedicated activists comprised of Natives, fishers, and citizens. EPC understands fully that successful long-term ecological protection must incorporate protection of cultural preservation and traditional ways of life for the Natives living along the Gulf of Alaska.⁴³⁹ EPC is working hard to have the “reopener clause” initiated so that the species that are not recovering, such as herring, will come back.

This recommendation for a perpetual stewardship council for Alaska Natives is not some impossible dream. The entire field of natural resource damage trustees is a work in progress. The EVOS Trustee Council was not prescribed by hard law in the halls of Congress. It was – figuratively at least – made up on the “back of an envelope” and made real by incorporation into the 1991 settlement. This same kind of creative reality must be pursued into the future of Prince William Sound.

6. Project Costs Are Not “Greatly Disproportionate” to the “Magnitude of the Benefits”

The validity of this qualifier is questionable. The Clean Water Act speaks of “restore, replace, or acquire the equivalent” of lost natural resources. The theory driving this law is obviously that of corrective justice: that which is damaged is to be repaired because the deed that caused the damage is reprehensible and the public should be made whole for the loss.

Moreover, in *Ohio v. DOI*, the U.S. Court of Appeals for the District of Columbia held that the language in CERCLA rules limiting damages recoverable by government trustees for harmed natural resources to the *lesser of* restoration/replacement costs or the diminution in value was clearly contrary to the intent of Congress.⁴⁴⁰ The court held that Congress was free to delegate considerable discretion in formulating a standard to measure damages but that the “lesser of” language was contrary to the underlying purpose of the Act, which is to restore completely natural resources.⁴⁴¹ The holding in *Ohio v. DOI* sheds light on the validity of the qualifier. Whereas the intent of the CWA is to make the public whole for the loss, allowing the defendant to avoid “restoring, replacing, or acquiring the equivalent” is tantamount to upholding the “lesser of” clause. Both opt for something less than full recovery. The statute invites no cost-benefit relaxation for benefit of the offender. No one asks the thief to return the wallet but only if the trip isn’t too far and the expense too demoralizing.

We are interested in the price of the Arctic loon, the Canary Rockfish, the Common merganser, the Dall’s Porpoise, the Gray Whale, the Hermit Crab, the Rhinoceros Auklet and scores of other species that were killed in this travesty⁴⁴², to be soon forgotten in the calculations, trends, and population estimates of the “bigger picture.” We are confident that if these trustees (or any successor Native Trustees) have courage enough to hire the National Research Council (NRC) for guidance on the scope of restoration “plan,” the NRC will have sense enough to withhold recommending costly projects that will not help the resources.

IV. Conclusion

We believe the case for the “reopener” is made. We hope the responsible governments for the State of Alaska and the United States ask the court to order Exxon to pay \$100 million. Failing that, we urge Native entities to intervene in the case and seek enforcement of the reopener. Whether it arrives by court order or future settlement, we

foresee a future for Prince William Sound made better by the resources that were legally committed to that purpose.

Respectfully submitted,

Natural Resources Damages Seminar, Law B585, Winter 2005 (Professor

William H. Rodgers, Jr.)

University of Washington School of Law, Seattle

– endnotes follow –

* W.H. Rodgers, Jr., and the Seminar Group (J.B. Crosetto III, C. A. Holley, T.C. Kade, J.H. Kaufman, C. M. Kostelec, K.A. Michael, R.J. Sandberg & J. L. Schorr), May 2005, Draft Four.

** *The Effects of the Exxon Valdez Oil Spill on the Alaskan Coastal Environment*, in PROCEEDINGS OF THE EXXON VALDEZ OIL SPILL SYMPOSIUM (1996, American Fisheries Society, Bethesda, Md.) (American Fisheries Society, Bethesda, Md.) (American Fisheries Society Symposium 18) [hereinafter 1996 OIL SPILL SYMPOSIUM].

¹ REPORT OF THE ALASKA OIL SPILL COMMISSION, *Spill: The Wreck of the Exxon Valdez – Implications*, Intro. at 1 (Feb. 1990) (1,244 miles of Alaska coastline); *id.* at 5 (“the human and natural losses were immense – to fisheries, subsistence livelihoods, tourism, wildlife”) [hereinafter 1990 OIL SPILL COMM’N FINAL REPORT]; Steve Keeva, *After the Spill*, 77-Feb. A.B.A. J. 66 (1991) (181 separate suits in state and federal courts; over 75 law firms); Miles Tolbert, *The Public as Plaintiff: Public Nuisance and Federal Citizen Suits in the Exxon Valdez Litigation*, 14 HARV. ENV’T L. REV. 511 n. 1 (1990) (within a month the oil had covered 1000 square miles of state land and waters and 1300 claims filed). Numbers of lawsuits quickly rose to 330. Robert E. Jenkins & Jill Watry Kastner, *Running Aground in a Sea of Complex Litigation: A Case Comment on the Exxon Valdez Litigation*, 18 U.C.L.A. J. ENV’T L.L. & POL’Y 151, 161 (1999/2000) [hereinafter 1999/2000 Jenkins & Kastner].

² Deborah S. Bardwick, *The American Tort System’s Response to Environmental Disaster*, 19 STAN. ENV’T L.L. J. 259 (2000) [hereinafter 2000 Bardwick].

³ Compare 1990 Oil Spill Report at 86 (top 65 spills) with Riki Ott, SOUND TRUTH AND CORPORATE MYTHS: THE LEGACY OF THE EXXON VALDEZ OIL SPILL 4-5 (Dragonfly Sisters Press 2005) [hereinafter 2005 Ott].

⁴ *Id.* at 62 (graphic entitled “Oil Spill Progression March 24 – May 18, 1989”).

⁵ Alaska Fish & Game, Vol. 21, No.4.

⁶ Memorandum of Agreement and Consent Decree, *U.S. v. Alaska*, Civ. Action No. A91-081 CV, Sept. 25, 1991, ¶ 17 (approved Oct. 8, filed Oct. 9) [hereinafter Oct. 1991 Consent Decree].

⁷ Oct. 1991 Consent Decree, ¶ 19.

⁸ Governments’ Memorandum in Support of Agreement and Consent Decree, Civ. Action No. A91-081 CV, Oct. 8, 1991, p. 12 (applauding the “novel” reopener provision; distinguishing CERCLA reopeners: “Under the Instant Decree, Exxon commits to pay up to \$100 million for restoration of unanticipated environmental harm, without any need for the Governments to establish Exxon’s liability”) [hereinafter 1991 Governments’ Memo in Support of Consent Decree].

⁹ Keith Schneider, *In Exxon Deal, Transportation Chief Wins Another One for the President*, N.Y. TIMES, Mar. 21, 1991, at A18.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ Many critics suspect that the G.W. Bush and Murkowski administrations are worried that any more negative attention brought by the *Exxon Valdez* spill will complicate their efforts to approve Arctic drilling plans. Rick Steiner, *Exxon Lessons: Use Less, Spill Less*, ANCHORAGE DAILY NEWS, Mar. 24, 2004, at B6.

¹⁵ For deep background, see W.H. Rodgers, Jr., ENVIRONMENTAL LAW: AIR & WATER § 2.20 (1986, with semi-annual updates) (collecting many NRD cases brought by public and private authorities; the lead plaintiff in the famous *Mono Lake* case was the National Audubon Society).

¹⁶ *Compare Illinois Central R.R. v. Illinois*, 146 U.S. 387 (1892).

¹⁷ Alaska Const., art. 8, § 3 (“Wherever occurring in their natural state, fish, wildlife and waters are reserved for the people for common use”), discussed in Gregory F. Cook, *The Public Trust Doctrine in Alaska*, 8 J. ENT’L L. & LIT. 1 (1993).

¹⁸ *National Audubon Soc’y v. Superior Court of Alpine Cnty.*, 33 Cal.3d 419, 189 Cal. Rptr. 346, 658 P.2d 709 (1983), cert. denied 464 U.S. (1983).

¹⁹ 658 P.2d at 728.

²⁰ Note, *State Protection of its Economy and Environment: Parens Patriae Suits for Damages*, 6 COL. J. LAW & SOC. PROB. 411 (1970).

²¹ *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 27 S. Ct. 618 (1907).

²² *Tennessee Copper* at 619.

²³ Rebecca Tsosie, *Tribal Environmental Policy in an Era of Self-Determination: The Role of Ethics, Economics, and Traditional Ecological Knowledge*, 21 VERMONT L. REV. 227 (1996). See also Click Relander (Now Tow Look), DRUMMERS AND DREAMERS (1956, Caxton Printers, Ltd., Caldwell, Idaho) (the story of Smowhala and the Washani faith).

²⁴ W.C. Vanderwerth, INDIAN ORATORY: FAMOUS SPEECHES BY NOTED INDIAN CHIEFTANS 119-20 (1989, Un. Of Oklahoma Press, Norman and London). See David Suzuki & Peter Knudtson, WISDOM OF THE ELDERS: SACRED NATIVE STORIES OF NATURE (1992, Bantam Books, N.Y., N.Y.) (on the authenticity of Chief Seattle’s remarks and much more; contains excerpts from the 1991 United Nations Draft “Universal Declaration on the Rights of Indigenous Peoples”). Compare Vine Deloria, GOD IS RED 95 (1973, Delta, N.Y., N.Y.) (pointing out that Young Chief, a Cayuse, refused to sign the Treaty of Walla Walla because the “rest of creation” was not represented in the transaction: “I wonder if the ground has anything to say? I wonder if the ground is listening to what is said.”).

²⁵ 42 U.S.C.A. § 9607(a)(4)(C); see *id.* § 9607(f).

²⁶ *Id.* § 9601(16).

²⁷ *Id.* § 9607(f)(1).

²⁸ 33 U.S.C.A § 2701(20).

²⁹ *Id.* § 2702(b)(2).

³⁰ *Id.* § 2706.

³¹ *Id.* §§ 2706(c)(1)(C), (2)(B), (3)(B).

³² Subsection 311(f)(4) of the CWA, 33 U.S.C.A. § 1321(f)(4).

³³ Subsection (f)(5), *id.* § 1321(f)(5). For a review of some of the case law, see Gordon J. Johnson, *Natural Resource Damages Under CERCLA, OPA and CWA*, SD28 ALI-ABA 333, 338 (1998); Peter M. Manus, *Natural Resource Damages from Rachel Carson’s Perspective: A Rite of Spring in American Environmentalism*, 37 WM. & MARY L. REV. 381 (1996).

³⁴ The spill, remember, was in 1989. In the 1987 CWA amendments, tribes won the right to be treated as “states” for various water pollution programs. See Subsection 518(e), 33 U.S.C.A. § 1377(e) (but apparently not “for purposes” of § 1321, the NRD provisions); see Subsection 518(g), *id.* § 1377(g)

("Alaska Native Organizations"). See also Jaqueline P. Hand, *Protecting the Seventh Generation: Saginaw Chippewa Tribe Serves as Natural Resources Trustee*, 83 JUL MICH. B.J. 28 (2004); William H. Rodgers, Jr., *Treatment as Tribe, Treatment as State: The Penobscot Indians and the Clean Water Act*, 55 U. ALA. L. REV. 815 (2004). Federal recognition of 225 (later 227) Alaskan tribes comes on Oct. 21, 1993. 58 Fed. Reg. 54364. Ironically, in the very reopener clause approved by the court post-OPA in 1991, it is obvious that the disadvantages pertaining to development of a "plan" were borrowed from the OPA. It is another matter, of course, to apply the advantages of that law to enhance the recovery of natural resource damages at the behest of Natives.

³⁵ There is a constituency in Alaska for believing that there is no Indian country, no tribe, and no trust duty owed by the U.S. to the tribes. There is not much Indian country, see *Alaska v. Native Village of Venetai*, 118 S. Ct. 948 (1998), but there are Tribes and there is a trust duty. Compare Felix S. Cohen's HANDBOOK OF FEDERAL INDIAN LAW 404 (1942, Un. New Mexico Press) with 1982 Edition at 79 and David S. Case & David A. Voluck, ALASKA NATIVES & AMERICAN LAWS, ch. 1 at 95-98 (2002 Un. Alaska Press, Fairbanks) [hereinafter 2002 Case & Voluck] and 1984 Edition at 111-13 (four-part analysis of trust responsibility discussing Native lands, human services, subsistence, and self-government) and G. Kevin Jones, *Black Gold and the Tlingit Indian Village of Yakutat, Alaska: A Case Study of Alaska's Outer Continental Shelf Oil and Gas Resources and the Federal Trust Responsibility to Native Alaskans*, 24 WILLAMETTE L. REV. 565 (1988).

³⁶ *Coeur d'Alene Tribe v. ASARCO, Inc.*, 280 F. Supp. 2d 1094, 57 ERC 1610 (D. Idaho 2003) (NO. CV 91-0342-N-EJL) (Judge Edward Lodge) (Order of Aug. 3, 2003), with later rulings.

³⁷ 1990 Oil Spill Comm'n Final Report, Forward at iv.

³⁸ *Id.* at 74-75.

³⁹ Patrick Daley with Dan O'Neill, "Sad is Too Mild a Word": Press Coverage of the *Exxon Valdez* Oil Spill, in *International Politics and the Press: Covering of the Exxon Valdez Oil Spill*, JOURNAL OF COMMUNICATION, Autumn, 1991, pp. 42, 50 [hereinafter 1991 Daley & O'Neill].

⁴⁰ Presentation of Dr. Usha Varanasi, Science and Research Director, Northwest Fisheries Science Center, NOAA, to Natural Resources Damages Seminar, University of Washington, School of Law, Feb. 2005.

⁴¹ 1991 Daley & O'Neill (using Anchorage Daily News and the Boston Globe as mainstream barometers).

⁴² *Id.* at 50, 51.

⁴³ *Id.* at 51.

⁴⁴ See 1991 Governments' Memo in Support of Consent Decree, p. 24 (listing seven categories of objections to the consent decree).

⁴⁵ A91-454 CIV ("*Chenega Bay*").

⁴⁶ 1991 Governments' Memo in Support of Consent Decree at 9.

⁴⁷ On the conflicts over the "confidential" treatment of early research data, see 2005 R. Ott at 206-07.

⁴⁸ Coastal Coalition's Motion to Intervene (3/29/95).

⁴⁹ U.S. Opposition to Motion to Intervene (4/18/95) [hereinafter Opposition Motion].

⁵⁰ Opposition Motion at 11, citing *Hook v. Arizona*, 972 F.2d 1012, 1014 (9th Cir. 1992); see also *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723 (1975).

⁵¹ Opposition Motion at 12, citing *Hook*, 972 F.2d at 1015, and *Dahl, Inc. v. Roy Cooper Co.*, 448 F. 2d 17, 20 (9th Cir. 1971).

⁵² District Court Order (May 17, 1995).

⁵³ Oct. 1991 Consent Decree, p. 29, para. 38.

⁵⁴ District Court Order at 8.

⁵⁵ E.g., Lila Gutterman, *15 years after the Exxon Valdez oil spill, researchers debate its lingering effects with \$100-million on the line*, CHRONICLE OF HIGHER EDUCATION, Sept. 24, 2004 [hereinafter 2004 Gutterman]; Jim Carlton, *Groups Seek to Increase Bill for Exxon Spill*, WALL ST. J., Aug. 30, 2001, at B4.

⁵⁶ *Sagebrush Rebellion, Inc. v. Watt*, 713 F.2d 525, 528 (9th Cir. 1983).

⁵⁷ Dune Lankard, Founder and Director of the Eyak Preservation Council, says of the billion-dollar settlement and the EVOS Trustee Council offers to ANCSA corporations: "What I believe is that the government said if you want a restoration program, or if you would like us to preserve or protect your Native land, you have to sell it to us." Dune Lankard, *Sacred Places: Indian Rights After the Exxon Valdez Oil Spill*, 10 FORDHAM ENVTL. L.J. 371, 375 (1999) [hereinafter 1999 D. Lankard].

⁵⁸ *NAACP v. New York*, 413 U.S. 345, 366 (1973).

⁵⁹ See *United States v. Alisal Water Corp.*, 370 F.3d 915, 921 (9th Cir. 2004).

⁶⁰ *U.S. v. Alaska*, Memorandum of Agreement and Consent Decree, Civ. Action No. A91-081 CV, Aug. 28, 1991, IV(C)(1).

⁶¹ *Martin v. Wilks*, 490 U.S. 755, 767-68 (1989), overruled by the Civil Rights Act.

⁶² See *United States v. City of Detroit*, 329 F.3d 515 (6th Cir. 2003); *United States v. City of Detroit*, 288 F. Supp. 2d 836 (E.D. Mich. 2003); *United States v. City of Detroit*, 25 Fed. Appx. 384 (6th Cir. 2002).

⁶³ Note 35, *supra*.

⁶⁴ Department of Interior, Office of American Indian Trust, American Indians and Alaska Natives at <https://www.denix.osd.mil/denix/Public/Native/Outreach/American/indian.html> (last visited April 3, 2005). Others have defined it similarly as "federal responsibility to protect or enhance tribal assets (including fiscal, natural, human, and cultural resources) through policy decisions and management actions." David E. Wilkins & K. Tsianina Lomawaima, *UNEVEN GROUND: AMERICAN INDIAN SOVEREIGNTY AND FEDERAL LAW* 65 (2001). Compare Mary C. Wood, *Origins and Development of the Trust Responsibility: Paternalism or Protection?* Address before the Federal Bar Association, 28th Annual Indian Law Conference (April 10, 2003) at http://www.law.uoregon.edu/org/enr/faculty/pdf/albuquerque_trust.pdf (last visited April 3, 2005).

⁶⁵ E.g., *United States v. Fort James Operating Co.*, 313 F. Supp. 2d 902 (E.D. Wis. 2004).

⁶⁶ 1990 Alaska Oil Spill Comm'n Report at 17-18 (40 minutes after Captain Hazelwood's report to the Coast Guard came the first request to use dispersants; "The episode is instructive: the industry pressed immediately and urgently for approval of dispersants even without sufficient equipment and supplies on hand to deliver them, and government resisted, imposing formal application requirements and asking for demonstrations of their effectiveness").

⁶⁷ See 2005 R. Ott at 251-53.

⁶⁸ Compare Carrie Gartner, *The Exxon Valdez Oil Spill: A Case Study in Institutional Apologia* 71-72 (1990, Ph.d Thesis in Master of Arts in Speech Communication, Cal. State Un., Fullerton) (interference with collection of dead birds) with 2004 Gutterman, *passim* (the latest allegations of scientific fraud).

See also Charles H. Peterson, et al., *Sampling design begets conclusions: the statistical basis for detection of injury to and recovery of shoreline communities after the Exxon Valdez oil spill*, 210 MARINE ECOLOGY PROGRESS SERIES 253 (2001); for response, see Edward S. Gilfillan, et al., *Comment on Peterson et al (2001) Sampling design begets conclusions*, 231 MARINE ECOLOGY PROGRESS SERIES 303 (2002); for

reply, see Charles H. Peterson, et al., *The join consequences of multiple components of statistical sampling designs*, 231 MARINE ECOLOGY PROGRESS SERIES 309 (2002).

⁶⁹ E.g., James S. Seevers, Jr., *NOAA's New Natural Resource Damage Assessment Scheme: It's Not About Collecting Money*, 53 WASH & LEE L. REV. 1513 (1996); James L. Nicoll, Jr., *Marine Pollution and Natural Resource Damages: The Multi-Million Dollar Damage Award and Beyond*, 5 U. SAN. FRAN. 323 (1993); Frederick R. Anderson, *Natural Resource Damages, Superfund, and the Courts*, 16 BOST. COLL. ENT'L AFF. L. REV. 405 (1989).

⁷⁰ NRD Seminar Group Meeting with Gardner Brown, Feb. 2005; see *Secret Studies Put Spill Damage at \$15 Billion*, LOS ANGELES TIMES, Oct. 8, 1991, pg. A1.

⁷¹ *Exxon Pleads Guilty and Agrees to Record \$1.125 Billion to Resolve Federal and State Claims From Exxon Valdez Oil Spill*, Sept. 30, 1991.

⁷² Ronald J. Ostrow, *Exxon Agrees to Pay \$1 Billion for Alaska Spill*, LOS ANGELES TIMES, Mar. 14, 1991, at A1.

⁷³ Stephen Raucher, *Raising the Stakes for Environmental Polluters: the Exxon Valdez Criminal Prosecution*, 19 Ecology L.Q. 147, 148 (1992).

⁷⁴ Ronald J. Ostrow, *Exxon Agrees to Pay \$1 Billion for Alaska Spill*, LOS ANGELES TIMES, Mar. 14, 1991, at A1.

⁷⁵ Patrick Lee, *Exxon-Alaska Civil Oil Spill Pact Collapses*, LOS ANGELES TIMES, May 4, 1991, at A1; *Judge Rejects Exxon Alaska-Spill Pact; Net Income Rose 75% in First Quarter*, WALL STREET JOURNAL (Eastern Edition), Apr. 25, 1991, pg. A3.

⁷⁶ Keith Schneider, *Judge Rejects \$100 Million Fine for Exxon in Oil Spill as Too Low*, N.Y. TIMES, Apr. 25, 1991, at A1.

⁷⁷ *Id.*

⁷⁸ 1999/2000 Jenkins & Kastner at 183.

⁷⁹ *Id.* at 183-84.

⁸⁰ § II (A)(5) above.

⁸¹ 1999/2000 Jenkins & Kastner at 184.

⁸² *Id.* at 184.

⁸³ Michael Parrish, *Exxon Reaches \$1.1 Billion Spill Settlement Deal*, LOS ANGELES TIMES, Oct. 1, 1991, at A1.

⁸⁴ Stephen Raucher, *Raising the Stakes for Environmental Polluters: the Exxon Valdez Criminal Prosecution*, 19 ECOLOGY L.Q. 147, 149 (1992).

⁸⁵ General Accounting Office Report No. B-254199, *Natural Resources Restoration: Use of Exxon Valdez Oil Spill Settlement Funds*, Aug. 1993, at 4.

⁸⁶ Michael Parrish, *Judge Approves \$1.125 Billion Oil Spill Settlement*, LOS ANGELES TIMES, Oct. 9, 1991, at A1.

⁸⁷ *Id.*

⁸⁸ Patrick Lee, *Exxon-Alaska Civil Oil Spill Pact Collapses*, LOS ANGELES TIMES, May 4, 1991, at A1.

⁸⁹ *Id.* *Alaska House Rejects Exxon Deal*, CHICAGO TRIBUNE (C Edition), May 3, 1991, pg. 3.

⁹⁰ 1999/2000 Jenkins & Kastner at 183-84.

⁹¹ Michael Parrish, *Exxon Reaches \$1.1 Billion Spill Settlement Deal*, LOS ANGELES TIMES, Oct. 1, 1991, at A1. Compare *U.S. v. Exxon Corp.*, No. A90-015 CR. (D. Alaska filed Oct. 9, 1991)

⁹² *U.S. v. Exxon Corp.*, No. A90-015 CR. (D. Alaska filed Oct. 9, 1991)

⁹³ William A. Lovett, *Exxon Valdez, Punitive Damages, and Tort Reform*, 38 TORT TRIAL & INS. PRAC. L. J. 1071, 1085 (2003).

⁹⁴ CBS News, *Exxon Valdez Restitution Paid*, at <http://www.cbsnews.com/stories/2002/05/16/national/main509364.shtml> (posted May 16, 2002) (last visited April 3, 2005).

⁹⁵ *Exxon Valdez Oil Spill Trustee Council, Oil Spill Facts*, at <http://www.evostc.state.ak.us/facts/qanda.html> (last visited April 3, 2005).

⁹⁶ *Id.*

⁹⁷ *Exxon Valdez Captain Is Serving His Sentence in a Soup Kitchen*, Dodge Globe, June 23, 1999, available at http://www.dodgeglobe.com/stories/062399/new_exxon.shtml (last visited April 3, 2005).

⁹⁸ See CBS News, *Exxon Valdez Restitution Paid*, at <http://www.cbsnews.com/stories/2002/05/16/national/main509364.shtml> (posted May 16, 2002) (last visited April 3, 2005).

⁹⁹ *Id.*

¹⁰⁰ See, *Exxon Valdez, Punitive Damages, and Tort Reform* at 1086.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ On Exxon's apologies, see Carrie Gartner, *The Exxon Valdez Oil Spill: A Case Study in Institutional Apologia* (1990, Ph.d Thesis, Master of Arts in Speech Communication, Cal State Un., Fullerton).

¹⁰⁴ Thomas A. Campbell, *Summary of Injuries to Natural Resources as a result of the Exxon Valdez Oil Spill*, National Oceanic and Atmospheric Administration, 56 Fed. Reg. 14687 (April 1991).

¹⁰⁵ *Id.* at 14691.

¹⁰⁶ *Id.* at 14694.

¹⁰⁷ *The Oil Spill Recovery Institute: Past, Present, and Future Directions*, ch. 5 at 51 (2003, National Academies Press, Washington, D.C.).

¹⁰⁸ 1991 Governments' Memo in Support of Consent Decree at 28.

¹⁰⁹ *Puerto Rico v. SS Zoe Colocotroni*, 628 F.2d 652 (1st Cir. 1980), *modifying and remanding* 456 F. Supp. 1327 (D. P.R. 1978).

¹¹⁰ *Puerto Rico v. SS Zoe Colocotroni* at 676.

¹¹¹ House Conf. Rpt. No. 95-830, 95th Cong., 1st Sess. 92, reprinted in (1977) U.S. Code Cong. Admin. News, pp. 4424, 4467.

¹¹² 628 F.2d at 676.

¹¹³ *Id.*

¹¹⁴ For the calculation, see James Nicoll and others, *Class Material on Natural Resource Damages*, ch. 7, p. 7 (Aug. 18, 1992):

The district court had calculated the replacement value as follows: (1) damage to marine organisms occurred in an approximately 20 acre area; (2) surveys reliably established a decline of 4,605,486 organisms per acre as a direct result of the spill; (3) therefore, 92,109,720 marine organisms were killed by the spill; (4) the affected organisms were part of a trust held for the people by Puerto Rico and the trust must be reimbursed for the diminution attributable to the wrongdoing; (5) supplies of similar organisms to biological laboratories provide a reliable reference price; (6) costs for the individual organisms range from \$.06 to \$4.50 per individual organism; and (7) using the lowest cost figure, damages are \$5,526,583.20 ($$.06 \times 92,109,720$). *Puerto Rico v. SS Zoe Colocotroni*, 456 F. Supp. 1327, 1344-1345 (D.P.R. 1978), *modified and remanded*, 628 F.2d 652 (1st Cir. 1980).

¹¹⁵ 628 F.2d at 677.

¹¹⁶ *Id.* at 675-76.

¹¹⁷ Kevin R. Murray, *Natural Resource Damage Trustees: Whose Side Are They Really On?*, ENVTL. LAW., Vol. 5, p.407, February 1999; Laura Rowley, *NRD Trustees: To What Extent Are They Truly Trustees?*, 28 BOST. COLL. ENVT'L AFF. L. REV. 459 (2001); Rhoda L. White, *Natural Resource Damages: Trusting the Trustees*, 27 SAN DIEGO L. REV. 407 (1990).

¹¹⁸ *SUPERFUND: Outlook for and Experience With Natural Resource Damage Settlements*, GAO/RCED-96-71, at 24, April 1996.

¹¹⁹ *Browner Announces Availability of Exxon Valdez Funds for Chesapeake Bay Watershed Protection Projects*, EPA PRESS RELEASE, March 19, 1997.

¹²⁰ General Accounting Office Report, *Natural Resources Restoration: Status of Payments and Use of Exxon Valdez Oil Spill Settlement Funds*, GAO/RCED-98-236, at 14 (1998).

¹²¹ *Id.* at 18.

¹²² Compare 33 U.S.C. § 1321(f)(5) (CWA) with 33 U.S.C. § 2702(b)(2)(C) (OPA) and *Alaska Sport Fishing Association v. Exxon Corp.*, 34 F.3d 769, 774 (9th Cir. 1994).

¹²³ *Eyak Native Village v. Exxon Corp.*, 25 F.3d 773 (9th Cir. 1994).

¹²⁴ *Id.* at 778, quoting plaintiffs' reply brief.

¹²⁵ 40 C.F.R. § 300.615(a).

¹²⁶ *Exxon Valdez Oil Spill Trustee Council, General Operating Procedures*, Adopted July 9, 2002, p. II-1.

¹²⁷ 1991 Memorandum of Agreement at 8.

¹²⁸ Sally K. Fairfax & Darla Guenzler, *CONSERVATION TRUSTS 74* (2001, Un. Press of Kansas, Lawrence) [hereinafter 2001 Fairfax & Guenzler].

¹²⁹ *The Day the Water Died: A Compilation of the November 1989 Citizens Commission Hearings on the Exxon Valdez Oil Spill* (1990) (sponsored and published by the National Wildlife Federation in cooperation with NRDC, the Wildlife Federation of Alaska, and the Windstar Foundation) [hereinafter 1990 *The Day the Water Died*].

¹³⁰ *Id.* at 37, 39.

¹³¹ *Id.* at 37.

¹³² *Id.*

¹³³ *Id.* at 33.

¹³⁴ *Id.* at 34-35.

¹³⁵ See 2001 Fairfax & Guenzler at 74.

¹³⁶ 1990 The Day the Water Died at 44-45.

¹³⁷ Christine Cartwright, *Natural Damage Assessment: the Exxon Valdez Oil Spill and Its Implications*, 17 RUTGERS COMPUTER & TECH. L.J. 451, 461-62 (1991) [hereinafter 1991 Cartwright].

¹³⁸ 42 U.S.C. § 9651(c) (1994 & Supp. III 1997)

¹³⁹ 1991 Cartwright at 466.

¹⁴⁰ *Colorado v. United States Dep't of the Interior*, 880 F.2d 481, 487 (D.C. Cir. 1989).

¹⁴¹ 1991 Cartwright at 469-70.

¹⁴² *Id.* at 479-81. The proposed studies included: effects on commercial fisheries prices; changes in fishing industry costs; use value of the commercial fisheries; effect on value of public land; economic injuries to recreational users of natural resources; value of impacts to resources relied on by subsistence users; loss of intrinsic value of resources; economic damage to research programs; and economic damage to archaeological sites.

¹⁴³ 2000 Bardwick at 270.

¹⁴⁴ *Ohio v. United States Dep't of the Interior*, 880 F.2d 432, 463 (D.C. Cir. 1989).

¹⁴⁵ 2000 Bardwick at 271. Specifically, the plan included contingent valuation of recreational activities and intrinsic values of lost subsistence uses and uses of archaeological sites.

¹⁴⁶ 1991 Cartwright at 483.

¹⁴⁷ *Id.* at 488.

¹⁴⁸ See John Lancaster, *Value of Intangible Losses from Exxon Valdez Spill Put at \$3 Billion*, WASH. POST, Mar. 20, 1991, at A4.

¹⁴⁹ U.S. General Accounting Office, *Natural Resources Restoration Use of Exxon Valdez Oil Spill Settlement Funds: BRIEFING REPORT FOR THE CHAIRMAN, HOUSE OF REPRESENTATIVES*, GAO/RCED-93-206BR at 3 (Aug. 1993) [hereinafter 1993 GAO Report].

¹⁵⁰ See Sharon E. McClintock, community coordinator, Nov. 30, 1989, *Alaska Oil Spill Commission Oiled Communities Response Investigation Report*, p. 36, in Alaska Oil Spill Commission, SPILL: THE WRECK OF THE EXXON VALDEZ (Feb. 1990), Vol. 2, App. C, Oiled Communities Response Investigation Report [hereinafter 1989 McClintock] (on life in Seldovia):

The effort to clean the oil was viewed as ridiculous. Every time workers would attempt to [clean up] the beaches, for example, groups, regulatory agencies or someone in a monkey suit would arrive and say, 'You're killing seaweed.' or 'Stop, there might be salmon in the stream.'

Compare ibid:

Exxon hired the crews for one day to pretend to clean the beaches at Gore Point, but as soon as CBS News left, the crews were demobilized the next day. Gore Point remained mired in oil.

¹⁵¹ Specifically, they recommended that, "[a]mong other things, attention should be given to (1) completing restoration and land acquisition plans, (2) requiring more timely and better quality project reports, (3) providing for more open competition for restoration projects, and (4) improving internal controls." 1993 GAO Report at 6-7.

¹⁵² John Keeble, *Out of the Channel: The Exxon Valdez Oil Spill in Prince William Sound* 323-25 (2d ed. 1999, Eastern Washington Un. Press) [hereinafter cited as 1999 Keeble].

¹⁵³ 1993 GAO Report, *passim*. Of the \$240 million that had been paid to Exxon through 1992, by February 1993 only \$19 million had been spent on damage assessment, restoration and administrative costs (\$107 million reimbursed federal and state agencies for response costs, \$40 million to reimburse Exxon for response costs, and \$74 million remained in a trust for future work). Of the \$19 million, only \$5.7 million had gone towards restoration (approximately 2.4% of the total paid up to that point by Exxon).

¹⁵⁴ 1999 Keeble 323-25.

¹⁵⁵ Restoration Projects Highlights, at <http://www.evostc.state.ak.us/restoration/highlights.html> (last visited April 24, 2005).

¹⁵⁶ For a list of project final reports, see <http://www.evostc.state.ak.us/restoration/projects.html> (last visited April 24, 2005).

¹⁵⁷ Ecosystem Based Research, at <http://www.evostc.state.ak.us/restoration/ecosystem.html> (last visited April 24, 2005).

¹⁵⁸ 2005 R. Ott at 319.

¹⁵⁹ Alaska Predator Ecosystem Experiment, at <http://www.fakr.noaa.gov/oil/apex.htm> (last visited April 24, 2005).

¹⁶⁰ NVP Project, at http://www.evostc.state.ak.us/restoration/ecosystem_nvp.html (last visited April 24, 2005).

¹⁶¹ 1999 Keeble at 140-41.

¹⁶² See 1999 D. Lankard at 371.

¹⁶³ An especially effective voice has been Mr. Rick Steiner, Director, The Coastal Coalition, who has inundated authorities with a well reasoned stream of correspondence. See, e.g., Joel Gay, *Herring buyback urged*, ANCHORAGE DAILY NEWS, Oct. 31, 2002 (Steiner's suggestion is that \$30 million of the reopener could be used to buy back and shut down the commercial herring fishery; this would leave the herring for sea lions, birds, and other aquatic life).

¹⁶⁴ Pub. L. 108-498 (Feb. 8, 1887). For this piece of regrettable history, see D.W.C. Duncan (Cherokee), *How Allotment Impoverishes the Indians: Testimony Before a Sen. Committee Investigating Conditions in the Indian Territory*, Nov., 1906, in GREAT DOCUMENTS IN AMERICAN INDIAN HISTORY 286 (W. Moquin with C. Van Doren, eds., 1995, Da Capo Press, N.Y., N.Y.).

¹⁶⁵ Presentation of Dr. Usha Varanasi, Northwest Fisheries Science Center, Natural Resources Damages Seminar, Un. of Washington School of Law, Seattle, Feb. 2005.

¹⁶⁶ 1990 Oil Spill Commission Final Report at 73 (graphic on "Annual round of subsistence resource utilization in Port Graham and English Bay, 1981-1982"). The villages at Chignik Lake, Karluk, Nanwalek, Ouzinkie and Tatitlek are among the eight highest consumers of salmon in Alaska. See Robert Duff, Director, Office of Environmental Health Assessments, Wash. State Dep't of Health, *Persistent Problem: Widespread chemical contamination of fish* (March 2005) (PUBLIC INTEREST ENVIRONMENTAL LAW CONFERENCE, Un. of Oregon). Compare Robert J. Wolfer, *Local Traditions and Subsistence: A Synopsis from Twenty-Five Years of Research by the State of Alaska*, Alaska Dep't of Fish & Game, Division of Subsistence, TECH. PAPER NO. 284 (July 2004).

¹⁶⁷ *Exxon Valdez Oil Spill Trustee Council, EVOS Tribal and Community Involvement*, available at <http://www.evostc.state.ak.us/publications.html> (last visited March 19, 2005).

¹⁶⁸ Society of Environmental Toxicology and Chemistry (SETAC), *Evaluating and Communicating Subsistence Seafood Safety in a Cross-Cultural Context: Lessons Learned from the Exxon Valdez Oil Spill*, OVERVIEW OF LESSONS LEARNED FROM THE EXXON VALDEZ OIL SPILL: A 10-YEAR RETROSPECTIVE, App. 5 (1999, SETAC Press, Pensacola, Fla.).

¹⁶⁹ *Id.* at 246.

¹⁷⁰ *Id.*

¹⁷¹ *Id.* at 237, 243-44 (emphasis added).

¹⁷² *Id.*

¹⁷³ *Id.* at 239.

¹⁷⁴ *Id.* at 247.

¹⁷⁵ Choice of “the baseline” for restoration is the single most important issue in natural resource damages. Restore to what level is the key question. The Council often has used “restore to pre-spill conditions.” *E.g.*, Exxon Valdez Oil Spill Trustee Council, RESTORATION PLAN 35 (Sept. 1994) (“recovery is often defined as a return to pre-spill conditions”). The Council has often used “restore to the way it was.” *E.g.*, Exxon Valdez Oil Spill Trustee Council, FINAL EIS FOR THE EXXON VALDEZ OIL SPILL RESTORATION PLAN xiii (Sept. 1994) (Summary). Now a resource is “recovered” if “recovery objectives are met.” This means a resource is “recovered” if we say it is. *See* note 177, *infra*, immediately below.

¹⁷⁶ Note 177, *infra*.

¹⁷⁷ *Status of Injured Resources* at <http://www.evostc.state.ak.us/facts/status.html> (last visited March 17, 2005). The status of injured resources apparently has not been updated since 2002, as the same 2002 data is used in the most recent EVOS Trustee Council 2003 Status Report.

¹⁷⁸ EVOS Trustee Council 2003 Status Report at 7.

¹⁷⁹ *Id.* at 7.

¹⁸⁰ *Id.* at 7.

¹⁸¹ E-mail from Phil Mundy to Jeep Rice & Molly McCammon, Organization: Exxon Valdez Oil Spill Trustee Council, May 29, 2003 (obtained by Rick Steiner in a FOIA request to NOAA).

¹⁸² 40 C.F.R. § 130.2(j) and 40 C.F.R. § 131.3(h) (“waste quality limited segment”).

¹⁸³ For the best introduction, see Oliver A. Houck, *TMDLs: The Resurrection of Water Quality Standards-Based Regulation Under the Clean Water Act*, 27 ENVTL LAW RPTR. 10327 (July 1997).

¹⁸⁴ Alaska’s 2002/2003 Water Quality Report at 49.

¹⁸⁵ Alaska Dep’t of Environmental Conservation, Alaska Water Quality Standards 18 AAC 70.020(17) (2003) available at www.epa.gov/ost/standards/wqslibrary/ak/ak_10_wqs.pdf (last visited May 22, 2005).

¹⁸⁶ Alaska’s 2002/2003 Water Quality Report at 5, 10, 20, 49, 71.

¹⁸⁷ EVOS Trustee Council website, <http://www.evostc.state.ak.us/restoration/highlights.html> (last visited May 14, 2005) (“... in most cases, if protected from harm, injured species will recover on their own.”).

¹⁸⁸ Memorandum from Molly McCammon, Executive Director, to Trustee Council Members, Craig Tillery [Alaska Assistant Attorney General] and Gina Belt [U.S. Department of Justice] 7-9 (June 12, 2003) (obtained by Rick Steiner in a FOIA request to NOAA).

¹⁸⁹ 1991 Governments' Memorandum in Support of Agreement and Consent Decree at 28 ("Based on the results of the damage assessment, the Governments do not believe that they will ever need to invoke [the reopener] clause.")

¹⁹⁰ *Compare* Interview with Craig R. O'Connor, Special Counsel Natural Resources, Office of General Counsel National Oceanic and Atmospheric Administration, Natural Resource Damages Seminar, Un. of Washington, School of Law, Seattle, Wash. (Feb. 3, 2005) with Jim Carlton, *Groups Seek to Increase Bill for Exxon Spill*, WALL. ST. J. Aug. 30, 2001, at B4.

¹⁹¹ http://www.integral-corp.com/page.php?pname=news/article&article_id=42 (last visited April 24, 2005).

¹⁹² http://www.evostc.state.ak.us/pdf/Work%20Plans/Final_2004_Workplan.pdf (last visited April 24, 2005).

¹⁹³ http://www.integral-corp.com/page.php?pname=news/article&article_id=42 (last visited Apr. 24, 2005).

¹⁹⁴ U.S. GAO, *Natural Resources Restoration: Status of Payments and Use of Exxon Valdez Oil Spill Settlement Funds* 9 (Aug. 1998) (REPORT TO THE CHAIRMAN, SEN. COMM. ON ENERGY & NATURAL RESOURCES) ("Most Settlement Funds Were Distributed to Federal Agencies and Alaska"). *Compare* 1993 GAO Report at 5-6 ("The same agencies – and sometimes the same individuals – that recommend a project for funding also approve and carry out the project").

¹⁹⁵ http://www.state.ak.us/dec/press_releases/2004/PR-Ballard.pdf (last visited Feb. 22, 2005).

¹⁹⁶ Tom Kizzia, *16 Years Later Pressure Mounts To Settle Spill Suit*, ANCHORAGE DAILY NEWS, Feb. 27, 2005, available at <http://www.adn.com/front/v-printer/story/6216852p-6091235c.html> (last visited April 24, 2005).

¹⁹⁷ Integral Consulting at <http://www.integral-corp.com/page.php?pname=projects/damage> (last visited April 24, 2005).

¹⁹⁸ Initial findings from Integral's review and synthesis effort are: lingering oil most significant in intertidal areas; surface *Exxon Valdez* oil, the focus of evaluation efforts following the oil spill, has a patchy distribution pattern and persists predominantly in a weathered form that is not bioavailable; subsurface *Exxon Valdez* oil has experienced more limited weathering and degradation, is sequestered in armored beaches and sheltered shorelines, and has greater bioavailability. Most resources currently classified as injured have limited or no exposure to lingering oil. Available at http://www.integral-corp.com/page.php?pname=news/article&article_id=42 (last visited April 24, 2005).

¹⁹⁹ *Exxon Valdez* Oil Spill Trustee Council, *Request For Proposals: Identify and Evaluate Oil Remediation Technologies Applicable to Lingering Oil in Prince William Sound, Alaska*, February 15, 2005 [hereinafter RFP-Lingering Oil].

²⁰⁰ *Id.* at 4-5 (citations omitted).

²⁰¹ *Id.* at 5. This leaves only four months before the deadline for invoking the reopener because Exxon must be given 90 days notice prior to September 1, 2006.

²⁰² *Exxon Valdez* Oil Spill Trustee Council, *Request for Proposals: Expert Review - Pacific Herring Populations in Prince William Sound, Alaska*, Feb. 15, 2005, at 4 [hereinafter cited as RFP-Herring].

²⁰³ *Id.* at 5.

²⁰⁴ *Id.* at 5.

²⁰⁵ *E.g., Illinois Central R.R. v. Illinois*, 146 U.S. 387 (1892); *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907).

²⁰⁶ E.g., 42 U.S.C.A. § 9601 (161).

²⁰⁷ Note 70, *supra*.

²⁰⁸ 1999 Keeble at 303. Total costs of wildlife restoration and rehabilitation to Exxon were \$41 million. *Ibid*.

²⁰⁹ 1989 McClintock at 12.

²¹⁰ See Robert Gramling & William R. Freudenberg, *The Exxon Valdez oil spill in the context of U.S. petroleum politics*, 6 INDUST. CRISIS Q. 175 (1992).

²¹¹ Mitchell F. Dolin, *An Overview of the Exxon Valdez Insurance Coverage Dispute*, 5 INT'L INS. L.R., 313-317 (1997) [hereinafter 1997 Dolin]; see *Exxon Valdez Fine Largely Tax Deductible, House Budget Task Force Chairman Charges*, DAILY REP. FOR EXECUTIVES, Nov. 1, 1991 at G-7.

²¹² 1997 Dolin at 317.

²¹³ See *id.* at 313.

²¹⁴ Richard Pyle, *Insurers Want Off Spill Hook, Companies Say Exxon's Cleanup a PR Ploy, Balk at Paying*, THE ASSOCIATED PRESS, Sept. 2, 1993, available at <http://www.adn.com/evos/stories/EV418.html> (last visited on April 24, 2005).

²¹⁵ 33 U.S.C.A. § 2737 (2005).

²¹⁶ *SeaRiver Maritime Financial Holdings, Inc. v. Mineta*, 309 F.3d 662 (9th Cir. 2002).

²¹⁷ *SeaRiver*, 309 F.3d at 680.

²¹⁸ *Ibid*.

²¹⁹ On the lawyers' rush to Alaska and the importance of "staying power," see David Lebedoff, CLEANING UP: THE STORY BEHIND THE BIGGEST LEGAL BONANZA OF OUR TIME, esp. ch. 4 (1997, Free Press, N.Y., N.Y.) [hereinafter cited as 1997 Lebedoff].

²²⁰ Compare 43 U.S.C.A. §§ 1651-1655 with D. Alan Rudlin, *Packaging Toxic Tort Cases for Trial; Use of Test Cases, Bifurcation and Class Actions*, 406 PLI/LIT 185 (Mar. 1991) and Steve Keeva, *After The Spill: New Issues in Environmental Law*, 77 A.B.A.J. (Feb. 1991).

²²¹ Darrin J. Quam, *Right to Subsist: The Alaska Natives Campaign to Recover Damages Caused by the Exxon Valdez Spill*, 5 GEO. INT'L ENVTL. L. REV. 177, 185-86 (1992) [hereinafter 1992 Quam].

²²² *Id.* By 1995, Exxon had paid more than \$304 million to settle private claims through the Claims Program. 1999 / 2000 Jenkins & Kastner at 179.

²²³ See Richard Mauer, *Exxon responds to 140 lawsuits*, ANCHORAGE DAILY NEWS, Aug. 16, 1989, at A1.

²²⁴ N. Robert Stoll, *Litigating and Managing a Mass Disaster Case, An Oregon Plaintiff Lawyer's Experience in the Exxon Valdez Oil Spill Litigation*, 56-OCT OR. ST. B. BULL. 14 (1995).

²²⁵ *Id.*

²²⁶ 1999/2000 Jenkins & Kastner at 161.

²²⁷ 60 Minutes: Ten Years Later (CBS television broadcast, Mar. 21, 1999).

²²⁸ § D(6)(b) (below) (the Seattle Seven episode).

²²⁹ Letter from Tony Knowles to Exxon, 12/28/2001, responding to decision in *In re Exxon Valdez*, 270 F.3d 1215 (9th Cir. 2001).

²³⁰ Letter from Exxon to Tony Knowles, 1/25/2002.

²³¹ *United States v. Exxon*, Civ. No. A91-082, March 13, 1991; *Alaska v. Exxon*, Civ. No. A91-083, March 15, 1991.

²³² Oct. 1991 Consent Decree at 3.

²³³ 1999/2000 Jenkins & Kastner at 185-86.

²³⁴ See Kimberly Edds, *Shipper Fined \$25 Million for Dumping Oil*, WASH. POST, April 5, 2005, p. A8 (“the largest criminal fine ever imposed for deliberately pouring oil into the ocean”).

²³⁵ 1992 Quam at 182.

²³⁶ The “Native Interests” included the following tribes, villages and native corporations:

Alaska Native Class: all Alaska Natives, all traditional Native organizations and other Native entities who have or may claims against the State of Alaska or the United States arising out of the *Exxon Valdez* oil spill, including all those who engage in, rely upon, promote, preserve, or provide services for, wholly or in part, a subsistence way of life in the following areas: Native Village of Chenega Bay, Eyak Native Village, Port Graham Village, the Native Village of English Bay, the Native Village of Tatitlek, the Native Village of Kodiak, the Native Village of Larsen Bay, the Native Village of Karluk, the Native Village of Port Lions, the Native Village of Akhiok, the Native Village of Ouzinke, Ivanoff Bay Village, the Native Village of Chignik Bay, Seward, Valdez, the Native Village of Chignik Lagoon, Chignik Lake Village and the Native Village of Perryville, the Kenai Peninsula Borough, the Kodiak Island Borough, the Lake and Peninsula Borough and the Aleutians East Borough.

ANCSA Corporation Class: All Native Corporations, as that termed is used within the Alaska Native Claims Settlement Act, as amended, 43 U.S.C. Sec. 1601 et. seq. (“ANCSA”), who have or may have claims against the State of Alaska or the United States arising out of the Exxon Valdez oil spill, including all those who are legal or equitable owners of real property in the geographic area encompassed by the Alaska Native Class.

²³⁷ *The Native Village of Chenega Bay, et al. v. Manuel Lujan et al. and Chenega Corp. et al. v. Manuel Lujan et al.*, Civil Actions Nos. 91-0483 SS, 91-0484 SS (D.D.C. 1991).

²³⁸ *The Native Village of Chenega Bay et al. v. Manuel Lujan, et al. and Chenega Corp. et al. v. Manuel Lujan et al.*, Civil Action Nos. 91-483 SS, 91-484 SS (D.D.C. March 12, 1991) (Memorandum Opinion and Order).

²³⁹ 1992 Quam at 184.

²⁴⁰ *Ibid.*

²⁴¹ *Ibid.*

²⁴² *The Native Village of Chenega Bay, et al. v. State of Alaska and United States*, No. A91-454 Civ. (D.Alaska, Sept. 24, 1991) (Consent Decree and Stipulation of Dismissal) [hereinafter Lujan Decree].

²⁴³ Lujan Decree ¶ 5.

²⁴⁴ Lujan Decree ¶ 6.

²⁴⁵ Lujan Decree ¶ 7, 8. A primary goal of the Native Corporations was preservation of their property interests in these lands in “interim jurisdiction.” The Native corporations successfully lobbied Congress to include a provision in the 1990 Oil Pollution Act to vest the corporations with title, as of March 23, 1989, the day before the spill, to lands they had already validly selected. The Native Villages’ interests were not the same as the Native corporations. The Native villages wanted to preserve their right to sue Exxon for

economic, subsistence and natural resource damages and to establish a fund that would be administered by Alaska Natives to monitor the environment and ecology of the area. 1992 Quam at 190.

²⁴⁶ Lujan Decree ¶ 9.

²⁴⁷ Lujan Decree ¶ 10.

²⁴⁸ Lujan Decree ¶ 12.

²⁴⁹ Lujan Decree ¶ 11.

²⁵⁰ Lujan Decree ¶ 13.

²⁵¹ Lujan Decree ¶ 14. This study is discussed above, in § II(C)(2)(c), text accompanying notes 168 to 174.

²⁵² Lujan Decree ¶ 23.

²⁵³ *Alaska Sportfishing Ass'n v. Alyeska Pipeline Serv.*, No. 3AN-89-51788 (Alaska Super.Ct. 1989), *cited in Alaska Sportfishing Ass'n v. Exxon*, 34 F.3d 769, 771 (9th Cir. 1994).

²⁵⁴ *Id.*

²⁵⁵ *National Wildlife Federation v. Exxon Corp.*, No. 3AN-89-6957 (Alaska Super.Ct. filed Aug. 17, 1989), *cited in Eyak Native Village v. Exxon Corp.*, 25 F.3d 773, 775-76 (9th Cir. 1994).

²⁵⁶ *See Eyak Native Village v. Exxon Corp.*, 25 F.3d 773, 776 (9th Cir. 1994).

²⁵⁷ Oct. 1991 Consent Decree at 5, emphasis added.

²⁵⁸ *Eyak Native Village*, 25 F.3d at 776.

²⁵⁹ *See Alaska Sportfishing Ass'n*, 34 F.3d at 771.

²⁶⁰ *Eyak Native Village*, 25 F.3d at 781.

²⁶¹ *See Alaska Sportfishing Ass'n*. 34 F.3d at 771.

²⁶² *See id.* at 772.

²⁶³ *Id.* at 772-73.

²⁶⁴ *See* Scott Kerin, *Alaska Sport Fishing Association v. Exxon Corporation Highlights the Need to Take a Hard Look at the Doctrine of Parens Patriae When Applied in Natural Resource Damage Litigation*, 25 ENVTL. L. 897 (1995).

²⁶⁵ *See id.*

²⁶⁶ Christopher V. Panoff, *In re The Exxon Valdez Alaska Native Class v. Exxon Corp.: Cultural Resources, Subsistence Living, and the Special Injury Rule*, 28 ENVTL LAW 701, 703 (1998) [hereinafter cited as 1998 Panoff]; *id.* at 703-04 (“In addition to claimed damage to a subsistence way of life, the complaint alleged injury to archaeological sites and artifacts, natural resources and property upon which the plaintiffs depend as part of their natural habitat and lives”); *id.* at 703 n. 14 (the “subsistence way of life” is defined as one that is “dependent upon the preservation of uncontaminated natural resources, marine life and wildlife, and reflects a personal, economic, psychological, social, cultural, communal and religious form of daily living”).

²⁶⁷ *Id.* at 703 & n.13.

²⁶⁸ The Native Corporations settled their separate lawsuit with the TAPL fund for \$23.27 million and with Alyeska for \$5.69 million. A subsequent jury verdict against Exxon for \$5.9 million for damages to land and archaeological resources was held to be offset by the TAPL and Alyeska payment. *Chenega Corp v. Exxon*, 991 P.2d 769, 775 (Alaska 1999).

²⁶⁹ 2000 Bardwick at 278.

²⁷⁰ 1998 Panoff at 703-04.

²⁷¹ *In re Exxon Valdez Alaska Native Class*, No. A89-0095-CV, 1994 WL 182856 at *2 (D.Alaska, March 23, 1994) (unreported).

²⁷² W.H. Rodgers, Jr., ENVIRONMENTAL LAW: AIR & WATER, Vol. 1, § 2.2 at 36 (1986, West, St. Paul) (with semi-annual Pocket Parts) (footnotes omitted); Denise E. Antolini, *Modernizing Public Nuisance: Solving the Paradox of the Special Injury Rule*, 28 ECOL. L. Q. 755 (2001).

²⁷³ *In re Exxon Valdez Alaska Native Class*, 1994 WL 182856 at *3 (D. Alaska, March 23, 1994) (unreported).

²⁷⁴ *Id.* at *4.

²⁷⁵ *Id.* at *4.

²⁷⁶ Compare Robert Snyder, Daniel Williams & George Peterson, *Culture Loss & Sense of Place in Resource Valuation: Economics, Anthropology and Indigenous Cultures*, in INDIGENOUS PEOPLES: RESOURCE MANAGEMENT & GLOBAL RIGHTS ch. 6 (S. Jentoft, H. Minde & Ragnar Nilsen eds., 2003 Eburon Delft) with Michele Straube, *Is Full Compensation Possible for the Damages Resulting from the Valdez Oil Spill?*, 19 ELR 10338 (1989) and John Lee, *The Underlying Legal Theory to Support a Well-Defined Human Right to a Healthy Environment as a Principle of Customary International Law*, 25 COLUM. J. ENV'T'L LAW 283, 336 (2000) ("As a result of a specific course of action, a degraded environment occurs, with either serious health consequences for a specific group of people or a disruption of a people's way of life").

²⁷⁷ *In re Native Class*, 104 F.3d 1196, 1198 (9th cir. 1997).

²⁷⁸ 2000 Bardwick at 281.

²⁷⁹ 1997 Lebedoff, *passim*

²⁸⁰ 1999/2000 Jenkins & Kastner at 160.

²⁸¹ *Ibid.*

²⁸² *In re Exxon Valdez*, 296 F. Supp.2d 1071, 1080 (D. Alaska 1994).

²⁸³ 1999/2000 Jenkins & Kastner at 192.

²⁸⁴ Mark Curriden, *Exxon Finds Slow Pace of Valdez Case Profitable: Company Says Fairness, Not Money, Is the Issue*, DALLAS MORNING NEWS, Mar. 14, 1999, at A1.

²⁸⁵ *Id.*

²⁸⁶ *In re Exxon Valdez*, 270 F.3d 1215, 1246-47 (9th Cir. 2001).

²⁸⁷ *BMW of North America v. Gore*, 517 U.S. 559, 116 S. Ct. 1589 (1996); *Cooper Industries, Inc. v. Leatherman Tool Group, Inc.*, 531 U.S. 923, 121 S. Ct. 297 (2000) (The *BMW* guideposts are: (1) the degree of reprehensibility of the person's conduct; (2) the disparity between the harm or potential harm suffered by the victim and his punitive damage award; and (3) the difference between the punitive damage award and the civil penalties authorized or imposed in comparable cases.

²⁸⁸ *Pacific Mutual Life Ins. Co. v. Haslip*, 499 U.S. 1 (1991).

²⁸⁹ *In re Exxon Valdez*, 270 F.3d 1215, 1241-46 (9th Cir. 2001).

²⁹⁰ *In re Exxon Valdez*, 236 F.Supp.2d 1043, 1068 (D. Alaska 2002).

²⁹¹ *TXO Production Corp v. Alliance Resources Corp.*, 509 U.S. 443 (1993).

²⁹² In re *Exxon Valdez*, 236 F. Supp. 2d at 1058-60.

²⁹³ In re *Exxon Valdez*, 236 F. Supp. 2d at 1068.

²⁹⁴ *State Farm Mutual Automobile Ins. Co. v. Campbell*, 538 U.S. 408 (2003).

²⁹⁵ In re *Exxon Valdez*, 296 F. Supp. 2d 1071, 1099-101 (D. Alaska 2004).

²⁹⁶ In re *Exxon Valdez*, 296 F. Supp. 2d at 1110.

²⁹⁷ In re *Exxon*, No. A89-0095-CIV, 1996 WL 384623, at *8 (D. Alaska June 11, 1996).

²⁹⁸ 1999/2000 Jenkins & Kastner at 202.

²⁹⁹ *Id.* at 201.

³⁰⁰ In re *Exxon*, No. A89-0095-CIV, 1996 WL 384623, at *12 (D. Alaska June 11, 1996).

³⁰¹ In re *Exxon Valdez*, 229 F.3d 790, 795 (9th Cir. 2000).

³⁰² *Id.* at 800-01.

³⁰³ Randle, *The Oil Pollution Act of 1990: Its Provisions, Intent, and Effects*, 21 ELR 10119, 10132 (March 1991).

³⁰⁴ *Id.*

³⁰⁵ See Eric Nalder, *Safety lapses plague tankers: Post-Exxon Valdez changes in oil carrier operations are being evaded, undermined, P-I investigation shows*, SEATTLE POST-INTELLIGENCER, March 22, 2005, pp. 1, 6, col. 4 (Conoco "endorsed double hulls immediately after the Exxon Valdez spill and built them"; "By contrast, Exxon's fleet hasn't launched any new double-hulled ships for the Alaska trade and, under the law, it might not be able to sail its ships into Prince William Sound in about two years").

³⁰⁶ 302 SCIENCE 2082 (Dec. 19, 2003).

³⁰⁷ *Id.* at 2082.

³⁰⁸ W.H. Rodgers, Jr., ENVIRONMENTAL LAW: AIR & WATER, Vol. 1, §§ 2.4, 2.5 (1986, West, St. Paul) (with semi-annual updates).

³⁰⁹ *Id.* § 2.20.

³¹⁰ Subsection 4(f), 16 U.S.C.A. § 1533(f) (recovery plans).

³¹¹ W.H. Rodgers, Jr., ENVIRONMENTAL LAW: HAZARDOUS WASTES & SUBSTANCES, Vol. 4, § 8.10 (1992) (with semi-annual updates).

³¹² Jeremy B.C. Jackson et al., *Historical overfishing and the recent collapse of ecosystems*, 293 SCIENCE 629 (2001).

³¹³ *Id.*

³¹⁴ *Id.*

³¹⁵ 1994 Draft Restoration Plan at 35.

³¹⁶ *The Exxon Valdez oil spill: Initial environmental impact assessment*, 25 ENVIR. SCIENCE & TECHNOL. 24, 29 (1991):

Available data to date for the *Valdez* spill are consistent with the observations made in this report. Samplings of petroleum aromatic hydrocarbon concentrations in the waters of Prince William Sound clearly demonstrate that average levels have remained well below exposure levels known to cause acute and chronic effects to sensitive aquatic life.

Field counts of plants, fish, and mammals from throughout the spill area provide convincing data that wildlife species are surviving and reproducing, thus confirming that biological recovery is rapidly taking place.

See also John A. Wiens, *Oil, seabirds, and science: the effects of the Exxon Valdez oil spill*, 46 BIO-SCIENCE 587, 594 (Sept. 1996) ("Recovery should instead be defined statistically, as the disappearance of a previously documented significant relationship between a population and a measure of initial oil exposure").

³¹⁷ Subsection 311(f)(5), 33 U.S.C.A. § 1321(f)(5).

³¹⁸ AMERICAN HERITAGE DICTIONARY 1054 (2d College ed. 1982, Houghton Mifflin Co., N.Y.).

³¹⁹ *Id.* at 1042.

³²⁰ *Id.* at 462.

³²¹ Donald A. Wickham, Carol Collinson Kahl, Garry F. Mayer & Eli Reinharz, *Restoration: The Goal of the Oil Pollution Act Natural Resource Damage Actions*, 45 BAYLOR L. REV. 405, 419 (1993); see Heidi Wendel, *Restoration as the Economically Efficient Remedy for Damage to Publicly Owned Natural Resources*, 91 COLUM. L. REV. 430 (1991).

³²² *Id.* at 418.

³²³ Compare NOAA Fisheries, Viable Salmonid Populations <http://www.nwr.noaa.gov/1salmon/salmesa/4ddocs/4dwsvps.htm> (last visited May 14, 2005).

³²⁴ David G. Shaw & Harry R. Bader, *Environmental Science in a Legal Context: The Exxon Valdez Experience*, 25 AMBIO 430, 432 (1996).

³²⁵ Exxon Valdez Oil Spill Trustee Council; Exxon Valdez Oil Spill Restoration Plan: Update on Injured Resources and Services, Aug. 2002 [hereinafter 2002 Status Update].

³²⁶ Doug O'Harra, *Dying killer whale family wins protection*, ANCHORAGE DAILY NEWS June 4, 2004; NOAA Fisheries Proposes Depleted Designation for Prince William Sound Killer Whales, at <http://www.fakr.noaa.gov/newsreleases/2003/AT1killerwhale.htm> (last visited April 30, 2005). The AT1 pod has been listed as depleted under the Marine Mammal Protection Act. Reproductive failure in this pod preceded the spill.

³²⁷ Craig Matkin & Eva Saulitis, *Killer Whale (Orcinus orca) Restoration Notebook 6-7. Exxon Valdez Oil Spill Trustee Council 1997.*

³²⁸ *Id.* at 10.

³²⁹ Killer Whale, at http://www.evostc.state.ak.us/facts/status_orca.html (last visited March 30, 2005).

³³⁰ John K.B. Ford & Graeme M. Ellis, TRANSIENTS: MAMMAL-HUNTING KILLER WHALES OF BRITISH COLUMBIA, WASHINGTON AND SOUTHEASTERN ALASKA 23 (1999, Un. British Columbia Press, Vancouver).

³³¹ *Id.* at 24.

³³² *Id.* at 19.

³³³ Craig Matkin & Eva Saulitis, *Killer Whale (Orcinus orca) Restoration Notebook 5. Exxon Valdez Oil Spill Trustee Council 1997.*

³³⁴ *Id.* at 18.

³³⁵ Doug O'Harra, *Dying killer whale family wins protection*, ANCHORAGE DAILY NEWS June 4, 2004.

³³⁶ Craig Matkin & Eva Saulitis, *Killer Whale (Orcinus orca) Restoration Notebook 10*. Exxon Valdez Oil Spill Trustee Council 1997.

³³⁷ *Id.*

³³⁸ *Id.*

³³⁹ Doug O'Harra, *Dying killer whale family wins protection*, ANCHORAGE DAILY NEWS, June 4, 2004.

³⁴⁰ 2002 Status Update at 18.

³⁴¹ Status of Injured Resources, at <http://www.evostc.state.ak.us/facts/status.html> (last visited March 30, 2005).

³⁴² Stellar Sea Lion: Western U.S. Stock. 2002 Stock Assessment, NOAA Fisheries, available at [http://www.nmfs.noaa.gov/pr/PR2/Stock_Assessment_Program/Pinnipeds/Steller_\(West\)/AK02stellerseallion_West.PDF](http://www.nmfs.noaa.gov/pr/PR2/Stock_Assessment_Program/Pinnipeds/Steller_(West)/AK02stellerseallion_West.PDF) (last visited March 30, 2005).

³⁴³ Donald G. Calkins et. al, IMPACTS ON STELLER SEA LIONS, IN MARINE MAMMALS AND THE *EXXON VALDEZ* 119 (Thomas Louglin, ed. 1994, Academic Press, San Diego).

³⁴⁴ *Id.*

³⁴⁵ *Id.* at 137.

³⁴⁶ Steller Sea Lion Research, at <http://nmml.afsc.noaa.gov/AlaskaEcosystems/sslhome/StellerHome.html> (last visited March 30, 2005).

³⁴⁷ G.L. Thomas & R.E. Thorne, *Acoustical-optical assessment of Pacific herring and their predator assemblage in Prince William Sound, Alaska*, 16 AQUATIC LIVING RESOURCES 247-253 (2003).

³⁴⁸ 2002 Status Update at 16.

³⁴⁹ *Ibid.*

³⁵⁰ 2005 R. Ott at 379 (references omitted).

³⁵¹ Alaska Department of Fish and Wildlife, Prince William Sound Herring Announcement #1, available at <http://www.cf.adfg.state.ak.us/region2/finfish/herring/pws/pwsupd05.php> (last visited March 30, 2005).

³⁵² 2005 R. Ott at 291.

³⁵³ 2002 Status Update at 13.

³⁵⁴ *Id.* at 16.

³⁵⁵ *Id.* at 17.

³⁵⁶ 2005 R. Ott at 379.

³⁵⁷ Alaska Department of Fish and Wildlife, Prince William Sound Herring Announcement #1, available at <http://www.cf.adfg.state.ak.us/region2/finfish/herring/pws/pwsupd05.php> (last visited March 30, 2005).

³⁵⁸ James E. Seeb, Susan E. Merkouris, Lisa W. Seeb, Jeffrey B. Olsen, Paul Bentzen, and Jonathan M. Wright, *Genetic discrimination of Prince William Sound herring populations, EXXON VALDEZ OIL SPILL RESTORATION PROJECT FINAL REPORT* (Restoration Project 97165), Alaska Department of Fish and Game (1999), available at http://www.evostc.state.ak.us/pdf/final_reports/165.pdf (last visited March 30, 2005) [hereinafter 1999 EVOS Restoration Project Herring Final Report].

³⁵⁹ *Id.*

³⁶⁰ Mary Ruckelshaus, Paul McElhany & Michael J. Ford, *Recovery Species of Conservation Concern – Are Populations Expendable?*, in THE IMPORTANCE OF SPECIES: PERSPECTIVES ON EXPENDABILITY & TRIAGE ch. 16 (P. Kareiva & S.A. Levin eds. 2003, Princeton U. Press, Princeton).

³⁶¹ R.T. Paine, *A Note on Trophic Complexity and Community Stability*, 103 THE AMERICAN NATURALIST 91 (1969).

³⁶² Evelyn D. Brown, Mark G. Carls, RESTORATION NOTEBOOK: PACIFIC HERRING I (Sept. 1998), *Exxon Valdez* Trustee Council.

³⁶³ 1999 EVOS Restoration Project Final Report.

³⁶⁴ 2002 Status Update at 3-4, 12-13. The EVOS recovery objective is “intertidal communities will have recovered when such important species as *Fucus* have been reestablished at sheltered rocky sites, the differences in community composition and organism abundance on oiled and unoiled shorelines are no longer apparent after taking into account geographic differences, and the intertidal and nearshore habitats provide adequate, uncontaminated food supplies for top predators.” *Id.* at 13

³⁶⁵ Jeffrey W. Short et al., *Estimate of Oil Persisting on the Beaches of Prince William Sound 12 Years After the Exxon Valdez Oil Spill*, 38 ENVIRON. SCI. TECHNOL. 19, 24 (2004) [hereinafter 2004 Short].

³⁶⁶ *Id.* at 19.

³⁶⁷ RFP-Lingering Oil at 4.

³⁶⁸ 2002 Status Update at 16.

³⁶⁹ Malin M. Babcock, Patricia M. Harris, Mark G. Carls, Christine C. Brodersen, & Stanley D. Rice, *Mussel Bed Restoration and Monitoring*, EXXON VALDEZ OIL SPILL RESTORATION PROJECT FINAL REPORT (Restoration Project 95090), NOAA/NMFS/Auke Bay Laboratory ii (Dec. 1998).

³⁷⁰ 2002 Status Update at 15-16.

³⁷¹ Brenda E. Ballachey, James L. Bodkin & Anthony R. DeGange, *An Overview of Sea Otter Studies*, In MARINE MAMMALS AND THE EXXON VALDEZ 56 (Thomas R. Loughlin, ed. 1994, Academic Press, San Diego).

³⁷² J. L. Bodkin et al., *Sea otter population status and the process of recovery from the 1989 Exxon Valdez oil spill*, 241 MARINE ECOL. PROG. SER. 237-253, 2002.

³⁷³ *Id.*

³⁷⁴ *Id.*

³⁷⁵ 2002 Status Update at 20.

³⁷⁶ 2002 Status Update at 20; *id.* at 19.

³⁷⁷ James A. Estes & John F. Palmisano, *Sea Otters: Their Role in Structuring Nearshore Communities*, 185 SCIENCE 1058, 1059-60 (1974).

³⁷⁸ John Piatt, et al., *Immediate Impact of the Exxon Valdez oil spill on marine birds*, 107 AUK 387 (1990):

Models of murre population dynamics suggested it could take 20-70 years for murre populations to recover to a stable age distribution if environmental conditions were favorable.

³⁷⁹ 2002 Status Update at 8-9.

³⁸⁰ Stephani G. Zador & John F. Piatt, *Time-Budgets of Common Murres at a Declining and Increasing Colony in Alaska*, 101 CONDOR 149, 151 (1999) (“Whatever the cause, we predicted correctly that murre

breeding in the declining colony at Chisik Island would reflect chronic food shortage by minimizing time spent at the colony.”)

³⁸¹ 2002 Status Update at 8.

³⁸² David B. Irons, Steven J. Kendall, Wallace P. Erickson, Lyman L. McDonald and Brian K. Lance, *Nine Years after the Exxon Valdez Oil Spill: Effects on Marine Bird Populations in Prince William Sound, Alaska*, 102 CONDOR 723, 727, 732 (2000); David B. Irons, Steven J. Kendall, Wallace P. Erickson, Lyman L. McDonald and Brian K. Lance, *A Brief Response to Weins et al., Twelve Years After the Exxon Valdez Oil Spill*, 103 CONDOR 892, 893 (2001).

³⁸³ 2002 Status Update at 9.

³⁸⁴ *Id.* at 12.

³⁸⁵ T.M. Caro & Gillian O’Doherty, *On the Use of Surrogate Species in Conservation Biology*, 13 CONSERVATION BIOLOGY 805, No. 4 (1999).

³⁸⁶ Audubon Watch List <http://audubon2.org/webapp/watchlist/viewSpecies.jsp?id=36> (last visited April 30, 2005); see also USFWS, Migratory Bird Management (last updated April 30, 2005) <http://alaska.fws.gov/mbsp/mbm/shorebirds/species/Black-oystercatcher.htm> (last visited April 30, 2005).

³⁸⁷ Over half of the populations nest in Alaska, concentrated especially in Prince William Sound and the Kodiak Archipelago. B.A. Andres and G.A. Falxa, *Black Oystercatcher (Haematopus bachmani)* in THE BIRDS OF NORTH AMERICA, No. 155 (A. Poole and F. Gill, eds. The Academy of Natural Sciences, Philadelphia, and The American Ornithologists’ Union, Washington, D.C.).

³⁸⁸ B.A. Andres, *The Exxon Valdez oil spill disrupted the breeding of Black Oystercatchers*, 61 J. WILDL. MANAGE. 1322–1328 (1997); B.A. Andres, *Shoreline Habitat use of Black Oystercatchers breeding in Prince William Sound, Alaska*, 69 J. FIELD ORNITHOL. 626–634 (1998).

³⁸⁹ EVOS, Status of the Black Oystercatcher at http://www.evostc.state.ak.us/facts/status_oystercatcher.html (last visited April 30, 2005).

³⁹⁰ Audubon Watch List at <http://audubon2.org/webapp/watchlist/viewSpecies.jsp?id=36> (last visited April 30, 2005).

³⁹¹ Brad A. Andres, *Effects Of Persistent Shoreline Oil On Breeding Success And Chick Growth In Black Oystercatchers*, 116(3) THE AUK 640-650 (1999).

³⁹² 2002 Status Update at 7.

³⁹³ EVOS Council, Status of the Black Oystercatcher at http://www.evostc.state.ak.us/facts/status_oystercatcher.html (last visited April 30, 2005).

³⁹⁴ Compare Alaska Department of Fish and Game, Wildlife Notebook Series (revised 1994) at <http://www.adfg.state.ak.us/pubs/notebook/furbear/rvrotter.php> (last visited April 30, 2005) with EVOS, Status of the River Otter at http://www.evostc.state.ak.us/facts/status_riverotter.html (last visited April 30, 2005).

³⁹⁵ Ned Rozell, *Oil-fed Otters May Provide Clues to Spill Damage*, ALASKA SCIENCE FORUM, July 22, 1998.

³⁹⁶ Merav Ben-David, *Responses of River Otters to Oil Contamination: A Captive Study*, RIVER OTTER ALLIANCE NEWSLETTER (Fall 2000) <http://www.otternet.com/ROA/oilcontamstudy.htm> (last visited April 30, 2005).

³⁹⁷ *Id.*

³⁹⁸ EVOS Council, Status of the River Otter http://www.evostc.state.ak.us/facts/status_riverotter.html (last visited April 30, 2005).

³⁹⁹ 2002 Status Update at 18.

⁴⁰⁰ *Id.*

⁴⁰¹ 2005 R. Ott at 291.

⁴⁰² 2002 Status Update at 18.

⁴⁰³ *Id.*

⁴⁰⁴ http://www.evostc.state.ak.us/restoration/projects_pink.html (last visited April 30, 2005).

⁴⁰⁵ 2005 R. Ott at 376.

⁴⁰⁶ 2004 Short.

⁴⁰⁷ Quoted in Alaska Action Network, *15 Years of Lingering Effects*, at <http://aknetwork.e-actionmax.com/showalert.asp?aaid=590> (last visited April 30, 2005).

⁴⁰⁸ Jeff Wheelwright, *PRINCE WILLIAM SOUND: HOW NATURE REELS AND REBOUNDS* (1994, Yale U. Press, New Haven).

⁴⁰⁹ 2002 Status Update at 2.

⁴¹⁰ 2004 Short at 19. Reports of buried oil from Native Alaskans and fishermen prompted these studies of oil persistence. See 2005 R. Ott at 361.

⁴¹¹ 2005 R. Ott at 257-58.

⁴¹² *Id.* at 265, 380.

⁴¹³ Gary D. Marty, et al., *Role of Disease in Abundance of Pacific Herring (*Clupea Pallasii*) population*, 60 CAN. J. FISH. AQUAT. SCI. 1258, 1259 (2003), modified to show date of settlement between U.S. / Alaska and Exxon.

⁴¹⁴ Charles H. Peterson et al, *Long-Term Ecosystem Response to the Exxon Valdez Oil Spill*, 302 SCIENCE 2082 (2003) [hereinafter 2003 Peterson].

⁴¹⁵ 2005 R. Ott at 393.

⁴¹⁶ 2003 Peterson.

⁴¹⁷ *Id.*

⁴¹⁸ 2005 R. Ott at 388.

⁴¹⁹ 2005 R. Ott at 388. For an overview of impacts on human health, see 2005 R. Ott at 388-392. PAHs are persistent in the environment, building up in biological tissues (human and animal), causing reproductive and developmental harm, central nervous system problems, cancers, and genetic impacts.

⁴²⁰ National Research Council, *OIL IN THE SEA III: INPUTS, FATES AND EFFECTS* 120 (2003).

⁴²¹ National Research Council, *OIL IN THE SEA* 392 (1985).

⁴²² National Research Council, *OIL IN THE SEA III: INPUTS, FATES AND EFFECTS* at 125.

⁴²³ 2005 R. Ott at 414.

⁴²⁴ 2003 Peterson, *passim*.

⁴²⁵ *Id.*

⁴²⁶ *Id.*

⁴²⁷ *Id.*

⁴²⁸ *Id.*

⁴²⁹ *Id.*

⁴³⁰ *Historical Overfishing and the Recent Collapse of Coastal Ecosystems*, 293 *SCIENCE* 629 (July 27, 2001).

⁴³¹ Lucinda Jacobs *2004/5 Assessment of Lingering Oil and Resource Injuries from the Exxon Valdez Oil Spill*, 2005 ALASKA MARINE SCIENCE SYMPOSIUM, January 24-26, 2005, Anchorage, Alaska, available at http://www.integral-corp.com/page.php?pname=news/article&article_id=42 (last visited April 30, 2005).

⁴³² Letter from Exxon to Tony Knowles, 1/25/2002.

⁴³³ 60 Minutes: Ten Years Later (CBS television broadcast, Mar. 21, 1999).

⁴³⁴ Lydia K. Bergen & Mark H. Carr, *Establishing Marine Reserves: How Can Science Best Inform Policy?*, *ENV'T*, Mar. 2003, at 10-11.

⁴³⁵ Replenishment occurs both through spillover of adults or juveniles out of reserves, as well as through the export of larvae or eggs that drift from the reserve to adjacent areas. Stephen R. Palumbi, Pew Oceans Commission, *MARINE RESERVES: A TOOL FOR ECOSYSTEM MANAGEMENT AND CONSERVATION* 27 (2002).

⁴³⁶ The famous Chenega Bay Native community whose name is embedded in the legal precedents of the spill has seen its population plummet to 42, less than half the pre-spill number. George Lewis, *Alaska Lives with an Unwanted Legacy*, MSNBC, March 24, 1999, at <http://msnbc.com/news/252495.asp> (last visited April 30, 2005).

⁴³⁷ Quoted in *ibid.*

⁴³⁸ <http://www.chugachmiut.org/index.html> (last visited April 30, 2005); <http://www.citci.com/> (last visited April 30, 2005) (Cook Inlet Tribal Council); <http://www.kanaweb.org/> (last visited April 30, 2005) (Kodiak Area Native Association); <http://www.ankn.uaf.edu/ansc.html> (last visited April 30, 2005) (Alaska Native Science Commission).

⁴³⁹ <http://www.redzone.org/v2/index.shtml> (last visited April 30, 2005) (Eyak Preservation Council); see <http://www.gregpalast.com/detail.cfm?artid=76&row=1> (last visited April 30, 2005) (*Nanwalek Rocks – Natives at Ground Zero of the Exxon Valdez oil spill: Index on Censorship*, *THE OBSERVER*, August 1, 1999).

⁴⁴⁰ *State of Ohio v. United States Department of Interior*, 880 F.2d 432 (D. D.C. 1989) (emphasis added); see Faith A. Bulger, *The Evolution of the "Grossly Disproportionate" Standard in Natural Resource Damage Assessments*, 45 *BAYLOR L. REV.* 459 (1993).

⁴⁴¹ *Id.* at 442.

⁴⁴² 1999 Keeble at 140-41.

– End of Endnotes –