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THE *EXXON VALDEZ* REOPENER: NATURAL RESOURCES DAMAGE SETTLEMENTS AND ROADS NOT TAKEN

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The 1989 Exxon Valdez oil spill caused extensive natural resource damage to the Prince William Sound. Lawsuits addressing this natural resource damage resulted in a settlement that required Exxon to pay \$900 million over time to trustees charged with spending this money to restore the damaged environment of the Sound and nearby areas. The settlement included a "Reopener Clause," which pledges Exxon to spend an additional \$100 million to fund restoration or rehabilitation of resources whose injuries were not foreseeable in 1989. This Article urges the State of Alaska and the United States to seek enforcement of the Reopener Clause, to restore natural resources and Native subsistence uses that were not addressed in the initial settlement and have not recovered from the Exxon Valdez oil spill. Alternatively, this Article urges Native entities to intervene in the case and seek enforcement of the Reopener Clause.

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This was the largest oil spill ever to have occurred in U.S. waters and the largest anywhere this far north.¹

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 spill killed more birds, contaminated more shoreline, covered more water, spawned more lawsuits, and ruined more lives than any oil spill in the history of this continent.²

The spill was so big that experts cannot agree on its volume, though it was clearly the largest spill in the United States. Exxon's figure, 10.8 million gallons, ranks it Number 34 in the "Top 65 Spills Worldwide," but more recent calculations—up to 30 million gallons—would bump it to Number 15 on the list.³ The spill's geographic reach is more obvious: oil reached to the far corners of Prince William Sound and way down the Alaska Peninsula.⁴

1. Symposium, *The Effects of the Exxon Valdez Oil Spill on the Alaskan Coastal Environment*, 1996 AM. FISHERIES SOC'Y SYMP. 18 (1996) (on file with author).

2. ALASKA OIL SPILL COMM'N, SPILL: THE WRECK OF THE *EXXON VALDEZ* 1, 5 (1990) [hereinafter 1990 OIL SPILL REPORT] (contaminated 1,244 miles of coastline); see also Robert E. Jenkins & Jill Watry Kastner, *Running Aground in a Sea of Complex Litigation: A Case Comment on the Exxon Valdez Litigation*, 18 UCLA J. ENVTL. L. & POL'Y 151, 153, 167 (1999–2000) (250,000 birds killed and 330 lawsuits); Steve Keeva, *After the Spill*, 77 Feb. A.B.A.J. 66, 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. ENVTL. L. REV. 511, 511 n.1 (1990) (within a month the oil had covered 1,000 square miles of state land and waters and 1,300 claims were filed).

3. Compare 1990 OIL SPILL REPORT, *supra* note 2, at 86 (listing top 65 spills) with RIKI OTT, SOUND TRUTH AND CORPORATE MYTH\$: THE LEGACY OF THE *EXXON VALDEZ* OIL SPILL 4–5 (2005) (estimating volume of 30 million gallons).

4. OTT, *supra* note 3, at xx (map displaying spread of oil from Mar. 24, 1989 to June 20, 1989).

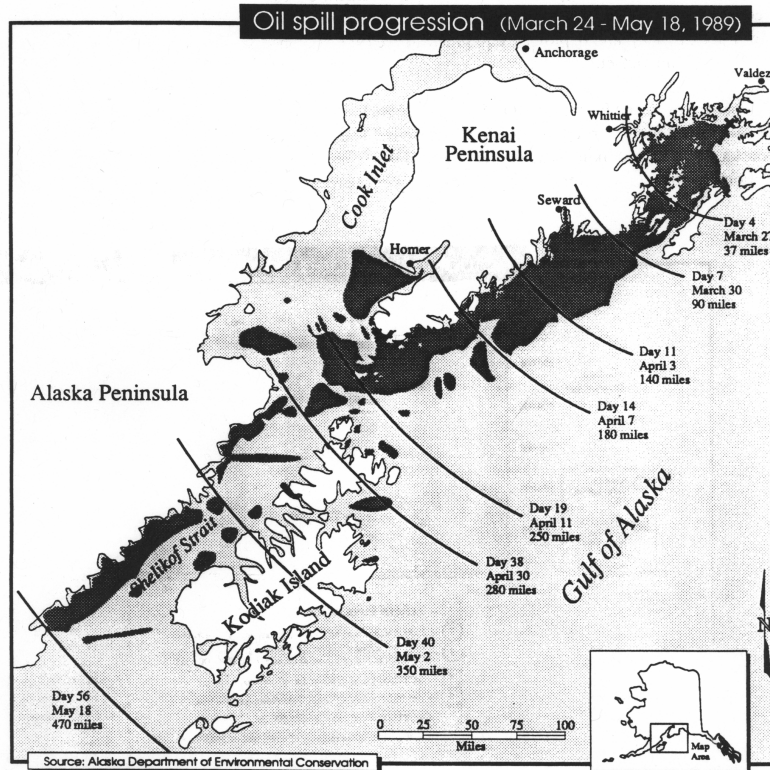


Figure 1. Spill: *The Wreck of the Exxon Valdez, Alaska Oil Spill Commission Final Report, State of Alaska, February 1990, p. 62.*

Despite its extensiveness, the lawsuits addressing the natural resources damage were settled amicably. On October 8, 1991 Judge H. Russel Holland approved a settlement among Exxon, the United States, and the State of Alaska.⁵ The agreement required Exxon to pay \$900 million over time to natural resources “trustees,” identified in the settlement documents as the United States and the State of Alaska.⁶ The Trustee Council, composed of three appointees of the United States and three from Alaska, would

5. [Consolidated] Agreement and Consent Decree, *United States v. Exxon Corp.*, Nos. A91-081-083 CV ¶¶ 6, 8 (D. Alaska, Oct. 9, 1991) [hereinafter Oct. 1991 Consent Decree].

6. *Id.* ¶¶ 8, 6(f).

spend this money to restore the damaged environment of Prince William Sound and nearby areas.⁷

Part of the inducement for this settlement was the so-called “Reopener clause,” titled in the Agreement and Consent Decree as a “Reopener for Unknown Injury.” 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.⁸

Resort to the Reopener is constrained by a filing requirement:

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.⁹

The Reopener helped seal the settlement. The governments told Judge Holland that it was an important hedge against miscalculations or excessive optimism, fueled by the desire to settle quickly.¹⁰ Early in the settlement process, Alaska and the federal

7. The provision also provides for reimbursement of legal costs. *Id.* ¶ 10; *see also* EVOS TRUSTEE COUNCIL, *EXXON VALDEZ OIL SPILL RESTORATION PLAN 5* (Nov. 1994), *available at* http://www.evostc.state.ak.us/pdf/restoration/restoration_plan.pdf [hereinafter *RESTORATION PLAN*].

8. Oct. 1991 Consent Decree, *supra* note 5, at ¶ 17.

9. *Id.* ¶ 19.

10. Governments’ Mem. in Support of Agreement and Consent Decree at 12, *United States v. Exxon Corp.*, No. A91-082 CV (D. Alaska 1991), *available at* http://www.evostc.state.ak.us/pdf/settlement/gov_memo100891.pdf [hereinafter *1991 Gov’t Consent Decree Mem.*] (applauding the “novel” Reopener provision and stating strict liability standard: “Exxon commits to pay up to \$100 million for

government announced they were looking for at least \$1 billion in damages.¹¹ Environmental Protection Agency (“EPA”) Administrator William Reilly “insisted” that the agreement contain \$300 million in a special compensation fund for additional, later-discovered damage to natural resources.¹² This demand underlies the Reopener clause in the final settlement agreement, and was opposed by Exxon executives from the start—the settlement negotiations nearly ran aground because of Mr. Reilly’s insistence on the Reopener.¹³ Exxon and Mr. Reilly compromised on a diminished Reopener, requiring Exxon to pay up to \$100 million after 2001, if necessary.¹⁴

This Article urges the State of Alaska and the United States to seek enforcement of the Reopener clause. To date, neither Alaska nor the federal government have requested any of the \$100 million Exxon may be required to pay to compensate for additional damages resulting from the oil spill. 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.* Modern natural resource damages (“NRD”) law is rooted in the common law public trust and *parens patriae* doctrines. The “public trust” doctrine arose in the 1892 *Illinois Central* case,¹⁵ and supports the idea that public resources must not be lost.¹⁶ The Alaska Constitution similarly reflects an understanding of the common ownership and stewardship of natural resources.¹⁷

restoration of unanticipated environmental harm, without any need for the Governments to establish Exxon’s liability.”).

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

12. *Id.*

13. *Id.*

14. *Id.*

15. Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 458 (1892).

16. *See id.*

17. *See* ALASKA CONST. art. VII, § 3 (“[w]herever occurring in their natural state, fish, wildlife and waters are reserved for the people for common use”); *see also* Gregory F. Cook, *The Public Trust Doctrine in Alaska*, 8 J. ENVTL L. & LITIG. 1, 5 (1993) (arguing that the Alaska Constitution implicitly adopts the public trust doctrine).

Parens patriae, “parent of the country,” protects the public trust by granting states standing to sue as guardians of natural resources.¹⁸ A leading case, *Georgia v. Tennessee Copper*,¹⁹ recognized a state’s quasi-sovereign interest in protecting its environment for its citizens: “[T]he 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.”²⁰

Another powerful underpinning of natural resource protection is the Indian trust doctrine.²¹ Because of history, tradition, religion, and cultural beliefs, the Native voice is often Nature’s voice:

Every part of this soil is sacred . . . 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 touch²²

The common law does not isolate who can speak for nature. There are at least three government voices (federal, state, and tribal), and sometimes many others. Moreover, nothing in the common law origins of NRD statutes eschews prevention in favor of restitution.

2. *Federal Natural Resource Damages Statutes.* Natural resource damages statutes build on these common law foundations, authorizing the federal government, states, and Indian tribes to act as trustees. The main statutes addressing hazardous substance spills are the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA” or “Superfund”)²³ and

18. See generally Note, *State Protection of Its Economy and Environment: Parens Patriae Suits for Damages*, 6 COLUM. J.L. & SOC. PROBS. 411 (1970).

19. 206 U.S. 230, 237 (1907).

20. *Id.*

21. Mary Christina Wood, *The Indian Trust Responsibility: Protecting Tribal Lands and Resources Through Claims of Injunctive Relief Against Government Agencies*, 39 TULSA L. REV. 355, 368 (2003) (“The Indian trust doctrine is perhaps the only source of law that can protect the natural landscapes, animals, and waters that sustain tribalism.”).

22. W.C. VANDERWERTH, INDIAN ORATORY: FAMOUS SPEECHES BY NOTED INDIAN CHIEFTAINS 121–22 (1971) (statement of Chief Seattle, Suquamish-Duwamish Indian).

23. 42 U.S.C. §§ 9601–9628 (2000).

the Oil Pollution Act of 1990 (“OPA”).²⁴ The tribal presence is confirmed in each.²⁵

Superfund addresses the clean-up of hazardous substances and counts NRD among recoverable response costs.²⁶ It specifies clean-up responsibilities and techniques. Superfund also makes clear that sums recovered as NRD by the United States or any state—but not by a tribe—are available “for use only to restore, replace, or acquire the equivalent” of natural resources.²⁷

OPA was a direct Congressional response to the *Exxon Valdez* spill, and it brought oil under the CERCLA regime.²⁸ It also defines “natural resources” to include tribal interests,²⁹ and it unmistakably includes subsistence use among the recoverable elements in an oil spill damages action: “[d]amages 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.”³⁰

OPA details the extent of liability to NRD trustees, the damages’ designation, and the damages’ function.³¹ Section 1006 requires all three trustees to “develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent” of the natural resources under their trusteeship.³²

3. *Tribes Left Out.* Notwithstanding Superfund and OPA’s clear inclusion of Indian interests, tribes were left out of the 1991 settlement because the *Exxon Valdez* claims were brought under

24. 33 U.S.C. §§ 2701–2728 (2000).

25. For instance, Superfund defines “natural resources” to include “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 . . . any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.” 42 U.S.C. § 9601(16) (2000). In contrast, the Clean Water Act lists only federal and state governments as trustees. 33 U.S.C. § 1321(f)(4). For a review 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 (1995–96).

26. 42 U.S.C. § 9601 (2000).

27. § 9607(f)(1).

28. 33 U.S.C. § 2702(a) (2000).

29. OPA’s definition mirrors CERCLA’s. See § 2701(20).

30. § 2702(b)(2)(C).

31. § 2706.

32. §§ 2706(c)(1)(C), (2)(B), (3)(B).

the Clean Water Act (“CWA”), whose 1977 amendments use the older, federal-and-state-only, trustee model.³³ Though tribes may be treated as states, they were not *sua sponte* brought in by any federal or state plaintiffs.³⁴ This outcome can be attributed to the conflict in Alaska over the status of Indian country, tribes, and the United States’ trust duty.³⁵ In short, despite the tribes’ great interest, none of the settlement parties wanted to include them.

4. *Alaska Native Villages and Tribes Hardest Hit.*

Never in the millennium of our tradition have we thought it possible for the water to die.³⁶

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.”³⁷

The omission of a tribal presence on the *Exxon Valdez* Trustee Council was not due to the spill’s chance neglect of village and tribal resources. Alaska Natives are the largest private landowners

33. See 33 U.S.C. § 1321(f)(4)–(5).

34. The spill was in 1989; in the 1987 CWA amendments, tribes won the right to be treated as “states” for various water pollution programs. See 33 U.S.C. § 1377(e) (2000). However, this right apparently did not extend to § 1321, the NRD provisions. See William H. Rodgers, Jr., *Treatment as Tribe, Treatment as State: The Penobscot Indians and the Clean Water Act*, 55 ALA. L. REV. 815, 818 (2004).

35. See *Alaska v. Native Vill. of Venetie Tribal Gov’t*, 522 U.S. 520, 523–24 (1998) (describing how the Alaska Native Claims Settlement Act (“ANCSA”) extinguished federal supervision over Indian affairs and resolved land claims by Alaska Natives). Notwithstanding this precedent, commentators recognize a tribal presence and the existence of a trust duty. See DAVID S. CASE & DAVID A. VOLUCK, *ALASKA NATIVES AND AMERICAN LAWS* 95–98 (2d. ed. 2002) [hereinafter CASE & VOLUCK]. Prior to *Venetie*’s interpretation of ANCSA, many commentators *assumed* a trust duty existed. See *id.* at 111–13 (ed. 1984) (four-part analysis of trust responsibility discussing Native lands, human services, subsistence, and self-government); FELIX S. COHEN, *HANDBOOK OF FEDERAL INDIAN LAW* 220–28 (1982 ed.); 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. 1990 OIL SPILL REPORT, *supra* note 2, at iv (quoting Water Meganinick, Sr., traditional village chief, Port Graham, in the wake of the spill).

37. *Id.* at 74–75.

in Prince William Sound.³⁸ The Chugach Alaska Corporation is “owned” by approximately 2,000 Native shareholders,³⁹ and within the region are twenty Native villages, including Chenega Bay, English Bay, Eyak, Port Graham, and Tatitlek.⁴⁰



Figure 2. Map Illustrating the Twenty Communities Affected by the Exxon Valdez Oil Spill. Courtesy of Dr. Usha Varanashi.

The massive news coverage of the spill mostly overlooked the Native story, focusing instead on a disaster narrative, turning quickly to the criminal aspects of the spill, and then emphasizing the environmental impact.⁴¹ By contrast, on the pages of the *Tundra Times*, the Native newspaper, ten of ten oil spill stories in April of 1989 emphasized the “subsistence narrative,” i.e., that “the very environment that gave them life could be dying.”⁴²

38. Patrick Daley with Dan O’Neill, “*Sad is Too Mild a Word*”: Press Coverage of the Exxon Valdez Oil Spill, *J. COMM.* 42, 42 (1991).

39. *Id.* at 50.

40. Dr. Usha Varanasi, Science & Research Director, Northwest Fisheries Science Center, NOAA, Presentation to NRD Seminar, Univ. of Wash. Sch. of Law (Feb. 2005) (on file with author).

41. Daley, *supra* note 38, at 50 (using ANCHORAGE DAILY NEWS and THE BOSTON GLOBE as mainstream barometers).

42. *Id.* at 50, 51.

5. *Chenega Bay Settlement*. Native groups opposed the 1991 settlement, objecting to the extent to which damage assessment information was made publicly available, the adequacy of compensation, and the absence of civil penalties.⁴³ Notably, however, no Native group in 1991 sought or demanded to become party to the federal-state-Exxon settlement. Further, in 1989-1991, no tribes were federally recognized, and thus they could be overlooked in the legal calculus.⁴⁴ One of the most active and effective groups in agitating against the settlement bowed out with a settlement of its own, in the case of *Native Village of Chenega Bay v. United States*.⁴⁵ Among other things, this settlement required Native groups to withdraw and waive any NRD claims arising from the spill, and stipulated that the federal and state governments could exclude Native groups from acting as trustees.⁴⁶

Although it was not an ideal settlement for Native plaintiffs, they were assured access to governmental research on spill damage, which was held confidential in anticipation of a huge NRD lawsuit that was never filed.⁴⁷ In addition, the *Chenega Bay* plaintiffs won the right to sue for monetary damages for cultural and subsistence losses.⁴⁸ However, this right proved worthless. When the Alaska Natives sued to recover damages for injuries to their “subsistence way of life,” the Alaska District Court dismissed their claim, holding that Alaska’s general population has a right to pursue a subsistence lifestyle.⁴⁹ The *Chenega Bay* settlement also anticipated that Native interests would be protected fully by the Trustee Council. This reliance was mistaken.

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

43. See 1991 Gov’t Consent Decree Mem., *supra* note 10, at 24 (listing seven categories of written objections to the consent decree).

44. Geoffrey D. Strommer & Stephen D. Osborne, “Indian Country” and the Nature and Scope of Tribal Self-Government in Alaska, 22 ALASKA L. REV. 1, 4-6 (2005).

45. Consent Decree and Stipulation of Dismissal, Native Vill. of Chenega Bay v. United States, No. A91-454 CV (D. Alaska, Sept. 24, 1991) [hereinafter *Chenega Consent Decree*].

46. *Id.* at ¶ 8.

47. On the conflicts over the “confidential” treatment of early research data, see OTT, *supra* note 3, at 206-07.

48. *Chenega Consent Decree*, *supra* note 45, at ¶¶ 7-9.

49. *In re Exxon Valdez*, No. A89-095 CV, 1994 WL 182856, at *2 (D. Alaska Mar. 23, 1994) (“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.”).

6. *Tribal Intervention to Enforce the Reopener.* Would it be possible at this late date for Alaska tribes to intervene in the NRD cases, for purposes of enforcing the Reopener? We think so.

This would not be the first attempt. In 1995, the non-profit Coastal Coalition sought permissive intervention for the purpose of establishing a post-decree monitor for the *Exxon Valdez* Oil Spill (“EVOS”) Trustee Council.⁵⁰ The federal government opposed the motion, arguing that: (1) it was untimely because there was no “live” case; (2) there was no common question of law or fact as required for permissive intervention under Federal Rule of Civil Procedure 24(b); (3) the Coastal Coalition presented no independent basis for jurisdiction, as required by Rule 24, to review Executive Branch restoration decisions; and (4) the Coastal Coalition had no standing to intervene because only third-party beneficiaries have non-party rights to enforce the terms of a consent decree.⁵¹ Furthermore, the federal government argued that, where it is party to a consent decree, it alone, on behalf of the public, may seek enforcement of the decree’s provisions.⁵²

Though the district court denied the Coastal Coalition’s motion, it was not a full denial.⁵³ The court did not address the issue of standing; rather, the court found it lacked jurisdiction to order the creation of a Review Commission.⁵⁴ But the court also held that the Coalition’s motion was timely filed, a review of the trustees’ activities would not unduly prejudice the parties, and common questions of law and fact existed between the motions to intervene and the main action.⁵⁵ With regard to jurisdiction, the court held that OPA did not apply but that independent jurisdiction might be found under Title 28, Section 1367 of the United States Code (supplemental jurisdiction).⁵⁶ Though the motion was denied, “the

50. Mot. to Intervene by Coastal Coalition, *United States v. Exxon Corp.*, No. A91-082 CV (D. Alaska, Mar. 29, 1995).

51. Opposition of the United States to the Coastal Coalition’s Mot. to Intervene, *United States v. Exxon Corp.*, No. A91-082 CV, at 3 (D. Alaska, Apr. 18, 1995) [hereinafter Apr. 1995 Opposition Motion].

52. *Id.* at 12.

53. Order (Mot. to Intervene), *United States v. Exxon Corp.*, No. A91-082 CV, at 9 (D. Alaska, May 17, 1995).

54. *Id.* at 7. In the *Exxon Valdez* consent decree, the district court retained jurisdiction over the implementation and enforcement of the agreement. Oct. 1991 Consent Decree, *supra* note 5, at ¶ 38.

55. Order (Mot. to Intervene), *United States v. Exxon Corp.*, No. A91-082 CV, at 6 (D. Alaska, May 17, 1995).

56. *Id.* at 7.

court [was] not unsympathetic with the Coastal Coalition's concerns"⁵⁷—perhaps the future will hold a more favorable decision.

An Alaskan tribe should be entitled to intervene under the Federal Rules of Civil Procedure, if: (1) the tribe claims an interest related to settlement, (2) the failure to intervene impairs its ability to protect that interest, and (3) the interest has not been adequately represented by the federal or state government.⁵⁸ These requirements should be easy to meet. The United States and the State of Alaska have not yet pursued the Reopener,⁵⁹ and an intervenor need only show that representation on its behalf “may be” inadequate.⁶⁰ The tribes were not recognized at the time of the settlement; they have not benefited from direct settlements or EVOS projects.⁶¹ Given the low prima facie inadequacy threshold, tribal intervention could at least shift the burden to the governments to prove 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.

Exxon will surely challenge the timeliness of tribal intervention, but under the circumstances, there could hardly be a more appropriate time. The timeliness of a motion to intervene “is to be determined from all the circumstances.”⁶² The tribe must then show why it is not too late, that Exxon and the governments will not be prejudiced thereby, and that there are legitimate reasons why the tribe did not intervene earlier.⁶³

As to the first element, though Exxon has made the last of its settlement payments, the case may still be pending because the Reopener window has not closed. Since the Reopener provides for unforeseen damages, and tribes can show such damages are real and will be relevant for decades to come, there seems to be no more fitting time to intervene than the present.

57. *Id.* at 8.

58. *See* FED. R. CIV. P. 24.

59. *See, e.g.*, Jim Carlton, *Groups Seek to Increase Bill for Exxon Spill*, WALL ST. J., Aug. 30, 2001, at B4; Lila Guterman, *Slippery Science*, 5 CHRON. HIGHER EDUC., Sept. 24, 2004, at A12.

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

61. According to the founder and director of the Eyak Preservation Council, “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. REV. 371, 375 (1999).

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

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

As to the delay, the governments' inaction as the Reopener deadline looms 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.⁶⁴ The burden was ultimately upon Exxon, the United States, and Alaska to join additional parties in order to ensure the judgment's binding effect.⁶⁵ With an approaching deadline, no ability to sue directly, and no sign from the governments of imminent joinder, intervention may be the tribes' last chance for a day in court.

Additionally, for a motion to intervene to succeed, the tribe must demonstrate that invoking the Reopener serves tribal interests. This should be simple—tribes could develop (and some have) a restoration plan worthy of the Reopener opportunity. Alternatively, a tribe could seek representation on the EVOS Council as a trustee. From there, a tribe might demand, for example, that money be spent on a study of how to best invest additional Reopener money.

An alternative to intervention is a tribal suit against the United States under the All Writs Act⁶⁶ for a mandamus order compelling enforcement of the consent decree's terms. When the conditions for invoking the Reopener are fully met, the government has a duty to invoke it. A line of cases in the Sixth Circuit confirms judicial authority to enforce a consent decree's terms against a non-party, if that party has frustrated the purposes of the decree or the administration of justice.⁶⁷ Here, if the federal government refuses to invoke the Reopener, and the Reopener is deemed necessary to fulfill the settlement goals, its conduct would frustrate the decree's purposes. It is not implausible that a non-party with an interest in the judgment could move the court for enforcement of the decree's terms, when a party fails to do so.

Finally, we believe the Indian trust doctrine is operative in Alaska. The federal responsibility towards Indians, according to the Department of the 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

64. Mem. of Agreement and Consent Decree, IV(C)(1), *United States v. Alaska*, A91-081 CV (D. Alaska Oct. 28, 1991).

65. *See* FED. R. CIV. P. 19.

66. 28 U.S.C. § 1651 (2000).

67. *See* *United States v. City of Detroit*, 329 F.3d 515 (6th Cir. 2003) (en banc), *vacated as moot*, 401 F.3d 448 (6th Cir. 2005) (but specifically preserving this aspect of the holding).

mandates of federal law with respect to American Indian and Alaska Native tribes.”⁶⁸ It is difficult to imagine how any version of this trust doctrine can be reconciled with a federal decision to leave ample amounts of oil on the properties and subsistence resources of Alaska Natives, while neglecting to compel delivery of money set out to fix the problem.

B. Disapproval of 1991 Settlement

In theory, Judge Holland could have disapproved the 1991 settlement and sent the litigation in a somewhat different direction, but practically, given the politics and pressures of the spill, this option was not available. In approving settlement, a court weighs whether the proposal is procedurally and substantively fair, reasonable, and compatible with underlying statutory goals.⁶⁹ Within these general contours hide a host of particulars, including whether the settlement is a product of arms-length negotiations, is reflective of uncertainties and litigation risks, or is convincing on its face.⁷⁰

The *Exxon Valdez* spill was a legal nightmare, as well as an ecological and economic disaster. Within hours of the catastrophe, Exxon was laying the groundwork for multiple assignments of blame and potential liability for the United States and Alaska, rendering settlement more attractive to these government actors.⁷¹ Further complicating the situation, baseline data for a pristine Prince William Sound would never be available (despite heroic efforts to secure it).⁷² Thus, pre-litigation science was controversial

68. See Dep’t of Interior, Office of American Indian Trust, American Indians and Alaska Natives, <https://www.denix.osd.mil/denix/Public/Native/Outreach/American/indian.htm> (last visited Oct. 6, 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) (emphasis added). For another discussion, see Mary C. Wood, *Origins and Development of the Trust Responsibility: Paternalism or Protection?*, Address before the Federal Bar Association 28th Annual Indian Law Conference (Apr. 10, 2003), http://www.law.uoregon.edu/faculty/mwood/docs/albuquerque_trust_speech.pdf.

69. *E.g.*, *United States v. Fort James Operating Co.*, 313 F. Supp. 2d 902, 906 (E.D. Wis. 2004).

70. See *generally id.* at 907–08 (analyzing a CERCLA consent decree).

71. See, *e.g.*, 1990 OIL SPILL REPORT, *supra* note 2, at 17–18 (Exxon immediately requested permission to use dispersants but the governments resisted, imposing a formal application requirement).

72. See OTT, *supra* note 3, at 251–53 (discussing the difficulties of obtaining baseline data for salmon).

and replete with competing, possibly misleading, studies.⁷³ There were no functional rules for calculating NRD. Contingent valuation studies done on the damage to the Sound varied between \$3 billion and \$15 billion,⁷⁴ but no one, not even federal litigators, had confidence in these estimates.⁷⁵

Rather, conventional wisdom holds that the case was settled on the back of an envelope in Washington, D.C. As the story goes, Governor Hickel demanded any settlement have a “B” in it. Potentially massive criminal penalties gave way to four misdemeanors and \$25 million in fines.⁷⁶ Of the \$1.25 billion in civil damages, fines, and restitution, \$125 million was “remitted” and vanished in an accounting gesture “in consideration” of the work Exxon had done in cleaning up the spill.⁷⁷ Another \$100 million was declared “restitution” and went to the federal government and the State of Alaska for “restoration projects” in Alaska.⁷⁸ These amounts were subtracted from the NRD portion of the settlement, leaving the EVOS Trustee Council with \$900 million.⁷⁹

The overall settlement was jeopardized by three particulars: the inadequacy of the criminal law disposition and its encroachment on the NRD fund; the understatement of injuries being forgiven and resolved; and the invention of conditions on the Reopener without basis in law. Only one of these objections was presented fully to Judge Holland.

73. Compare Carrie Gartner, *The Exxon Valdez Oil Spill: A Case Study in Institutional Apologia* 71–72 (1990) (unpublished Ph.D Thesis, Cal. State Univ., Fullerton) (on file with author) (describing interference with collection of dead birds) with Guterman, *supra* note 59, at A12 (describing allegations of scientific fraud). Compare 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 255, 255–83 (2001) with Edward S. Gilfillan et al., *Comment on Sampling Design Begets Conclusions*, 231 MARINE ECOLOGY PROGRESS SERIES 303, 303–08 (2002).

74. Gardner Brown, Group Meeting with NRD Seminar, Univ. of Wash. Sch. of Law (Feb. 2005) (on file with author); see also Michael Parrish, *Secret Studies Put Spill Damage at \$15 Billion*, L.A. TIMES, Oct. 8, 1991, at A1.

75. Brown, *supra* note 74.

76. Michael Parrish, *Exxon Reaches \$1.1 Billion Spill Settlement Deal*, L.A. TIMES, Oct. 1, 1991, at A1.

77. *Id.* Exxon was called “a good corporate citizen” based on its actions after the spill. Michael Parrish, *Judge Approves \$1.125 Billion Oil Spill Settlement*, L.A. TIMES, Oct. 9, 1991, at A1.

78. Parrish, *supra* note 76, at A1.

79. See *id.*

1. *The Criminal-Civil Case Confusion.* The Exxon Shipping Company and the Exxon Corporation faced five criminal charges as a result of the spill. 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.⁸⁰ By including claims under the Refuse and Migratory Bird Treaty Acts, the government was able to hold Exxon strictly liable for the spill, in a settlement-encouragement endeavor.⁸¹ In March 1991, Exxon Shipping agreed to plead guilty to all three misdemeanors, and the Exxon Corporation agreed to plead to the Migratory Bird Treaty Act misdemeanor. The parties concluded that a \$100 million criminal penalty was appropriate.⁸²

On April 24, 1991, federal district court Judge H. Russel Holland rejected the \$100 million plea agreement as insufficient.⁸³ Judge Holland declared the fines an inadequate deterrent: "I'm afraid these fines send the wrong message, suggesting that spills are a cost of business that can be absorbed."⁸⁴

Of particular concern was Exxon's lack of remorse regarding the impacts of the spill. There was also concern that an approved settlement might have an adverse impact on the claims of the Alaska Natives.⁸⁵ Part of the discovery process was designed to ascertain if Exxon planned to use the government settlement to hinder potential claims by Alaska Natives.⁸⁶ Exxon Chair Lawrence Rawl asserted that Exxon did not consider these claims during the settlement process;⁸⁷ to shore up settlement negotiations with Exxon, federal and state authorities negotiated an agreement with the *Chenega Bay* plaintiffs and other Native groups whereby the governments reserved the exclusive right to recover for NRD on public lands, including those used for subsistence living, and the

80. See Ronald J. Ostrow, *Exxon Agrees to Pay \$1 Billion for Alaska Spill*, L.A. TIMES, Mar. 14, 1991, at A1.

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

82. See Ostrow, *supra* note 80, at A1.

83. Patrick Lee, *Exxon-Alaska Civil Oil Spill Pact Collapses*, L.A. TIMES, May 4, 1991, at A1; Alanna Sullivan et al., *Judge Rejects Exxon Alaska-Spill Pact*, WALL ST. J., Apr. 25, 1991, at A3.

84. Jenkins & Kastner, *supra* note 2, at 183 (quoting Keith Schneider, *Judge Rejects \$100 Million Fine for Exxon in Oil Spill as Too Low*, N.Y. TIMES, Apr. 25, 1991, at A1).

85. *Id.*

86. *Id.*

87. *Id.* at 184.

Native groups retained the right to pursue their private claims.⁸⁸ On September 25, 1991, Exxon and the governments signed a new settlement agreement that was subsequently approved by the Alaska Legislature and accepted by Judge Holland.⁸⁹

The approved settlement was strikingly similar to the earlier proposal, which was rejected as inadequate.⁹⁰ This time, Judge Holland commended Exxon for its efforts, calling Exxon a “good corporate citizen.”⁹¹ The settlement included \$150 million in fines, with \$100 million for restitution to be split between the state and federal governments.⁹² However, Exxon paid only \$25 million in fines to the North American Wetlands Conservation and the Victim Compensation and Assistance Act accounts.⁹³ In consideration of Exxon’s cooperation in the clean-up, the court forgave \$125 million in criminal fines.⁹⁴ Concurrently, the district court approved a civil settlement where Exxon would pay \$900 million over ten years, plus an additional \$100 million Reopener, if warranted, for environmental damages.⁹⁵

Notably, the civil and criminal components were closely linked. Nine days after Judge Holland rejected the initial criminal settlement, Exxon and Alaska withdrew from civil settlement negotiations.⁹⁶ The Alaska House of Representatives supported Judge Holland’s decision, voting 27-13 to reject the settlement and to seek \$1.2 billion: \$700 million for civil claims and \$500 million in criminal fines.⁹⁷ While it is difficult to identify motives, some people were concerned about the impact of the settlement on the claims of non-participating parties, Alaska Natives in particular.⁹⁸ From a legal strategy perspective, it made sense for Exxon to settle the criminal and civil claims simultaneously, with exchanges and trade-offs crossing civil-criminal boundaries. This conclusion is evidenced by the settlements being referred to as a single “\$1.125 billion deal.”⁹⁹

88. *Id.*

89. *Id.*

90. Parrish, *supra* note 76, at A1.

91. Parrish, *supra* note 77, at A1.

92. GEN. ACCOUNTING OFFICE (“GAO”), REP. NO. B-254199, USE OF EXXON VALDEZ OIL SPILL SETTLEMENT FUNDS 4 (1993).

93. *Id.*

94. *Id.*

95. Parrish, *supra* note 77, at A1.

96. Lee, *supra* note 83, at A1.

97. *Id.*; see *Alaska House Rejects Exxon Deal*, CHI. TRIB., May 3, 1991, at 3.

98. Jenkins & Kastner, *supra* note 2, at 183–84.

99. Parrish, *supra* note 76, at A1.

As for *Exxon Valdez* Captain Hazelwood's fate, he was acquitted on charges of driving a watercraft while intoxicated, reckless endangerment, and criminal mischief, but was convicted of negligent discharge of oil. Ultimately, he was sentenced to a \$1,000 fine, \$50,000 in reparations, and ninety days in jail. The sentence was suspended in lieu of completing 1,000 hours of community service.¹⁰⁰

2. *The 1991 "Baseline" Document: Settling the Unknown.* Anyone intent on activating the Reopener must look closely at the description of known effects at the time of the 1991 settlement. The provision in the October 1991 Consent Decree is denominated "Reopener for Unknown Injury" and applies only to damages that are now recoverable but could not have been reasonably known or anticipated in 1990-1991.¹⁰¹ Thus any inquiry turns to what was known and what could have been anticipated.

The National Oceanic and Atmospheric Administration ("NOAA") compiled a summary of studies into a preliminary estimate ("Summary of Injuries") caused by the *Exxon Valdez* oil spill.¹⁰² This document served as a foundation for the settlement negotiations, but it does not clearly state what was known or anticipated in 1990-1991.

Because of the biodiversity of Prince William Sound, this document was difficult to create—most of the studies were inconclusive as to the numbers of animals killed and even what species were affected. It is not surprising that the spill's potential long-term effects were not fully articulated. In many respects, investigation had barely begun when the report was published, two years after the spill. NOAA labeled the document "preliminary," imply-

100. William A. Lovett, *Exxon Valdez, Punitive Damages and Tort Reform*, 38 TORT TRIAL & INS. PRAC. L.J. 1071, 1085 (2003). Originally, Superior Court Judge Karl Johnstone wanted Hazelwood to spend his community service hours hand-scrubbing rocks in the affected areas. See CBS News, *Exxon Valdez Restitution Paid*, <http://www.cbsnews.com/stories/2002/05/16/national/main509364.shtml> (May 16, 2002). By 1999, when the eight-year appeals process ended and Hazelwood's sentence was approved, the clean-up effort had been abandoned. *Id.* Instead, Hazelwood fulfilled his community service by clearing litter and working in a soup kitchen. *Exxon Valdez Captain Is Serving His Sentence in a Soup Kitchen*, DODGE CITY DAILY GLOBE, June 23, 1999, available at http://www.dodgeglobe.com/stories/062399/new_exxon.shtml.

101. Oct. 1991 Consent Decree, *supra* note 5, at ¶ 17.

102. Summary of Injuries to Natural Resources as a Result of the *Exxon Valdez* Oil Spill, 56 Fed. Reg. 14,687 (Apr. 11, 1991).

ing a lack of reliable information for the purposes of litigation or settlement.

The lack of a complete, accurate damages valuation suggests the political nature of the settlement. At the same time, it reinforces the logic behind and need for the Reopener clause: governments were meant to revisit the claim later, after a full study of the damages. Exxon, through payments to the Trustee Council, would fund the studies later to be used as evidence of further injury.

Again, the Summary of Injuries was very preliminary; it openly stated that more time was needed to evaluate the oil spill damages.¹⁰³ The document discussed thirty-two species, in addition to the intertidal and subtidal ecosystems and archaeological resource damage. Of the thirty-two species, twenty-five needed further assessment to determine the extent of harm. The Summary of Injuries explained the difficulty of knowing how many animals died from the spill, especially during the initial impact. Its predictions were estimates.

Moreover, there was (and is) no indication in the Summary of Injury that any long-term effects were anticipated, though they were regarded as a possibility. With the benefit of hindsight, a National Research Council study determined in 2003:

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.¹⁰⁴

The 1991 settlement was thus approved despite a measure of ignorance. The unexpected soon would be revealed and reflect dire circumstances. The Reopener, a clause the governments did not expect to invoke,¹⁰⁵ now offers an opportunity to hold Exxon accountable for the extent of the damage it caused.

C. A Reconstituted and Better-Directed Council

It is trivial, perhaps, to suggest that a different Trustee Council might have gone in another direction. But it might be useful to ex-

103. *Id.* at 14,694.

104. COMM. TO REVIEW THE OIL SPILL RECOVERY, NAT'L RESEARCH COUNCIL, PAST, PRESENT, AND FUTURE DIRECTIONS 51 (2003).

105. See 1991 Gov't Consent Decree Mem., *supra* note 10, at 28.

plore what potentially is 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 have been accused of inefficiency, ineptitude, and self-dealing. Allegations against the EVOS Trustee Council include: inefficient use of recovered funds, abuse of settlement authority for the benefit of Potentially Responsible Parties (“PRPs”), preclusion of private claims, open conflicts where trustees are PRPs, and problems inherent in concurrent trustee jurisdiction.¹⁰⁶

First, NRD trustees may be taken to task for spending too much money on administrative costs and not enough on restoration, rehabilitation, and acquisition of the equivalent of damaged resources.¹⁰⁷ 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.”¹⁰⁸ 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 Trustee Council also acquired land in and around Prince William Sound at a cost one-and-one-half times the appraised value.¹⁰⁹

106. See, e.g., Kevin R. Murray et al., *Natural Resource Damage Trustees: Whose Side Are They Really On?*, 5 ENVTL. LAW. 407 (1999); Laura Rowley, *NRD Trustees: To What Extent Are They Truly Trustees?*, 28 B.C. ENVTL. AFF. L. REV. 459 (2001); Rhoda L. White, Comment, *Natural Resource Damages: Trusting the Trustees*, 27 SAN DIEGO L. REV. 407 (1990).

107. For example, in 1995 the Cantara Trustee Council, formed to oversee funds recovered from a train derailment that spilled 19,000 gallons of herbicide into the Sacramento River, announced it would spend the \$14 million in recovery damages on a variety of projects not affecting the river. See GAO, REP. NO. B-270985, SUPERFUND: OUTLOOK FOR AND EXPERIENCE WITH NATURAL RESOURCE DAMAGE SETTLEMENTS 24 (1996).

108. Press Release, EPA, Browner Announces Availability of *Exxon Valdez* Funds for Chesapeake Bay Watershed Protection Projects (Mar. 19, 1997), <http://www.epa.gov/newsroom/newsreleases.htm>.

109. Through 1997, the trustees acquired nine parcels at a cost of \$234 million, with an appraised value of only \$150 million. GAO, REP. NO. B-280449, STATUS OF PAYMENTS AND USE OF *EXXON VALDEZ* OIL SPILL SETTLEMENT FUNDS 14 (1998). Three of the parcels were subject to ANCSA, offering a degree of protection from development and some restrictions on the land’s use. Department of the Interior officials believed those protections and restrictions were difficult to act upon. *Id.* at 18. The solution was to re-purchase the land.

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 a disposition to avoid offense to oil. Silence on the Reopener thus seems predictable.

Third, government trustees may try to protect their exclusive authority to assert NRD claims.¹¹⁰ The *Exxon Valdez* litigation confirms the federal and state governments' monopoly in this regard.¹¹¹

Fourth, in some instances the federal or state government will be simultaneously a PRP and a trustee, such as where the federal government is responsible under CERCLA for cleaning up military facilities. The *Exxon Valdez* spill produced a similar conflict for the State of Alaska, which faced potential liability from thousands of fishermen, property owners, and Alaska Natives.¹¹²

Finally, the statutory scheme establishing multiple NRD trustees has built-in coordination and cooperation difficulties.¹¹³ The EVOS Trustee Council, comprised of three state and three federal nominees, labors under a unanimity requirement for all Trustee Council actions.¹¹⁴

The Council also faces a practical problem related to the definition of natural resources, which "includes the 'services' provided by the natural resources on which the villages and local . . . econom[ies] depend."¹¹⁵ In 1989, the National Wildlife Federation ("NWF") conducted a series of public hearings with Alaska resi-

110. Compare Clean Water Act, 33 U.S.C. § 1321(f)(5) (2000) (authority to recover damages held by a trustee selected by the government) with Oil Pollution Act of 1990, 33 U.S.C. § 2702(b)(2)(C) (2000) (damages recoverable by any claimant injured by the loss of natural resources).

111. See *Alaska Sport Fishing Ass'n v. Exxon*, 34 F.3d 769, 774 (9th Cir. 1994) (res judicata prevents private parties from recovering where a public trustee has already recovered for the same injury).

112. See, e.g., *Eyak Native Vill. v. Exxon*, 25 F.3d 773, 778 (9th Cir. 1994).

113. See Trustees for Natural Resources, 40 C.F.R. § 300.615(a) (2004) (anticipating need for cooperation among multiple trustees).

114. *Exxon Valdez* Oil Spill Trustee Council, General Operating Procedures pt. II-1 (July 9, 2002), <http://www.evostc.state.ak.us/pdf/admin/progeneralop.pdf>.

115. SALLY K. FAIRFAX & DARLA GUENZLER, CONSERVATION TRUSTS 74 (2001).

dents.¹¹⁶ The compilers noted many aspects of Alaskan life that could not be simply measured or restored by the trustees, despite their best efforts to repair the ecosystem and replenish natural resources. The hearings testimony disclosed increased drug and alcohol abuse, a rise in child neglect and abuse, overloaded mental health facilities, and increased suicide rates.¹¹⁷ Communities were divided between long-term residents and those who came to Alaska in search of high-paying clean-up jobs. Businesses lost employees who abandoned their longtime positions to profit from the clean-up effort. With the increase in people came an increase in crime, waste, and traffic.¹¹⁸ In short, any attempt the EVOS trustees made to restore natural resources could not alleviate the economic, environmental—even psychological—suffering of local communities directly related to the spill.¹¹⁹

2. Performance of the EVOS Trustee Council.

a. *The Slow Start: “They Paid Themselves.”* Between 1989 and 1991, the Trustee Council published three versions of its assessment plan to identify the damages caused by the *Exxon Valdez* spill.¹²⁰ The plans were prepared pursuant to CERCLA regulations acknowledging the government’s standing to sue for NRD recovery. CERCLA also requires the Department of the Interior to develop procedures for assessing NRD.¹²¹ Consequently, the Department published regulations for simple “Type A” assessments and more complex “Type B” assessments.¹²² In providing for two procedures, Congress “envisioned generally that Type A rules would cover most minor releases and Type B rules would cover large or unusually damaging releases.”¹²³ Based on the magnitude

116. *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 NWF in cooperation with Natural Resources Defense Council (“NRDC”), the Wildlife Federation of Alaska, and the Windstar Foundation).

117. *Id.* at 37.

118. *Id.*

119. The Native populations, dependent on ecosystems damaged by the *Exxon Valdez* spill, suffered psychological and cultural harm to their subsistence way of life. For Natives, simple clean-up efforts could not compensate for the intangible losses suffered “the day the water died.” *Id.* at 44–45.

120. See Christine Cartwright, Comment, *Natural Damage Assessment: The Exxon Valdez Oil Spill and Its Implications*, 17 RUTGERS COMPUTER & TECH. L.J. 451, 461–62 (1991).

121. 42 U.S.C. § 9651(c) (2000).

122. Cartwright, *supra* note 120, at 466.

123. *Colorado v. U.S. Dep’t of the Interior*, 880 F.2d 481, 487 (D.C. Cir. 1989).

of the *Exxon Valdez* oil spill, the Trustee Council was clearly correct in adopting a Type B assessment methodology.¹²⁴

The first assessment plan, published in 1989, proposed nine studies to quantify the economic value of the damaged resources.¹²⁵ Only one study examined the market value of lost services to humans.¹²⁶ Around this time, the D.C. Circuit Court in *Ohio v. Department of the Interior*¹²⁷ reviewed Type B regulations, holding that “market prices are not acceptable as primary measures of the use values of natural resources.”¹²⁸ The next plan, proposed in 1990, reflected *Ohio*’s influence: the Council sought to evaluate the intrinsic value of natural resources impacted by the Exxon spill.¹²⁹ In revising the studies, the Council included measures to assess the cost of restoring, replacing, or acquiring the equivalent of the damaged resources.¹³⁰ The 1991 plan reiterated the methods of the 1990 studies and looked at increases in the market price of petroleum on consumers. Building on *Ohio*, this plan better approximated the total NRD value caused by the spill.¹³¹ The 1991 plan estimated damages in excess of \$3 billion, a shocking figure that likely facilitated settlement—for one-third of that amount.¹³²

Through 1992, Exxon paid two annual installments (for a total of \$240 million) of the \$900 million owed under the civil settlement.¹³³ Of this, \$107 million was returned to federal and state agencies as reimbursement for pre-settlement clean-up and damage assessment costs.¹³⁴ An additional \$40 million was offset against

124. Cartwright, *supra* note 120, at 469–70.

125. The proposed studies included: (1) effects on commercial fishery prices; (2) changes in fishing industry costs; (3) use value of commercial fisheries; (4) effect on value of public land; (5) economic injuries to recreational users of natural resources; (6) value of impact to resources relied on by subsistence users; (7) loss of intrinsic value of resources; (8) economic damage to research programs; and (9) economic damage to archaeological sites. *Id.* at 479–81.

126. Deborah S. Bardwick, *The American Tort System’s Response to Environmental Disaster*, 19 STAN. ENVTL L.J. 259, 270 (2000).

127. 880 F.2d 432 (D.C. Cir. 1989).

128. *Id.* at 463.

129. Bardwick, *supra* note 126, at 271 (specifically, the plan included contingent valuation of recreational activities and intrinsic values of lost subsistence uses and uses of archaeological sites).

130. Cartwright, *supra* note 120, at 483.

131. *Id.* at 488.

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

133. GAO, REP. NO. B-254199, *supra* note 92, at 5.

134. *Id.*

Exxon's payments for clean-up costs incurred in 1991.¹³⁵ Sadly, this reimbursement paid for a poorly managed effort:¹³⁶ workers looted archaeological sites,¹³⁷ beaches were gravely damaged by hot water scouring,¹³⁸ and dispersants further contaminated the beaches.¹³⁹ Even the General Accounting Office ("GAO") saw room for improvement, recommending that federal and state trustees work proactively and cooperatively to spend the billion dollars more effectively.¹⁴⁰

Use of the civil settlement funds, less the reimbursements, has been charted by Patty Brown-Schwalenberg, executive director of the Chugach Regional Resources Commission as follows:

135. *Id.* at 3.

136. *See* SHARON E. MCCLINTOCK, OILED COMMUNITIES RESPONSE INVESTIGATION REPORT, *in* 1990 OIL SPILL REPORT, *supra* note 2, at 36 ("The effort to clean the oil was viewed as ridiculous. Every time workers would attempt to [clean] 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.'" . . . "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. . . . Gore Point remained mired in oil.")

137. IMPACT ASSESSMENT, INC., *EXXON VALDEZ OIL SPILL, CLEANUP, AND LITIGATION: A COLLECTION OF SOCIAL-IMPACTS INFORMATION AND ANALYSIS* 73–74 (2001), *available at* <http://www.mms.gov/alaska/reports/2003andOlderRpts/EVOS/volume5.pdf>.

138. *Id.*

139. *Id.*

140. GAO, REP. NO. B-254199, *supra* note 92, at 6–7 (recommending "[a]mong other things, [that] 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.").

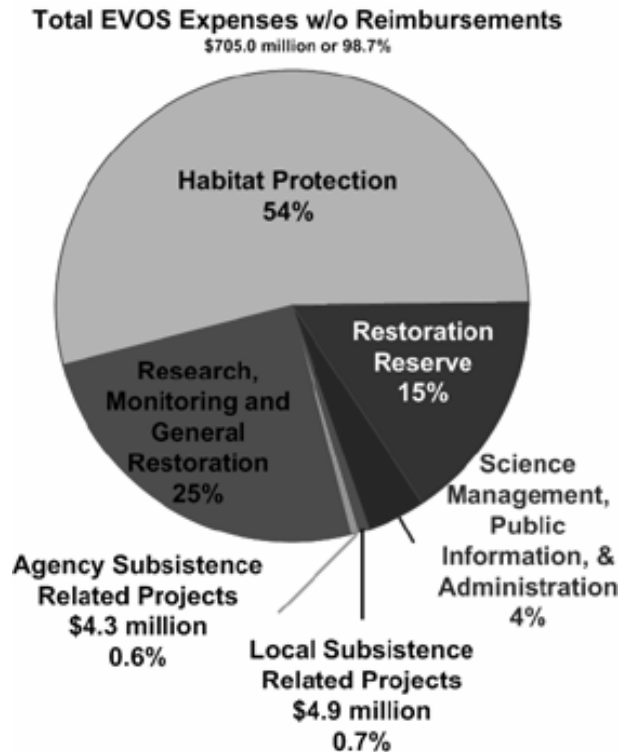


Figure 3. Total EVOS Expenses Without Reimbursements. Courtesy of Patty Brown-Schwalenberg.¹⁴¹

b. Mid-Course Correction: The Tanker Blockade. It is tempting to conclude the EVOS Trustee Council’s “eureka moment” occurred when Alaska’s salmon fishing fleet blockaded tanker access to Valdez in the fall of 1993.¹⁴² An August 1993 GAO report had criticized the Council’s procedures and outlays.¹⁴³ This

141. Patty Brown-Schwalenberg, *The Exxon Valdez Oil Spill: Impacts and Response from a Tribal Perspective* 14 (Chugach Regional Resources Comm’n, Jan. 2004) (draft paper for presentation, on file with author).

142. JOHN KEEBLE, *OUT OF THE CHANNEL: THE EXXON VALDEZ OIL SPILL IN PRINCE WILLIAM SOUND* 323–25 (1999).

143. GAO, REP. NO. B-254199, *supra* note 92, at 3. Of the \$240 million paid by Exxon through 1992, by February 1993 only \$19 million had been spent on damage assessment, restoration, and administrative costs. Of this, only \$5.7 million went towards restoration—this was approximately 2.4% of the amount paid by Exxon to that point. Of the remaining \$240 million, \$107 million reimbursed federal and state agencies and \$40 million reimbursed Exxon for response costs, and \$74 million remained in trust for future work. *Id.*

was not news to local fishers, who were painfully aware of the lack of progress on restoration and quite familiar with the shell-game features of Council expenditures.¹⁴⁴ Knowing that Secretary of the Interior Bruce Babbitt was in Alaska, and that Exxon's ship *Sea River Baton Rouge* was due to enter the port of Valdez on August 19, a fishing fleet set up a blockade across the inlet, intending to escort the ship to the terminal.¹⁴⁵ The fishers hoped to raise awareness of their condition, but with advance knowledge of the blockade, Exxon delayed the ship's approach.¹⁴⁶ Other tankers also delayed entry, not wanting to take the heat intended for Exxon.¹⁴⁷ For possibly the first time since the opening of the Trans-Alaska pipeline, there were no tankers within Prince William Sound.¹⁴⁸ Sympathy was definitely in the fishers' favor—Governor Walter Hickel declared, “[i]f I were a fisherman, I'd probably be out there too.”¹⁴⁹ 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 for a promise to investigate their complaints against the Council.¹⁵⁰ The Council was responsive and began to finalize agreements for purchase of land and conservation easements on important forest habitat.¹⁵¹

The Council also commenced a monitoring and research program that has grown in scope and intensity over time.¹⁵² Council reports claim to have invested approximately \$170 million on “hundreds of research, monitoring, and general restoration projects,”¹⁵³ to investigate the spill's impact on a wide variety of species, recreation, archaeological resources, and subsistence uses.¹⁵⁴

The EVOS Council also has encouraged large-scale ecosystem studies, funding three long-term projects to assess ecosystem health. The Sound Ecosystem Assessment (“SEA”) project is the most ambitious, focusing on the spill's impact on herring and pink salmon fisheries, and funded at \$22.4 million over a seven-year pe-

144. KEEBLE, *supra* note 142, at 323–24.

145. *Id.*

146. *Id.*

147. *Id.*

148. *Id.*

149. *Id.* at 324–25.

150. *Id.*

151. *Id.*

152. *Id.*

153. EVOS Trustee Council, Restoration Project Highlights, <http://www.evostc.state.ak.us/restoration/highlights.html> (last visited Oct. 3, 2005).

154. For a list of project final reports, *see* <http://www.evostc.state.ak.us/restoration/projects.html> (last visited Oct. 3, 2005).

riod.¹⁵⁵ The Council also funded the Alaska Predator Ecosystem Experiment (“APEX”), a five-year, \$10.8 million project begun in 1996.¹⁵⁶ APEX investigated the general hypothesis that low food abundance contributed to the decline of seabird and marine mammal populations in Prince William Sound.¹⁵⁷

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 five years.¹⁵⁸ The NVP project focused on four species, two that feed on fish (river otters and pigeon guillemots) and two that feed on shellfish (sea otters and harlequin ducks).¹⁵⁹ Despite its efforts, the Council could only study a fraction of the 128 species killed in the *Exxon Valdez* spill; there was no follow-up research on marine invertebrates.¹⁶⁰

Additionally, the Council’s most conspicuous “restoration” was the acquisition of a number of Native corporation properties that were slated for clear-cutting.¹⁶¹ Although the impetus for this action mostly came from environmentalists, the Native entities benefited from less-than-fee transfers.¹⁶² However, strong and cogent objection was raised as 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.¹⁶³

155. EVOS Trustee Council, Ecosystem Based Research, <http://www.evostc.state.ak.us/restoration/ecosystem.html> (last visited Oct. 3, 2005).

156. OTT, *supra* note 3, at 319.

157. See Alaska Predator Ecosystem Experiment, <http://www.fakr.noaa.gov/oil/apex.htm> (last visited Oct. 3, 2005).

158. EVOS TRUSTEE COUNCIL, MECHANISMS OF IMPACT AND POTENTIAL RECOVERY OF NEARSHORE VERTEBRATE PREDATORS FOLLOWING THE 1989 EXXON VALDEZ OIL SPILL, FINAL REPORT 1 (2002), available at http://www.evostc.state.ak.us/pdf/final_reports/025chapters01.pdf.

159. *Id.* at 1.6–1.8.

160. KEEBLE, *supra* note 142, at 140–41.

161. See Lankard, *supra* note 61, at 375–76 (discussing the forced transfer of Native land rights to the government in exchange for an environmental restoration program funded by Exxon damages).

162. An especially effective voice has been Mr. Rick Steiner, Director of the Coastal Coalition, who has inundated authorities with a well-reasoned stream of correspondence. Steiner suggests that \$30 million of the Reopener could be used to buy back and shut down the commercial herring fishery, causing a rebound in herring stocks that would benefit the entire ecosystem. See Joel Gay, *Herring Buyback Urged*, ANCHORAGE DAILY NEWS, Oct. 31, 2002, at B1.

163. Act of Feb. 8, 1887, ch. 119, Pub. L. 108-498, 24 Stat. 388, 388–91 (1887) (providing for the allotment of lands in severalty to Indians on the various reserva-

c. Natives Left Out Again. The EVOS Trustee Council, made up exclusively of state and federal employees, was less than extravagant in the allotment of funds towards the restoration of Native resources, even though Native villages were in the middle of the spill area¹⁶⁴ and the disaster interfered dramatically with subsistence harvests.¹⁶⁵ Alaska Natives seemed an afterthought to the Council—five years passed before Council personnel became involved with Native communities in the spill area.¹⁶⁶

In 1994, the Council made its initial foray into the realm of Traditional Ecological Knowledge (“TEK”) when the Council developed a handbook illustrating how its biologists could integrate TEK into data collection.¹⁶⁷ They also interviewed community members to document historical distribution patterns of various species.¹⁶⁸ Between 1995 and 2001, the Council engaged facilitators (typically tribal government employees) from ten affected communities to increase communication between the Council and community members.¹⁶⁹ Just over \$6 million from the settlement with Exxon was appropriated to the Alaska Department of Community and Economic Development (“DCED”) in order 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.”¹⁷⁰ The grants went to the nine non-incorporated communities of Tatitlek, Chenega Bay, Port

tions and extending the protection of U.S. law over the Indians). For this piece of regrettable history, see D.W.C. Duncan, *How Allotment Impoverishes the Indians: Testimony Before a Senate Comm. Investigating Conditions in the Indian Territory* (1906), reprinted in GREAT DOCUMENTS IN AMERICAN INDIAN HISTORY 286 (W. Moquin & C. Van Doren eds., 1995).

164. Varanasi, *supra* note 40.

165. See 1990 OIL SPILL REPORT, *supra* note 2, 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 also Robert Duff, Director, Wash. Office of Env’tl Health Assessments, Persistent Problem: Widespread Chemical Contamination of Fish, Presentation at the Univ. of Or. Env’tl Law Conference (Mar. 2005); cf. Robert J. Wolfer, *Local Traditions and Subsistence: A Synopsis from Twenty-Five Years of Research by the State of Alaska*, Dep’t of Fish & Game, TECH. PAPER No. 284 (2004).

166. See EVOS TRUSTEE COUNCIL, EVOS TRIBAL AND COMMUNITY INVOLVEMENT 2 (2002), available at <http://www.evostc.state.ak.us/pdf/comminvrpt.pdf>.

167. *Id.* at 4.

168. *Id.* at 3.

169. *Id.* at 1–2.

170. *Id.* at 4.

Graham, Nanwalek, Karluk, Chignik Lake, Chignik Lagoon, Per-ryville, and Ivanof Bay.¹⁷¹ The three Alaska state representatives on the Trustee Council are responsible for determining whether grants are awarded.¹⁷² As of 2002, twenty-four projects had been funded with these grants.¹⁷³

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”).¹⁷⁴ Exxon also played a role: in July 1989, Exxon and NOAA entered into a Memorandum of Understanding related to the “Sampling and Analysis of Subsistence Food Resources.”¹⁷⁵ This crucial information on food warnings for subsistence users fell victim to the general embargo on litigation-sensitive studies and was not released, even in preliminary form, until March 1991.¹⁷⁶ Public review was pushed back to 1993.¹⁷⁷

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 clean-up workers. These meetings were two months before the [Oil Spill Health Task Force] sponsored community meetings would begin. Exxon proceeded to arrange with . . . [Native organizations] to hold a series of village meetings. Exxon also wanted to present the early risk-assessment results from the [Food and Drug Administration] and the sensory test results from the [Alaska Department of Environmental Conservation] laboratory 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.*¹⁷⁸

The independent experts evaluating the impact of the spill on subsistence food resources reported on the “Crisis, Confusion, and

171. *Id.*

172. *Id.*

173. *Id.*

174. *See generally* SOC’Y OF ENVT’L TOXICOLOGY AND CHEMISTRY, EVALUATING AND COMMUNICATING SUBSISTENCE SEAFOOD SAFETY IN A CROSS-CULTURAL CONTEXT: LESSONS LEARNED FROM THE EXXON VALDEZ OIL SPILL (1999).

175. *Id.* at 317; *see also id.* at 243 (“Exxon made subsistence food safety a priority and designed a sampling program to be conducted in all spill areas (except the Alaska peninsula) over a period of weeks.”).

176. *Id.* at 246.

177. *Id.*

178. *Id.* at 243–44 (emphasis added).

Uncertainty Among Alaska Native Communities in the Oil Spill Area.”¹⁷⁹ They found a lack of leadership due to the fact that there was no agency or organization with a “clear mandate” to address subsistence food safety concerns.¹⁸⁰ They also highlighted the reactions of Natives to this “void of responsibility” that initially resulted in the perception by many in the Native community that no one took their concerns seriously.¹⁸¹ Natives were convinced that politics stood behind the infamous “double standard,” a zero-tolerance policy for commercial fisheries if oil was present in quantities sufficient to foul gear, but any food for subsistence fisheries was “likely safe to eat” if it had no smell, taste, or appearance of oil.¹⁸²

d. The Current Course: Reopener or Not? Over time, the EVOS Trustee Council achieved a modicum of independence from its political sponsors. It developed a classification scheme for expressing progress towards the goal of complete restoration.¹⁸³ It tracked thirty species and resources, characterizing them as “Not Recovering,” “Recovering,” “Recovered,” or “Recovery Unknown.”¹⁸⁴ There has been no extended discussion of whether unmonitored conditions and species are “fully recovered,” as no information is available.

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

179. *Id.* at 237.

180. *Id.* at 239.

181. *Id.* at 239–42.

182. *Id.* at 247.

183. EVOS Trustee Council, Status of Injured Resources, <http://www.evostc.state.ak.us/facts/status.html> (last visited Oct. 2, 2005). Apparently, the Status of Injured Resources has not been updated since 2002—the same data is used in the most recent EVOS Status Report. See EVOS TRUSTEE COUNCIL, UPDATE ON INJURED RESOURCES AND SERVICES (2002), available at <http://www.evostc.state.ak.us/pdf/restoration/injupdate02.pdf>.

184. *Id.*

Recovered	Recovering	Not Recovered	Recovery Unknown
Archaeological 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		

Table 1: Status of Injured Resources.¹⁸⁵

A “recovered” species is one that has returned to pre-spill conditions¹⁸⁶ or meets recovery objectives.¹⁸⁷ “Recovering” means “substantive progress is being made toward recovery objectives,”¹⁸⁸ with the timeline varying by resource.¹⁸⁹ Resources that are “not recovered” are those demonstrating “little or no clear improvement since spill injuries occurred.”¹⁹⁰ If labeled “recovery unknown,” limited data is available for that resource.¹⁹¹

185. *Id.*

186. RESTORATION PLAN, *supra* note 7, at 35–37. Defining the “baseline” for restoration is the single most important issue in valuing NRD.

187. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 2–3.

188. RESTORATION PLAN, *supra* note 7, at 35–37.

189. *Id.*

190. *Id.*

191. *Id.*

In addition to the tracked resources, the EVOS Trustee Council recognizes that certain human services were impaired by the spill, such as recreation and tourism, commercial fishing, subsistence, and passive use.¹⁹² The Council considers these services “recovering until the resources on which they depend are fully recovered.”¹⁹³

Certain Council staffers have written on the status of recovery and the pursuit of the Reopener. For example, in 2003, Chief Scientist Phil Mundy advised the Council that Prince William Sound was an “impaired water body” under EPA criteria and suggested that conditions for triggering the Reopener were clearly met.¹⁹⁴

The Clean Water Act requires states to compile lists of impaired water bodies and then develop and implement total maximum daily loads (“TMDLs”) for these waters.¹⁹⁵ TMDLs specify the maximum amount of a pollutant that a water body can sustain and still meet water quality standards.¹⁹⁶ In Alaska’s 2002-2003 Integrated Water Quality Monitoring and Assessment Report (required by the Clean Water Act), Prince William Sound is listed as “impaired but not needing a TMDL.”¹⁹⁷ The offered justification is that a TMDL process would duplicate efforts of the EVOS Trustee Council and restoration projects specified in the *Exxon Valdez* Restoration Plan.¹⁹⁸

Water quality standards are developed based on the uses for which a water body is allocated. In Alaska, marine water uses include aquaculture, seafood processing, recreation, growth and propagation of fish and other wildlife, and harvesting of raw

192. *Id.* at 31–32; see also UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 23–28.

193. RESTORATION PLAN, *supra* note 7, at 31–32.

194. E-mail from Phil Mundy, Chief Scientist, *Exxon Valdez* Oil Spill Trustee Council, to Jeep Rice & Molly McCammon (May 29, 2003) [hereinafter Mundy Email] (on file with author). An “impaired water body” is one that has not attained and maintained water quality standards even after point sources of pollution have installed the required levels of pollution control technologies. See 40 C.F.R. §§ 130.2(j), 131.3(h) (2004).

195. See 40 C.F.R. § 130.7 (2004).

196. *Id.* § 132.2. For an introduction to TMDL regulations, see Oliver A. Houck, *TMDLs: The Resurrection of Water Quality Standards-Based Regulation Under the Clean Water Act*, 27 E.L.R. 10329 (1997).

197. ALASKA DEP’T OF ENV’T L CONSERVATION, FINAL INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT 49 (2003), available at <http://www.dec.state.ak.us/water/wqsar/pdfs/finali%20integrated%202002-2003%20report.pdf> (last visited Oct. 2, 2005) [hereinafter WATER QUALITY REPORT].

198. *Id.*

aquatic life.¹⁹⁹ 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 shore-lines 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; and raw aquatic life organisms could not exceed concentrations that impart undesirable odor or taste as determined by bioassay or organoleptic tests.²⁰⁰ Prince William Sound can be considered impaired because the presence of petroleum hydrocarbons, oil, and grease is not low enough to satisfy the standards linked to those uses.²⁰¹

Sixteen years after the spill, Prince William Sound may still be considered impaired because of the presence of Exxon's petroleum hydrocarbons, oil, and grease. The State of Alaska justifies avoidance of expensive TMDL analysis and implementation by referring to the Trustee Council's "pollution control requirements."²⁰² But habitat monitoring and assessment—what the EVOS Trustee Council does—are not "pollution control requirements." Rather, the Council's strategy relies on natural recovery.²⁰³ 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 Trustee Council's Executive Director, Molly McCammon, hinted that there were sufficient grounds for invoking the Reopener. In a memo to the Council, McCammon discussed additional oil-spill-related injuries to natural resources that have been discovered since the 1991 settlement.²⁰⁴ McCammon noted that for some species, "and for the ecosystem itself," the Council could not know if full recovery had occurred.²⁰⁵ Thus, the Council implemented the Gulf Ecosystem Monitoring Program in 1999, as a

199. See ALASKA ADMIN. CODE tit. 18, § 70.020 (2005).

200. *Id.*

201. 40 C.F.R. §§ 130.2(j), 131.3(i) (2004); see also Mundy Email, *supra* note 194.

202. WATER QUALITY REPORT, *supra* note 196, at 5, 10, 20, 71.

203. EVOS Trustee Council, Restoration Project Highlights, *supra* note 153 (noting that "in most cases, if protected from harm, injured species will recover on their own").

204. Memorandum from Molly McCammon, Executive Director, EVOS Trustee Council, to U.S. Dep't of Justice, Alaska Att'y Gen., and Trustee Council Members 7–9 (June 12, 2003) (on file with author).

205. *Id.* at 5.

“means of ensuring and enhancing restoration and recovery well into the future.”²⁰⁶

From the beginning, the State of Alaska and the United States did not support the idea of invoking the Reopener clause.²⁰⁷ Nonetheless, they seem to understand that a decision to forego the Reopener would attract intense public scrutiny.²⁰⁸ The EVOS Trustee Council has hired a consultant to help with these matters, but this has produced its own stumbles. Integral Consulting has been contracted to conduct “a series of evaluations using available scientific data to provide an independent analysis of [the] recovery status of key resources and to define any linkage to residual oil.”²⁰⁹ The work includes “a re-survey of sediment quality . . . to assess in situ levels of toxicity in areas most likely to remain oil-impaired,” and a “synthesis of scientific information relevant to injury from lingering oil . . . [that] will provide information on the status of injured resources and options for future restoration.”²¹⁰

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,” and a framework for assessing resources currently listed as Recovering or Not Recovered.²¹¹

206. *Id.* McCammon also noted, in the “best judgment of the scientists most closely familiar with oil spill injury,” there were species and resources whose injuries were likely related to the oil spill but it was difficult to prove a cause-effect linkage; there were also species whose injury was strongly linked to the spill. *Id.* at 7–9 (“Probable injury unknown at time of settlement, with stronger linkage to oil spill [includes]: injury to subsistence uses . . . pink salmon had more damage than expected . . . oil remaining in the environment in a toxic state for a longer period of time than originally expected . . . mussel beds data in 1999 indicate that oil is still being accumulated in mussels and several other invertebrate prey species. . .”).

207. 1991 Gov’t Consent Decree Mem., *supra* note 10, at 28 (“[b]ased on the results of the damage assessment, the Governments do not believe that they will ever need to invoke [the Reopener] clause”).

208. Compare Craig R. O’Connor, Natural Res. Special Counsel, NOAA Office of Gen. Counsel, Interview with NRD Seminar, Univ. of Wash. Sch. of Law (Feb. 3, 2005) (on file with author); with Jim Carlton, *Groups Seek to Add \$100 Million to Bill for Exxon Oil Spill*, WALL ST. J., Aug. 30, 2001, at B4.

209. Integral Consulting: News, http://www.integral-corp.com/page.php?pname=news/article&article_id=42 (last visited Oct. 2, 2005).

210. EVOS TRUSTEE COUNCIL, WORKPLAN FY 2004–FY 2006 26 (2004), http://www.evostc.state.ak.us/pdf/Work%20Plans/Final_2004_Workplan.pdf.

211. Integral Consulting: News, *supra* note 209.

However, the contract with Integral has raised concerns about conflicts of interests for the Council.²¹² Ernesta Ballard, Commissioner of the Alaska Department of Environmental Conservation until October 2004, initially recommended Integral.²¹³ In February 2005 she admitted to having worked with Integral on a project for Ketchikan Pulp Company before she joined state government.²¹⁴ The impartiality of Integral is also questionable when it comes to developing projects financed by Reopener funds—Integral’s website notes that its scientists are trained technically and policy-wise to assist PRPs in addressing NRD claims.²¹⁵ In other words, the Trustee Council has hired 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 best way to get unbiased advice at a reasonable cost.

Apparently, the Council itself is unsure if Integral’s work will completely answer all questions.²¹⁶ The Council issued a Request for Proposals (“RFP”) on February 15, 2005, to study possible remediation projects to address the problem of lingering oil in sediments.²¹⁷ The Council’s language is instructive:

212. GAO, REP. NO. B-280449, *supra* note 109, at 5–6 (“The same agencies—and sometimes the same individuals—that recommend a project for funding also approve and carry out the project.”).

213. Tom Kizzia, *16 Years Later, Pressure Mounts To Settle Spill Suit—Exxon Valdez: State, Federal Lawyers Must Decide By Next Summer Whether to Seek Additional Damages*, ANCHORAGE DAILY NEWS, Feb. 27, 2005, at A1.

214. *Id.*

215. Integral Consulting: NRD Assessment, <http://www.integral-corp.com/page.php?pname=projects/damage> (last visited Oct. 2, 2005).

216. Three major initial findings resulted from Integral’s review and synthesis: (1) lingering oil most significant in intertidal areas; (2) 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 bio-available; and (3) 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. Integral Consulting: News, *supra* note 209.

217. EVOS TRUSTEE COUNCIL, RFP: IDENTIFY AND EVALUATE OIL REMEDIATION TECHNOLOGIES APPLICABLE TO LINGERING OIL IN PRINCE WILLIAM SOUND, ALASKA 4 (2005), available at http://www.evostc.state.ak.us/pdf/05LingeringOil_RFP.pdf. The Council noted, based on NOAA 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

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 [sic] 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?²¹⁸

Proposals were due March 16, 2005, with a final report due in January 2006.²¹⁹ With the problem defined as “28 acres of sub-surface oil,” sweeping remedies are not likely to come about.

In February 2005, the EVOS Trustee Council also issued an RFP for “the synthesis of information relevant to Pacific herring and the determination of the status of this species.”²²⁰ The Council is seeking to evaluate the recovery of Pacific herring by conducting an independent evaluation of the eighteen previously conducted monitoring and research projects of Pacific herring populations in Prince William Sound.²²¹ Proposals are also due March 16, 2005, with a final report due in January 2006.²²²

D. The Civil Suits: More “What Ifs”

In the immediate wake of the spill, the Exxon Corporation faced enormous potential NRD liabilities. The common law was anticipated to offer broad protections under the theories of public trust, *parens patriae*, and public nuisance.²²³ Statutory definitions of “natural resources” protected all affected resources.²²⁴ Contingency valuation, to measure damages, gauged liabilities in the many bil-

initial spill. . .” (citations omitted). The Council distinguished between ‘regular’ lingering oil and EVOS oil, which is “is less susceptible to weathering processes and is generally more persistent.” *Id.*

218. *Id.* at 5.

219. *Id.* The due date is only four months prior to the deadline for invoking the Reopener, as Exxon must receive ninety days notice of intent to invoke the Reopener.

220. EVOS TRUSTEE COUNCIL, RFP: EXPERT REVIEW—PACIFIC HERRING POPULATIONS IN PRINCE WILLIAM SOUND, ALASKA 4 (2005), available at http://www.evostc.state.ak.us/pdf/05Herring_RFP.pdf.

221. *Id.* at 5.

222. *Id.*

223. *See, e.g., Georgia v. Tenn. Copper Co.*, 206 U.S. 230, 238–39 (1907) (noting that a state is entitled to protect against the pollution of its natural resources via legislation and involvement of the courts); *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 458 (1892) (noting that laws “have sedulously guarded the public use of navigable waters within their limits against infringement, subjecting it only to such regulation by the State, in the interest of the public”).

224. *E.g., 42 U.S.C. § 9601* (2000).

lions of dollars.²²⁵ The grim economic reality of “restoring” the ecological treasures of Prince William Sound offered no solace—what would it cost to “save” a sea otter or an eagle? The rehabilitation rates were \$90,000 and \$42,000, respectively.²²⁶ At these rates, the company was facing astronomical out-of-pocket costs.

The EVOS settlement was a win for Exxon because of the company’s brilliantly conceived and effectively implemented defensive strategy. The strategy consisted of: (1) takeover and domination of the clean-up; (2) voluntary payments to most-injured parties; (3) quick settlement of initial NRD claims; and (4) aggressive resistance of subsequent NRD claims.

1. Takeover and Domination of the Cleanup.



Figure 4. *The Clean-up.* Courtesy of Brad Marten, Esq.

The Prince William Sound clean-up was a disaster on the ground, but a legal success for Exxon. Exxon, which presented itself as having done the best it could throughout the crisis, was able to assume a “good citizen” mantle, which would prove enormously beneficial over the long haul.²²⁷ As a good citizen, Exxon was reim-

225. See, e.g., Parrish, *supra* note 74, at A1.

226. KEEBLE, *supra* note 142, at 303. Total costs to Exxon of wildlife restoration and rehabilitation were \$41 million, though this represents only the costs of rehabilitating directly oiled animals. *Id.*

227. Parrish, *supra* note 77, at A1 (quoting U.S. District Judge H. Russel Holland).

bursed for cash paid in the NRD settlement, was spared a \$125 million fine in the criminal case, and won reduction of the punitive damages award against it.

With the help of its lawyers, Exxon passed a substantial share of spill-related costs onto its insurers. After six years of arbitration and litigation, Exxon and a consortium of over 100 international insurers settled a coverage dispute arising from the spill.²²⁸ The settlement totaled \$780 million.²²⁹ Exxon claimed coverage under various sections of its policies, including first-party property recovery for removal of debris, marine liability to repay cargo-owners' losses, and general liability for pollution clean-up costs.²³⁰ The settlement provided relief for the expenses incurred in the clean-up—Exxon claims these expenses exceeded \$2.5 billion.²³¹

The outer limits of “good citizen” cost recovery were reached only in the takings challenge Exxon brought against the act of Congress that banished the *Exxon Valdez* from the waters of Prince William Sound. 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 to be excluded from the Sound.²³² This provision effectively banned only the *Exxon Valdez*, as no other tank vessel had spilled more than one million gallons of oil into the marine environment.²³³ In ruling on Exxon's takings claim, the Ninth Circuit Court of Appeals was not impressed with Exxon's argument that this was the first bill of attainder ever directed at an inanimate object. The court held the OPA provision was not an unconstitutional bill of attainder because it did not punish Exxon, and that the provision did not violate procedural due process because it furthered a rational legislative purpose.²³⁴ The court found it “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.”²³⁵

228. Mitchell F. Dolin, *An Overview of the Exxon Valdez Insurance Coverage Dispute*, 5 INT'L INS. L.R. 313, 313–317 (1997).

229. *Id.* at 317.

230. *See id.* at 313.

231. Richard Pyle, *Insurers Want Off Spill Hook: Companies Say Exxon's Cleanup a PR Ploy, Balk at Paying*, ANCHORAGE DAILY NEWS, Sept. 2, 1993.

232. 33 U.S.C. § 2737 (2000).

233. *See SeaRiver Mar. Fin. Holdings, Inc. v. Mineta*, 309 F.3d 662 (9th Cir. 2002).

234. *Id.* at 680.

235. *Id.*

2. *Exxon Voluntary Payments.* The strategy of making voluntary payments to most injured parties was well conceived and quite successful. It soaked up the private claims and undercut the broader litigation strategies of private claimants.²³⁶ Of course, it was not just strategy—Exxon greatly benefited from the federal district court’s ruling that plaintiffs must exhaust the \$100 million Trans-Alaska Pipeline Authorization Act Fund (“TAPF”) before pursuing their claims.²³⁷ TAPF 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, but rather paid proportionately on all accepted claims.²³⁸ Claimants therefore had to settle with or fight Exxon for the remaining balance.²³⁹

In the first year of litigation, approximately 52,000 plaintiffs filed more than 200 suits against Exxon in federal and state court.²⁴⁰ While many claimants argued amongst themselves whether individual or class action suits were the best way to proceed, Exxon settled with over 10,000 claimants for a total of \$235 million.²⁴¹ Exxon encouraged settlement by making litigation as complicated and intimidating as possible for potential plaintiffs, consistently challenging who had standing to sue or be sued. In litigation, typical defenses Exxon employed included: (1) the “who me?” (arguing that Bligh Reef was not well marked and/or government officials were to blame for clean-up damages because Exxon was following government orders); (2) the “why are you whining?” (arguing that fishers’ and cannery workers’ lost wages could be offset by wages earned for spill clean-up); (3) the “haven’t we suffered enough?” (arguing that punitive damage awards in one case should bar punitive awards in another); and (4) the “stiff arm” of precedent set in

236. On the lawyers’ rush to Alaska following the spill, see DAVID LEBEDOFF, *CLEANING UP: THE STORY BEHIND THE BIGGEST LEGAL BONANZA OF OUR TIME* (1997) (especially ch. 4).

237. See 43 U.S.C. § 1653(c)(3) (2000) (discussing liability caps and the Trans-Alaska Pipeline Liability Fund); Oct. 1991 Consent Decree, *supra* note 5, at ¶ 19. Compare generally 43 U.S.C. §§ 1651-1655 with D. Alan Rudlin, *Packaging Toxic Tort Cases for Trial: Use of Test Cases, Bifurcation and Class Actions*, 406 PLI/LIT 185 (1991) and Keeva, *supra* note 2, at 67–68.

238. Jenkins & Kastner, *supra* note 2, at 170 (“If the total claims allowed exceed \$100 million, each person’s claims are reduced proportionately.”).

239. 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).

240. Jenkins & Kastner, *supra* note 2, at 155.

241. *Id.* “By 1995, Exxon had paid more than \$304 million in settlement of private claims through the Claims Program.” *Id.* at 179.

*Robins Dry Dock & Repair Co. v. Flint*²⁴² (precluding recovery of economic losses “absent physical damage to a proprietary interest”).²⁴³

Exxon established a program for fishers whose claims looked like clear courtroom winners, paying the fishers’ net average income for the preceding three seasons prior to the spill.²⁴⁴ In 1994, Exxon settled with various municipalities and with a class of Alaska Native subsistence users, at a cost just over \$214 million.²⁴⁵

Exxon strategically employed a divide-and-conquer strategy for compensatory damages but pushed for and won a broad mandatory class certification on the award of punitive damages.²⁴⁶ Without the opt-out clause of Federal Rule of Civil Procedure 23(b)(3) certification,²⁴⁷ Exxon was able to consolidate all potential punitive claims and delay payment of damages. To date, no plaintiff has received any of the \$5 billion award.²⁴⁸ Yet Exxon is alleged to earn about 18% on its investments, while the unpaid punitive award accrues interest at a mere 6%.²⁴⁹ At this rate, it appears the punitive damage award (and the tax-deductible legal expenses for the endless stream of motions challenging it) could soon pay for itself.

Exxon’s voluntary payment strategy was successful on many levels. For one, the claims program was an effective public relations tool, as Exxon publicized its payments to highly visible and sympathetic candidates (i.e. fishers). Early settlement also saved Exxon from the headache of further litigation, a strategy that paid off well for the company (as discussed below).²⁵⁰ However, perhaps the greatest benefit to Exxon was arranging and entrenching a damages standard before the affected parties realized the potential extent of the damages. Alaska Governor Tony Knowles wrote to

242. 275 U.S. 303 (1927).

243. See Richard Mauer, *Exxon Responds to 140 Lawsuits*, ANCHORAGE DAILY NEWS, Aug. 16, 1989, at A1.

244. 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, 19 (1995).

245. *Id.*

246. Jenkins & Kastner, *supra* note 2 at 161.

247. FED. R. CIV. P. 23(b)(3).

248. This is because the case has bounced back-and-forth between the Ninth Circuit and the District of Alaska. See, e.g., *In re Exxon Valdez*, 296 F.Supp.2d 1071 (D. Alaska 2004) (appeal pending).

249. *60 Minutes: Ten Years Later* (CBS Television Broadcast Mar. 21, 1999) (estimating 6.5 years for Exxon to generate investment accrual to pay the judgment).

250. See discussion *infra* pt. II(D)(6)(b).

Exxon in December 2001, offering the resources of his office to facilitate resolution of outstanding claims by Alaskans in the wake of the Ninth Circuit decision on punitive damages.²⁵¹ Exxon responded a month later, pointing out that all actual damages were already paid, and only unpaid punitive damages remained an issue. Faced with only the punitive damages issue, Exxon was able to wash its hands of actual damages left in Alaska.

Clearly, Exxon sought cost certainty. Recognizing the enormity of the disaster, Exxon was extremely proactive in setting the price of its own liability. Exxon's desire for certainty also explains its fear of the Reopener, which represents open-ended liability for future spills. Thus, the Reopener is a dangerous proposition from Exxon's point of view.

3. *Quick Settlement of NRD Claims.* The successful settlement of the NRD claims can only 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.²⁵² As mentioned above, the three parties reached a civil and criminal settlement that was approved by the district court on October 8, 1991. The resulting Consent Decree stated that the state and federal governments would recover compensatory and remedial relief in their capacity "to act on behalf of the public as trustees of Natural Resources to recover damages for injury to Natural Resources arising from the Oil Spill."²⁵³ The inclusion of this clause in the Consent Decree invoked the doctrine of *res judicata* and purports to bar claims brought by other plaintiffs for damages to natural resources caused by the oil spill.²⁵⁴ Thus, after the approval of the 1991 settlement agreement, the only actionable claims could be those of trustees not represented or of parties suffering damages different from those incurred by the general public.²⁵⁵

From Exxon's perspective, the quick settlement of the NRD claims was a triumph. Though the settlement amount was at the time unprecedented, it did not approach Exxon's annual profits of

251. Letter from Alaska Gov. Tony Knowles to Exxon Corp. (Dec. 28, 2001) (responding to decision in *In re Exxon Valdez*, 270 F.3d 1215 (9th Cir. 2001)) (on file with author).

252. *Alaska v. Exxon*, No. A91-083 CV (D. Alaska Mar. 15, 1991); *United States v. Exxon*, No. A91-082 CV (D. Alaska Mar. 13, 1991).

253. See Oct. 1991 Consent Decree, *supra* note 5, at 3.

254. Jenkins & Kastner, *supra* note 2, at 185-86.

255. *Id.*

\$5 billion.²⁵⁶ More importantly, the civil settlement insulated Exxon from NRD claims beyond \$900 million.²⁵⁷

The \$100 million Reopener was a small, albeit unwelcome, concession in Exxon's broader strategy—for the governments, it served as a sweetener that would facilitate approval of the settlement.²⁵⁸ In 1991, the Exxon legal team believed that the contingencies anticipated by the Reopener were remote and unlikely; if for some reason they came to pass, the company would likely be able to block the issue at that time. Moreover, \$100 million was not a significant amount and chances for recovering it seemed slim.

4. *Strategic Settlement of the Chenega Bay Case.* The Native tribes were parties to neither the lawsuits nor the settlement between Exxon and the federal and state governments. These tribes represented a grave threat to the NRD settlement, but their advances were repelled in Chenega Bay.²⁵⁹

In March 1991, after unsuccessful attempts to participate in negotiations on the pending settlement between the Alaska and federal governments and Exxon,²⁶⁰ the Native Village of Chenega Bay and other Native villages and corporations²⁶¹ sued in the Dis-

256. *Id.* at 188.

257. Oct. 1991 Consent Decree, *supra* note 5, at 7.

258. See Keith Schneider, *In Exxon Deal, Transportation Chief Wins Another One for the President*, N.Y. TIMES, Mar. 20, 1991, at A18.

259. Native Vill. of Chenega Bay v. Lujan, Nos. 91-483, 91-484 CV, 1991 U.S. Dist. LEXIS 2986 (D.D.C. Mar. 12, 1991) (Memorandum Opinion and Order).

260. Quam, *supra* note 239, at 182.

261. The "Native Interests" included the following tribes, villages and corporations, grouped into two broad classes. First, the Alaska Native Class: all Alaska Natives, all traditional Native organizations and other Native entities 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 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. Second, the ANCSA Corporation Class: all Native Corporations, as that termed is used within the Alaska Native Claims Settlement Act, as amended, 43 U.S.C. §§ 1601-05, 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

trict Court for the District of Columbia for an injunction preventing the settlement.²⁶² In these consolidated cases, the Native interests argued that the proposed deal between the government entities and Exxon would compromise individual plaintiffs' rights to seek relief against Exxon and Alyeska.²⁶³ The Native interests asserted a right to act as trustees for NRD recovery because the Natives depended on the impacted resources to sustain subsistence cultures. They also argued for government consultation with them, before damage assessments or restoration activities could be performed on Native lands.²⁶⁴ In opposition, the governments countered that "resolution of the [United States' NRD claims] should not impair rights or claims of third parties."²⁶⁵ Judge Stanley Sporkin interpreted this claim 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."²⁶⁶ Thus, Judge Sporkin denied the plaintiffs' motion for a preliminary injunction,²⁶⁷ but retained jurisdiction to "ensure that the defendants' representations are carried out so that plaintiffs' rights are protected."²⁶⁸ In April 1991, the court found that the proposed settlement between the governments and Exxon might interfere with the natural resources rights of Alaska Natives.²⁶⁹ Judge Sporkin ordered discovery to ascertain if Exxon intended to use the civil settlement against the Native interests.²⁷⁰ In his deposition, the Chairman of Exxon responded that the interests of Alaska Natives were not even considered in the proposed settlement.²⁷¹

After successfully delaying the government-Exxon settlement for seven months, and possibly influencing a slightly higher crimi-

equitable owners of real property in the geographic area encompassed by the Alaska Native Class. See *Chenega Consent Decree*, *supra* note 45, at ¶ 2.

262. *Native Vill. of Chenega Bay*, 1991 U.S. Dist. LEXIS 2986.

263. *Id.* at *1.

264. *Id.*

265. *Id.*

266. *Id.* at *2.

267. *Id.* at *3.

268. *Id.*

269. *Quam*, *supra* note 239, at 184.

270. *Id.*

271. *Id.*

nal penalty against Exxon,²⁷² the Native interests consented to their own settlement with the governments in September 1991.²⁷³

In the agreement between the governments and the Natives, the governments retained all rights to act as trustees for natural resources, and excluded the Native interests from acting as co-trustees.²⁷⁴ The Natives gave up any right to sue for, receive, or control the use of any NRD recoveries arising from the oil spill.²⁷⁵

However, the governments recognized that the Native interests retained the rights to pursue claims for all private harms resulting from injuries caused by the oil spill.²⁷⁶ Though the governments promised to “endeavor to restore the natural resources injured by the oil spill, including those resources used for subsistence,” nothing in the Consent Decree required

either Government to take any action which, in its judgment, is unnecessary or inappropriate in light of statutory and 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.²⁷⁷

The governments also agreed to obtain consent from the appropriate Alaska Native Claims Settlement Act (“ANCSA”) Corporation Class²⁷⁸ prior to conducting damage assessments or restoration activities on Corporation lands,²⁷⁹ and, as required by federal and state law, to consider the views of the Corporation Class prior to making decisions regarding such assessments and activities on lands which the corporations had selected but were not yet con-

272. *Id.* at 178.

273. *See generally* Chenega Consent Decree, *supra* note 45.

274. *Id.* at ¶ 5.

275. *Id.* at ¶ 6.

276. *Id.* at ¶¶ 7, 8. A primary goal of the Native Corporations was preservation of their property interests in these lands in “interim jurisdiction.” The corporations successfully lobbied Congress to include a provision in the 1990 OPA to vest the corporations with title, as of March 23, 1989 (the day before the spill), to lands they had already selected. The Native villages’ interests were not the same as the Native corporations; they instead 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. *See Quam, supra* note 239, at 190.

277. Chenega Consent Decree, *supra* note 45, at ¶ 9.

278. *Id.* at ¶ 9; *see also id.* at ¶ 2(b) (defining ANCSA as a settlement class).

279. *Id.* at ¶ 10.

veyed to the corporation.²⁸⁰ The Corporation Class agreed to allow the governments to access their lands for such activities.²⁸¹

The Native interests were granted representatives on any public advisory groups that might be established in the future.²⁸² Moreover, the United States and the Native interests agreed to commence a joint study on the impact of the oil spill on natural resources used for subsistence.²⁸³ Though Alaska was not required to participate in the study, it retained the right to gain access to study results and monitor its progress.²⁸⁴ The governments agreed to provide scientific data for the study to the Native interests.²⁸⁵ The Native interests considered this provision a victory because the United States government was previously unwilling to share the results of studies it conducted in anticipation of litigation with Exxon.²⁸⁶ The Native interests intended to use this information in their pending civil suit against Exxon.²⁸⁷

Finally, and probably most importantly with respect to the Reopener, the settlement between the Native interests and the governments resulted in dismissal of the complaints filed in the D.C. district court.²⁸⁸ Any Alaska Native interest intervening to enforce the Reopener must overcome the preclusive effect of this decree. One way to circumvent this effect is to note that the word “tribes” did not appear in the definition of “Alaska Native Class.”²⁸⁹ Moreover, Reopener claims did not exist at the time of this Chenega Bay settlement; they did not exist until the principal case was settled the following month.

If Native representatives in this case actually “settled” future claims for unknown NRD, then questions arise over public trust or federal Indian trust limitations on the authority of trustees to dispose of their patrimony in this manner.

5. *Successful Defense of the Exclusivity of the NRD Settlement Process.* Perhaps Exxon’s greatest “success” during the litigation

280. *Id.* at ¶ 12.

281. *Id.* at ¶ 11.

282. *Id.* at ¶ 13.

283. *Id.* at ¶ 14.

284. *Id.*

285. *Id.* This study is discussed above, in pt. II(C)(2)(c).

286. See Ann D. Cummings, *The Exxon Valdez Oil Spill and the Confidentiality of Natural Resource Damage Assessment Data*, 19 *ECOLOGY L.Q.* 363, 364–65 (1992).

287. *Id.* at 366.

288. Chenega Consent Decree, *supra* note 45, at ¶ 23.

289. *Id.* at ¶ 2.

and settlement was the transformation of the NRD process from one in which many parties could sue for money damages and broad equitable remedies to one in which only the United States and the State of Alaska could merely seek the narrowest of injunctions. This process unfolded in two steps.

a. *Alaska Sport Fishing Ass'n v. Exxon*. In June 1989, the Alaska Sport Fishing Association ("ASFA") filed a class action in Alaska Superior Court on behalf of an estimated 130,000 recreational sport fishers who used Prince William Sound and other areas affected by the *Exxon Valdez* oil spill.²⁹⁰ The plaintiffs sought injunctive relief and damages "to provide for an environmental mitigation and monitoring fund."²⁹¹ In August 1989, the National Wildlife Federation, Natural Resources Defense Council, and Wildlife Federation of Alaska also sued,²⁹² seeking to establish a conservation trust fund to restore the ecology of the oil spill 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, and to acquire resources equivalent to those lost in the spill.²⁹³ These suits were later consolidated.²⁹⁴

The October 1991 Consent Decree defined NRD to include "remedial relief recoverable by the Governments in their capacity as trustees of Natural Resources . . . under any federal or state statute or maritime or common law relating to the environment."²⁹⁵ Exxon moved for removal of the consolidated cases to federal court and for summary judgment, arguing that the suit was in derogation of the Consent Decree.²⁹⁶ The district court granted Exxon's motion, ruling that the plaintiffs were in privity with the governments in entering into the Consent Decree, and that res judicata precluded further claims for public relief.²⁹⁷ In 1994, the Ninth Circuit affirmed the district court's ruling.²⁹⁸ Though the district court

290. *Alaska Sport Fishing Ass'n v. Exxon*, 34 F.3d 769, 771 (9th Cir. 1994) (citing *Alaska Sport Fishing Ass'n v. Alyeska Pipeline Serv.*, No. 3AN-89-5188 CV (Alaska Super. Ct. 1989)).

291. *Id.*

292. *Nat'l Wildlife Fed'n v. Exxon Corp.*, No. 3AN-89-6957 CV (Alaska Super. Ct. filed Aug. 17, 1989), cited in *Eyak Native Vill. v. Exxon Corp.*, 25 F.3d 773, 775-76 (9th Cir. 1994).

293. See *Eyak Native Vill.*, 25 F.3d at 776.

294. *Id.*

295. See Oct. 1991 Consent Decree, *supra* note 5, at ¶ 6 (emphasis added).

296. *Eyak Native Vill.*, 25 F.3d at 776.

297. See *Alaska Sport Fishing Ass'n v. Exxon*, 34 F.3d 769, 771 (9th Cir. 1994).

298. *Eyak Native Vill.*, 25 F.3d at 781.

allowed ASFA to amend its complaint to “better allege their uniquely private claims,”²⁹⁹ the court ultimately was “convinced that the sport fishermen were unable to allege private claims because these plaintiffs suffered no private injury.”³⁰⁰ The Ninth Circuit upheld the lower court ruling, finding that the Consent Decree was *res judicata* and covered all “lost use” damages and that the plaintiffs, in privity with the governments under the *parens patriae* doctrine, had been represented by the governments when the governments entered into the Consent Decree.³⁰¹

The plight of the Alaska sport fishermen and the environmental groups exemplified how the courts took an anti-plaintiff stance in private suits brought in response to the oil spill.³⁰² Commentators have argued that there is a substantial difference between active and passive loss of use.³⁰³ Nevertheless, the holding in this case confirms that whenever the government enters into a settlement decree, *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.³⁰⁴

b. In re Native Class. As described above, Alaska Natives brought a class action suit against Exxon, seeking damages for the loss of their subsistence way of life.³⁰⁵ Originally, the class was composed of all Alaska Natives and Native organizations.³⁰⁶ Subsequently, the class was limited to 3,455 individual Natives (thereby

299. *Alaska Sport Fishing Ass'n*, 34 F.3d at 771.

300. *Id.* at 772.

301. *Id.* at 771–73.

302. See Scott Kerin, *Alaska Sport Fishing Association v. Exxon Corp. 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, 908–09 (1995).

303. *Id.*

304. See *id.*

305. 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. L. 701, 703–04, n.14 (1998) (“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” and defining “subsistence way of life” as “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”).

306. *Id.* at 703 n.13.

excluding Native villages and government entities).³⁰⁷ The suit was filed in state court but removed to federal court,³⁰⁸ where the claims were split into: (1) economic damages due to loss of harvest, and (2) non-economic damages due to injury to the subsistence culture.³⁰⁹ The Native class settled with Exxon for the economic damages.³¹⁰ The court then granted Exxon's motion for summary judgment on all non-economic injuries.³¹¹

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.”³¹² The class argued that the “unique nature of their subsistence lifestyle [was] the keystone to their culture.”³¹³ This “special injury” rule is a 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.”³¹⁴ It was applied in this case to protect defendants from the only meaningful action that could be brought to correct the subsistence injury.

Though 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 reasoned that the Natives’ subsistence-culture claim was common to the public, taking judicial notice “of the fact that hunting and fishing for the family table is traditional throughout all of rural America.”³¹⁵ The court likened the subsistence lifestyle to hunting and fishing à la Daniel Boone and noted that, “all Alaskans, and not just Alaska Natives,

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

308. Panoff, *supra* note 305, at 704.

309. *Id.*

310. *See* Bardwick, *supra* note 126, at 278.

311. Panoff, *supra* note 305, at 703–04.

312. *In re Exxon Valdez*, No. A89-095 CV, 1994 WL 182856, at *1 (D. Alaska Mar. 23, 1994) (unreported).

313. *Id.* at *2.

314. W.H. RODGERS, JR., ENVIRONMENTAL LAW: AIR & WATER § 2.2, at 36 (Vol. 1, West 1986) (footnotes omitted). *See also* Denise E. Antolini, *Modernizing Public Nuisance: Solving the Paradox of the Special Injury Rule*, 28 *ECOL. L. Q.* 755 (2001).

315. *In re Exxon Valdez*, 1994 WL 182856, at *2.

have the right to obtain and share wild food, enjoy uncontaminated nature, and cultivate traditional, cultural, spiritual, and psychological benefits in pristine natural surroundings.”³¹⁶ According to Judge Holland, neither the length of time in which Alaska Natives have practiced subsistence nor the manner in which they practice it makes their lifestyle sufficiently unique.³¹⁷

In dicta, the court drove the final nail in the coffin of Alaska Native subsistence claims by concluding that the degradation of the Native subsistence lifestyle began well in advance of 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, 1989.³¹⁸

The Ninth Circuit affirmed the district court without hesitation, agreeing that the non-economic cultural claims were “potentially different in degree” but not “different in kind” from the injuries suffered by other Alaskans.³¹⁹ 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 law journals³²⁰ and in the disappointments of the Native people who had been turned away. Exxon “won” millions in damage forgiveness for its remorse; the Natives got nothing for their distress. Triggering the Reopener Clause could alleviate some of this suffering by allocating an additional \$100 million to aid the recovery of species and habitat the Alaska Natives rely on for their subsistence way of life.

6. *The Slow Decline in Punitive Damages.*

a. *5 Billion to 4 Billion to 4.5 Billion.* The punitive damages phase of the *Exxon Valdez* case was born in a creative flourish

316. *Id.*

317. *Id.* (“These attributes of the Alaska Native lifestyle only make it different in degree from the same subsistence lifestyle available to all Alaskans.”).

318. *Id.* at *4.

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

320. *E.g.*, Bardwick, *supra* note 126, at 281.

that gives high hope to students of law.³²¹ 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.³²² The class included all persons who possessed or asserted claims for punitive damages against Exxon.³²³ The formation of one punitive damages class was done primarily for legal efficiency and equality.³²⁴ It insured that Exxon would not be punished numerous times and that all plaintiffs could recover damages.³²⁵ 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.³²⁶ In Phase 2, the jury returned a verdict awarding compensatory damages of \$287 million for losses relating to the spill.³²⁷ On September 16, 1994, the verdict for Phase 3, assessing punitive damages, resulted in an award of \$5 billion.³²⁸ After the verdict was announced, the plaintiff's lawyer hugged his three-year old son as an attorney for Exxon whispered, "he'll be in college before you get any of that money."³²⁹ So far, those words have been prophetic, as Exxon has not paid any of the punitive damages awarded.³³⁰

The punitive damages case reached the Ninth Circuit in 1999.³³¹ In the interim, Exxon filed "more than 60 petitions and appeals, sought 23 time extensions and filed more than 1,000 motions, briefs, requests and demands," requesting a reduction in the damages amount, a reversal, and a new trial, while also claiming jury misconduct and jury tampering.³³² On appeal, the Ninth Circuit vacated and remanded the punitive damages award.³³³ The lower

321. See LEBEDOFF, *supra* note 236, *passim*.

322. Jenkins & Kastner, *supra* note 2, at 158.

323. *Id.*

324. *Id.* at 160.

325. *Id.*

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

327. *Id.*

328. Jenkins & Kastner, *supra* note 2, at 192.

329. 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.

330. See Jenkins & Kastner, *supra* note 2, at 192; see also Gargi Chakrabarty, *Protests Aim to Expose Exxon*, ROCKY MOUNTAIN NEWS, Jul. 13, 2005, at 7B (protesters angry that Exxon has not paid all punitives; Exxon argues that punitive award is excessive).

331. *In re Exxon Valdez*, 270 F.3d 1215 (9th Cir. 2001).

332. Curriden, *supra* note 329, at A1.

333. *In re Exxon Valdez*, 270 F.3d at 1254.

court was ordered to apply the three “guideposts” set out by the Supreme Court in *BMW of North America v. Gore*³³⁴: (1) the degree of reprehensibility of the defendant’s conduct; (2) the ratio between the harm or potential harm suffered by the victim and the amount of punitive damages awarded; and (3) the comparison between the punitives and other criminal or civil penalties authorized by law or imposed in like cases.³³⁵ In applying this test, the Ninth Circuit found, first, because the spill was an accident and Exxon acted promptly to mitigate its effects, its reprehensibility was reduced.³³⁶ Second, the ratio of punitive to compensatory damages was seventeen-to-one, which exceeded the four-to-one ratio the Supreme Court called “close to the line” in *Pacific Mutual Life Insurance Co. v. Haslip*.³³⁷ Finally, the Court determined that the punitive damages award far exceeded other comparable penalties and those allowable under the Oil Pollution Act.³³⁸ Based on these factors, the district court was ordered to reduce the amount of punitive damages.³³⁹

The district court reevaluated the amount of punitive damages awarded and determined that \$5 billion did not violate due process as described in *BMW v. Gore*.³⁴⁰ In applying the *Gore* factors, the court found that Exxon’s conduct was highly reprehensible.³⁴¹ Also, in its calculation, the court fixed the ratio of punitive harm to quantifiable damages at 9.85-to-1, which does not exceed the ten-to-one ratio upheld in *TXO Production Corp v. Alliance Resources Corp.*³⁴² The court calculated the amount of quantifiable damages by adding up all the payments made by Exxon, to arrive at an amount of “actual harm” equal to \$507,509,094.³⁴³ Judge Holland totaled twenty-one awards, payments, and settlements to reach this figure.³⁴⁴ Finally, the court determined that the penalty was appro-

334. 517 U.S. 559 (1996).

335. *Id.* at 574–75.

336. *In re Exxon Valdez*, 270 F.3d at 1243.

337. *Id.* (quoting *Pac. Mut. Life Ins. Co. v. Haslip*, 499 U.S. 1 (1991)).

338. *Id.* at 1241–46.

339. *Id.* at 1246–47.

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

341. *Id.* at 1057 (knowing that Captain Hazelwood was an alcoholic and drinking on duty, leaving him in command “demonstrated reckless disregard for the livelihood, health, and safety of the residents of Prince William Sound, the crew of the *Exxon Valdez*, and others”).

342. *Id.* (citing *TXO Prod. Corp. v. Alliance Res. Corp.*, 509 U.S. 443 (1993)).

343. *Id.* at 1060.

344. *Id.* at 1058–60.

appropriate based on comparable misconduct.³⁴⁵ 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.³⁴⁶ Exxon again appealed the amount of the award.³⁴⁷

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 Insurance Co. v. Campbell*.³⁴⁸ In reassessing actual harm yet again, Judge Holland considered twenty-four awards, payments, and settlements, to reach a total of \$513,147,740.³⁴⁹ 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 a defendant for conduct that happened in another jurisdiction (following the rule that a court may not consider extraterritorial conduct that has no nexus to the harm suffered by plaintiffs).³⁵⁰ The court also found that the punitive award of \$5 billion would not violate Exxon's due process rights.³⁵¹ Finally, Judge Holland reduced the award to \$4.5 billion, again to comply with the Ninth Circuit's remand order.³⁵²

b. The Seattle Seven Interlude. A telling component of this litigation involves claims brought by the "Seattle Seven," a group of seafood processors.³⁵³ On January 8, 1991, the Seattle Seven entered into a confidential \$70 million settlement with Exxon.³⁵⁴ In exchange for \$70 million, the Seattle Seven agreed to release their claims against Exxon and "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, set-

345. *Id.* at 1061.

346. *Id.* at 1068.

347. *In re Exxon Valdez*, 296 F. Supp. 2d 1071, 1075, 1084–85 (D. Alaska 2004).

348. *Id.* (citing *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408 (2003)).

349. *Id.* at 1099–1101.

350. *Id.* at 1090–91.

351. *Id.* at 1110.

352. *Id.*

353. See Jenkins & Kastner, *supra* note 2, at 201–04 (discussing *In re Exxon Valdez*, No. A89-095 CV, 1996 WL 384623, at *7 (D. Alaska June 11, 1996), *aff'd*, No. 97-35208 DC, 1998 WL 536878 (9th Cir. Aug. 17, 1998)).

354. *Id.* at 201–02.

tlements, and claims.”³⁵⁵ They agreed to challenge the “Plan of Allocation” of punitive damages and to use their share to reimburse Exxon (over \$700 million).³⁵⁶ The payoff, if successful, would be \$12 million. The district court rejected this secret agreement on public policy grounds,³⁵⁷ but the Ninth Circuit reversed, holding that the cede-back provisions were enforceable but should not be disclosed to the jury.³⁵⁸

Exxon has done everything legally possible to delay its payment of the awarded punitive damages. This litigation effort was tortured in the appellate process and by Exxon’s questionable motives.³⁵⁹ Six times Exxon went to the Ninth Circuit, which resulted in six wins for Exxon. The district court’s most recent order, setting punitive damages at \$4.5 billion, is pending a hearing before the court of appeals. 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.

E. Double Hulls and Margins of Tolerance

The Oil Pollution Act was a response to the tragedy of the 1989 *Exxon Valdez* oil spill. Congress did much to fix the deficiencies that were on conspicuous display post-EVOS: it even took steps to redesign petroleum tankers by the simple expedient of mandating double hulls in tanker design and construction.³⁶⁰

Congress thought it had discovered a silver-bullet solution with this technological change. Exxon, on the other hand, fought imposition of such a requirement throughout the legislative process.³⁶¹ In the Senate, efforts to mandate double hulls were narrowly defeated.³⁶² In the House, a provision compelled double hulls to be phased-in over fifteen years,³⁶³ and a phase-out of single hull tank-

355. *Id.*

356. *Id.* at 202.

357. *See In re Exxon Valdez*, 1996 WL 384623, at *12.

358. *See In re Exxon Valdez*, 229 F.3d 790, 800–01 (9th Cir. 2000).

359. *See Jenkins & Kastner, supra* note 2, at 205–08. While Exxon asserts that it is just “exercising [its] legal right[s] to appeal an unjust verdict,” critics point out that Exxon maintains control of the penalty and can invest it to realize a higher rate of return than the federally mandated 5.9%. *See 60 Minutes: Ten Years Later, supra* note 249.

360. *See Russell V. Randle, The Oil Pollution Act of 1990: Its Provisions, Intent, and Effects*, 21 ENVTL. L. REP. 10119, 10119 (March 1991).

361. *Id.* at 10132.

362. *Id.*

363. *Id.*

ers was to begin in 1995. By 2010, all vessels over 5,000 gross tons with single hulls are to be prohibited from operating until converted to double hulled vessels.³⁶⁴ The Congressional margin of tolerance for double hulls was twenty years. This requirement has had no impact on Exxon traffic in Prince William Sound since the 1989 spill.³⁶⁵

Double hulls were “a road not taken” in the 1990 OPA, and it is a road that beckons again during the 2002-2006 Reopener window. The Sound could be significantly protected if every penny of the Reopener’s \$100 million were sent back to Exxon with instructions to invest it in putting double hulls on its tanker fleet that moves Valdez oil.

III. THE 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 are “substantial”; (3) the losses must result from the oil spill; (4) the losses could not have been reasonably known or anticipated by the trustees; (5) restoration projects must be identifiable and set forth in a “restoration plan”; and (6) the costs of any project “must not be grossly disproportionate to the magnitude of the benefits anticipated from the remediation.”³⁶⁶

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, and species have suffered losses and declines in Prince William Sound, and these declines have been substantial. For example, an impressive summary of consequences appeared in a 2003 *Science* article, which concluded powerfully:

[O]il persisted beyond a decade in surprising amounts and in toxic forms, was sufficiently bioavailable to induce chronic bio-

364. *Id.*

365. 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, Mar. 22, 2005, at A1, A6, (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 old ships into Prince William Sound . . . in about two years.”).

366. Oct. 1991 Consent Decree, *supra* note 5, at 19.

logical 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.³⁶⁷

In layman's terms, the article concluded that populations, habitats, and species continue to be exposed to oil in toxic amounts in Prince William Sound, and these exposures compromise the health, growth, and reproduction of individual animals with resultant population effects. There is scientific documentation of these losses across the species that populate the Sound; elaboration of the oil spill's effects on a few selected species and environments is supplied below.

2. How to Measure "Substantial" Declines in Populations, Habitats, or Species?

a. *Generally.* The test of whether the environmental damages fall below a legally acceptable norm is inescapable in environmental law and crucial to the resolution of the *Exxon Valdez* Reopener. The common law of nuisance³⁶⁸ and public trust³⁶⁹ measures violation by reference to whether an injury is "substantial." The Endangered Species Act and CERCLA (to mention two examples) demand somewhat different levels of improvement to the environmental baseline—the first, at which listed species are fully "recovered,"³⁷⁰ and the second, at which human health is fully protected.³⁷¹

Contestants in the *Exxon Valdez* litigation have used different standards of recovery at different times. The EVOS Trustee Council first defined recovery as "a return to pre-spill conditions or to conditions comparable to those of unoiled areas."³⁷² On the other side, Exxon's Alan W. Maki has invoked indicators such as no-effects exposure levels and successful survival, reproduction, and

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

368. W.H. RODGERS, JR., ENVIRONMENTAL LAW: AIR & WATER, Vol. 1, §§ 2.4, 2.5 (1986).

369. *Id.* § 2.20.

370. 16 U.S.C. § 1533(f) (2000) (recovery plans).

371. See W.H. RODGERS, JR., ENVIRONMENTAL LAW: HAZARDOUS WASTES & SUBSTANCES, Vol. 4, § 8.10 (1992).

372. RESTORATION PLAN, *supra* note 7, at 35.

re-colonization of oiled areas to confirm that “biological recovery is rapidly taking place.”³⁷³

The 1991 settlement rests on the Clean Water Act, which directs public trustees to “restore, rehabilitate or acquire the equivalent” of natural resources.³⁷⁴ By dictionary definition, “restore” means to “bring back to an original condition” or to “bring back into existence or use.”³⁷⁵ “Rehabilitate” means “to restore . . . to useful life” or “to restore to a former state or condition.”³⁷⁶ “Equivalent” means “practically equal” or “having virtually identical or corresponding parts.”³⁷⁷

Some commentators have formally defined recovery 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.”³⁷⁸ This definition is 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 . . . to pre-spill levels within the limits of expected variability”).³⁷⁹

We will follow this last approach, because 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) for determining whether pre-spill conditions are met.³⁸⁰

373. See Alan W. Maki, *The Exxon Valdez Oil Spill: Initial Environmental Impact Assessment*, 25 ENVTL. SCI. & TECH. 24, 29 (1991) (analyzing petroleum hydrocarbon levels and counting animals, thus concluding recovery is occurring); see also John A. Wiens, *Oil, Seabirds, and Science: The Effects of the Exxon Valdez Oil Spill*, 46 BIO-SCIENCE 587, 594 (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.”).

374. 33 U.S.C. § 1321(f)(5) (2000).

375. AMERICAN HERITAGE DICTIONARY 1054 (2d College ed. 1982).

376. *Id.* at 1042.

377. *Id.* at 462.

378. Donald A. Wickham et al., *Restoration: The Goal of the Oil Pollution Act Natural Resource Damage Actions*, 45 BAYLOR L. REV. 405, 418 (1993); see also Heidi Wendel, *Restoration as the Economically Efficient Remedy for Damage to Publicly Owned Natural Resources*, 91 COLUM. L. REV. 430 (1991).

379. Wickham et al., *supra* note 378, at 419.

380. Cf. NOAA Fisheries, *Viable Salmonid Populations*, <http://www.nwr.noaa.gov/1salmon/salmesa/4ddocs/4dwsvps.htm> (last visited Oct. 28, 2005).

We recognize that any attempt to define recovery using a pre-spill baseline is inherently problematic because of “the grossly inadequate state of knowledge of environmental baseline conditions”³⁸¹ and 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.”³⁸² 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 establishing the baseline) or questioning the causation of the changes we are observing (natural or human-made).

The 2002 EVOS Restoration Plan Update on Injured Resources and Services identifies recovery objectives for spill-impacted resources and services. These objectives are intended to be measurable conditions that signal recovery—for each of the species and habitats of concern, the Plan uses these objectives as “yardsticks” to determine whether recovery has been achieved.³⁸³ 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. A Partial List: As Applied.

(i). *Orcas*. No better example of the enduring—thus substantial—ecological loss 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.”

The AT1 pod of transient, mammal-eating, killer whales has declined by at least 50% since the *Exxon Valdez* spill.³⁸⁴ Originally numbering twenty-two animals, the pod currently consists of seven

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

382. *Id.*

383. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 1; see also EVOS Trustee Council Application to the Cal. Dep’t of Water Res., Large Ecosystem Level Project Decision Support Systems Questionnaire, available at <http://www.iep.water.ca.gov/cmarp/groups/dartwt/largescale/evos.doc> (last visited Oct. 16, 2005).

384. Doug O’Harra, *Dying Killer Whale Family Wins Protection*, ANCHORAGE DAILY NEWS, June 4, 2004, at A1; see also News Release, NOAA Fisheries, NOAA Fisheries Proposes Depleted Designation for Prince William Sound Killer Whales (Oct. 27, 2003), <http://www.fakr.noaa.gov/newsreleases/2003/AT1killer-whale.htm>.

whales and has not produced a viable calf in over twenty years.³⁸⁵ 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.³⁸⁶ Despite this dramatic decline—coinciding with the oil spill—and despite expert opinion,³⁸⁷ the Council insists there is no evidence linking the oil spill to the AT1 group's decline.³⁸⁸

Following the oil spill, several members of the AT1 group were photographed swimming through oiled waters near the *Exxon Valdez*.³⁸⁹ In a report prepared for the EVOS Trustee Council, killer whale researchers Craig Matkin and Eva Saulitis stated:

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.³⁹⁰

Additional impacts from the oil spill may include the decline in harbor seals³⁹¹ and the extremely high levels of contaminants found in the blubber of the AT1 whales.³⁹² The contaminants consist of assorted PCB compounds as well as DDT and its breakdown components;³⁹³ scientists are concerned that the contaminants will affect the whales' reproductive success. The combination of contaminants and the decreased prey population may prevent the AT1 group from recovering,³⁹⁴ perhaps so much so that future recovery is impossible.³⁹⁵ In short, the AT1 orca pod fails all criteria for re-

385. O'Harra, *supra* note 384, at A1. The AT1 pod has been listed as depleted under the Marine Mammal Protection Act. *Id.* Reproductive failure in this pod preceded the spill. *See id.*

386. CRAIG MATKIN & EVA SAULITIS, KILLER WHALE (*ORCINUS ORCA*) 3, 6-7 (EVOS Trustee Council Restoration Notebook Series 1997), <http://www.evostc.state.ak.us/pdf/mkiwh.pdf>.

387. *See id.* at 10.

388. EVOS Trustee Council, Status of Injured Resources—Killer Whale, http://www.evostc.state.ak.us/facts/status_orca.html (last visited Oct. 4, 2005).

389. *See* O'Harra, *supra* note 384, at A1.

390. MATKIN & SAULITIS, *supra* note 386, at 10.

391. *See id.*

392. *See id.*

393. *Id.*

394. *See id.*

395. O'Harra, *supra* note 384, at A1 (quoting Dr. James Balsiger, NOAA Fisheries, Alaska Regional Fisheries Administrator, "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.").

covery because it is on its way to extinction. The EVOS Trustee Council lists the harbor seal as “not recovering.”³⁹⁶ The orca who prey on the seal are “not recovering” either. This sad story is a regrettable residue of the 1989 oil spill.

(ii). *Steller Sea Lions*. The EVOS Council does not include the Steller sea lion as an “injured resource.”³⁹⁷ However, the western stock of Steller sea lions has declined drastically since the 1970s; it is estimated the population fell 40% between 1990 and 2000.³⁹⁸ The stock is listed as endangered under the Endangered Species Act.³⁹⁹ Although Prince William Sound does not contain rookeries (terrestrial breeding and pupping sites), there are two haul-out sites used year-round and three used on a seasonal basis.⁴⁰⁰ Twenty-five more haul-outs outside of Prince William Sound were in the path of the oil spill.⁴⁰¹

Direct impacts to Steller sea lions from the oil spill appeared to be minimal; scientists did not find conclusive evidence of an effect from the oil spill on the population.⁴⁰² Nonetheless, recent research demonstrates that herring are the most important winter forage item for Steller sea lions in the Sound,⁴⁰³ and, as discussed below, the herring fishery has not recovered from the spill. It is probable that the decline in herring availability combined with other ecosystem changes from the oil spill has contributed to the decline of the Steller sea lion in Prince William Sound—more research would be required to find the causes and effects. Nonetheless, it is clear the Steller sea lion population has waned and should be recognized as “not recovered” by the EVOS Council.

(iii). *Pacific Herring*. Pacific herring are deemed “not recovering” by the Trustee Council.⁴⁰⁴ This species has failed to meet its EVOS recovery objective: it “will have recovered when the next

396. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 11.

397. *See id.* at 3.

398. NOAA Fisheries, 2002 Stock Assessment, Steller Sea Lion: Western U.S. Stock 2, [http://www.nmfs.noaa.gov/pr/PR2/Stock_Assessment_Program/Pinnipeds/Steller_\(West\)/AK02stellersealion_West.pdf](http://www.nmfs.noaa.gov/pr/PR2/Stock_Assessment_Program/Pinnipeds/Steller_(West)/AK02stellersealion_West.pdf).

399. *Id.* at 7.

400. Donald G. Calkins et al., *Impacts on Steller Sea Lions*, in MARINE MAMMALS AND THE EXXON VALDEZ 119, 119–20 (Thomas R. Loughlin, ed., 1994).

401. *Id.*

402. *Id.* at 137.

403. *See* 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, 247 (2003).

404. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 17.

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.”⁴⁰⁵

This crucial species fails each of our five tests for recovery: (1) its numbers are down, (2) its habitat is poisoned, (3) its health is bad, (4) its distribution is limited, and (5) its diversity is in jeopardy. For these reasons, it cannot serve as the main prey item in many complex food webs.

First, herring numbers are dramatically down since before the oil spill. The population of spawning herring was depressed through 1995; in 1997 and 1998, spawning numbers doubled those of 1994 (the year after the crash) and suggested recovery had begun.⁴⁰⁶ Limited harvests were thus permitted in 1997-1998.⁴⁰⁷ In 1999, the EVOS Trustee Council considered Pacific herring to be recovering.⁴⁰⁸ Regrettably, “in the last several years the recovery has stalled and the population has yet to recruit a highly successful yearclass [sic], which is fundamental to recovery.”⁴⁰⁹ Evidence in 2003 suggested a class of juveniles could recruit into the adult stocks; if these fish do not trigger a disease outbreak, they could start to rebuild the Sound’s herring population and again spark recovery.⁴¹⁰ However, the fishery remains closed through 2006.⁴¹¹ Until a class recruits, Pacific herring “can only be considered to be not recovering from the effects of the oil spill.”⁴¹²

Dr. Riki Ott has identified habitat and health factors that originated with the spill:

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

405. *Id.* at 16.

406. *Id.* at 17.

407. *Id.*

408. *Id.*

409. *Id.*

410. *Id.*; see also OTT, *supra* note 3, at 379.

411. Alaska Dep’t of Fish and Wildlife, Prince William Sound Herring Announcement #1, <http://www.cf.adfg.state.ak.us/region2/finfish/herring/pws/pwspud05.php> (last visited Oct. 2, 2005).

412. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 17.

matured and joined the adult stocks. Viral outbreaks decimated the Sound's remaining herring stocks again in 1998 and 2001.⁴¹³

Herring disease assessment has been conducted by the Alaska Department of Fish and Game ("ADFG") since 1993. In April 2004, ADFG examined herring for prevalence of focal skin reddening and the pathogen *Ichthyophonus hoferi*.⁴¹⁴ The prevalence of reddening was low but the prevalence of *I. hoferi* was relatively high (14%) and consistent with the increasing age of the dominant 1999 age-class.⁴¹⁵ The ADFG concluded, "[I]f this trend continues, mortality of the dominant age class may increase significantly."⁴¹⁶ Exposure to *Exxon Valdez* oil has been shown to compromise the immune systems of adult herring.⁴¹⁷

The herring habitat was contaminated by the spill and remains contaminated. In the opinion of one herring researcher, 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."⁴¹⁸ The habitat for herring continues to impact this species negatively, due to residual oil causing instability in the plants that make up this habitat.⁴¹⁹

In short, the science shows an increased incidence of pathogens (and a surprising genetic disparity between Prince William Sound herring and other nearby herring stocks).⁴²⁰ This may be problematic. Herring are a keystone species, whose activities and abundances can determine the integrity and stability of a complex ecosystem.⁴²¹

413. OTT, *supra* note 3, at 379 (references omitted).

414. Alaska Department of Fish and Wildlife, *Prince William Sound Herring Announcement #1*, *supra* note 411.

415. *Id.*

416. *Id.*

417. See UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 16.

418. OTT, *supra* note 3, at 291.

419. See UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 13.

420. Another example of EVOS effects: In 1994, the Trustee Council commissioned a four-year study of genetic differences of herring within and adjacent to Prince William Sound, and between year classes within and adjacent to the Sound. The results showed a large genetic discontinuity between herring from the Gulf of Alaska and the Bering Sea and between specific locations within Prince William Sound, the Gulf of Alaska, and the Bering Sea. The study also revealed significant inter-annual variation at locations sampled in successive years within Prince William Sound. See JAMES E. SEEB ET AL., GENETIC DISCRIMINATION OF PRINCE WILLIAM SOUND HERRING POPULATIONS FINAL REPORT 2 (1999), available at http://www.evostc.state.ak.us/pdf/final_reports/165.pdf (last visited Oct. 16, 2005).

421. See R.T. Paine, *A Note on Trophic Complexity and Community Stability*, 103 AM. NATURALIST 91, 92 (1969).

Few species are of greater combined ecological and economic importance in Prince William Sound (and in many other coastal ecosystems) than is the Pacific Herring . . . 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.⁴²²

The delay in recovery of Pacific herring is a likely factor in the delay in recovery of other species. Reopener funds could be useful in finding ways to assist the herring population in recovery.

The chief difficulty in assessing EVOS responsibility for the herring is the substantial natural variability in herring populations. This makes it “impossible” to know what a population or community would have been like “in the absence of the spill.”⁴²³ But surely NRD provisions of law are not rendered inoperative by natural variability. Exxon’s restoration standard of a normally functioning ecosystem is not met in the case of herring; it is insufficiently ambitious because “judging recovery solely by criteria of ecosystem function minimizes the significance of specific biological detail such as species density and age structure.”⁴²⁴

(iv). *Intertidal Communities.* The EVOS Council says that “Intertidal Communities” are recovering in the wake of the spill⁴²⁵ and has its own criteria for ascertaining full recovery.⁴²⁶ The intertidal zone is comprised of beaches and nearshore, sub-tidal areas that play a vital role in maintaining the ecosystem of Prince William Sound.⁴²⁷ If this regime is not recovered—and it is not—the legal case for the Reopener is established.

422. See EVELYN D. BROWN & MARK G. CARLS, PACIFIC HERRING (*CLUPEA PALLASI*) 1, (EVOS Trustee Council Restoration Notebook Series 1998), <http://www.evostc.state.ak.us/pdf/rnpahe.pdf>.

423. R.T. Paine et al., *Trouble on Oiled Waters: Lessons from the Exxon Valdez Oil Spill*, 27 ANN. R. ECOLOGY & SYSTEMATICS 197, 205 (1996).

424. *Id.*

425. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 13.

426. *Id.* at 12–13. The EVOS recovery objective is that important species have been reestablished, “the differences in community composition and organism abundance on oiled and unoiled shorelines are no longer apparent . . . and the intertidal and nearshore habitats provide adequate, uncontaminated food supplies for top predators.” *Id.* at 13.

427. OTT, *supra* note 3, at 202. The intertidal rockweed and subtidal eelgrass and kelp forests provide food and shelter for a large variety of smaller organisms (e.g., small bottom-dwelling fish, mussels, snails, clams, marine worms, sea stars, sea urchins, small crabs, and other crustaceans). These species serve as food for

Twelve years after the *Exxon Valdez* oil spill, the Alaska Fisheries Science Center conducted a study and found, quite amazingly, that *Exxon Valdez* oil 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.”⁴²⁸ This oil persistence study found oil on seventy-eight out of ninety-one beaches selected randomly based on previous exposure to EVOS oil.⁴²⁹ The study evaluated an area of 11.3 hectares and estimated “conservatively” that there were 55,600 kilograms of subsurface oil remaining.⁴³⁰ “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.”⁴³¹

The spill impacted portions of the 1,400 mile coastline in Prince William Sound, on the Kenai and Alaska peninsulas, and in the Kodiak Archipelago.⁴³² The flora and fauna of the intertidal zone suffered significant impacts from the spilled oil and the subsequent clean-up efforts.⁴³³ Within a few years, algal coverage and invertebrate populations returned to densities and abundances like those observed in unoiled areas.⁴³⁴ Despite this recovery, there continues to be large fluctuations in algal coverage in the areas impacted by the oil spill.⁴³⁵ Specifically, *Fucus gardneri* populations (a perennial brown seaweed known as rockweed or popweed that dominates the intertidal) continue to be unstable as a result of the spill and more recent natural events.⁴³⁶ Additionally, through 1997,

many larger predators. In addition, the intertidal areas provide vital foraging, nursery, and spawning habitat for numerous aquatic, avian, and terrestrial species. *Id.*

428. See 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 ENVTL. SCI. & TECH. 19, 24 (2004).

429. *Id.*

430. *Id.* at 19. “Analysis of terpanes indicated that over 90% of the surface oil and all of the subsurface oil was from the *Exxon Valdez*.” *Id.*

431. *Id.*

432. See UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 12.

433. *Id.*

434. *Id.* at 13.

435. *Id.*

436. *Id.*; see also W.B. Driskell et al., *Long Term Signal of Disturbance: Fucus Gardneri After the Exxon Valdez Oil Spill*, 11 ECOLOGICAL APPLICATIONS 815 (2001) (“Broad-scale (and probably recurrent) oscillations in *Fucus* cover suggest that authentic recovery cannot simply be defined as the reappearance of a species or assemblage at its former abundance. Instead, the dynamics of the system in terms of both spatial and temporal variability must fall within a range of natural

studies have confirmed that populations of invertebrate mollusks and annelid worms on oiled and washed beaches are much less abundant than those on comparable unoiled beaches.⁴³⁷

In comparing oiled sites with unoiled reference sites, scientists documented a reduced abundance of many species of algae and invertebrates in areas impacted by the spill.⁴³⁸ For example, the oil spill contributed to a reduced abundance and reproductive potential of the common seaweed, *Fucus gardneri*, and its place was superseded by “more opportunistic” species such as barnacles, oligochaete worms, and filamentous brown algae.⁴³⁹

Intertidal communities are ecologically important and serve as subsistence resources for a variety of species, including sea and river otters, black oystercatchers, harlequin ducks, and pigeon guillemots.⁴⁴⁰ Of critical importance to intertidal communities is the full recovery of *Fucus gardneri* populations, which provide cover for many invertebrate populations.⁴⁴¹ *Fucus*’ recovery has been hindered by the unexpected persistence of subsurface *Exxon Valdez* oil in the middle and lower intertidal zones.⁴⁴²

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

(v). *Sea Otters.* Sea Otters are deemed “recovering” in the August 2002 Status Report.⁴⁴³ They are not recovered. Though the total number of sea otters killed by the oil spill is unknown, acute loss is estimated in the range of several thousand.⁴⁴⁴ The sea otter population is probably increasing today in Prince William Sound.⁴⁴⁵ But sea otters in the most heavily oiled areas still face

variation.”); R.T. Paine et al., *supra* note 423, at 221 (“Exxon’s assessment of *Fucus* recovery . . . is statistically correct yet biologically flawed”).

437. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 13.

438. *Id.* at 12.

439. *Id.* at 13.

440. *Id.* at 12.

441. *Id.* at 13.

442. See Short et al., *supra* note 428, at 25.

443. See UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 20.

444. Brenda E. Ballachey et al., *An Overview of Sea Otter Studies*, in MARINE MAMMALS AND THE EXXON VALDEZ 47, 56 (1994).

445. R.T. Paine et al., *supra* note 423, at 218 (“[a]lthough doubt may remain about the time course to recovery because of both chronic effects of oil and possible disease introduction from the intensive rehabilitation efforts”).

significant recovery problems.⁴⁴⁶ Knight Island, which suffered heavy oiling and the highest otter mortalities after the spill, showed no increase in the population as of 2000, due to low juvenile survival rates.⁴⁴⁷ Oil persists on the beaches and is ingested by the otters during foraging activities; “progress toward recovery . . . 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.”⁴⁴⁸ Until the sea otters 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 sea otter is a keystone species because it helps keep other species under control in nearshore communities.⁴⁴⁹ Given the importance of the intertidal community to the health of sea otters, and the critical importance of sea otters in the Prince William Sound ecosystem, it is clear that this species cannot be considered fully recovered from the effects of the oil spill. More effort needs to be taken to speed the otters’ resurgence.

3. *Are These Losses “As a Result” of the Oil Spill?* All losses depicted above—and many more not discussed here—are linked to the oil spill. The Peterson study of long-term ecosystem responses shows how far the science of oil-spill causation has progressed since 1989.⁴⁵⁰ For some species, lingering consequences show up as health effects; for others, population numbers are down. For the orcas of Pod AT1, the “result” of the oil spill may very well be extinction.⁴⁵¹

For many species, the habitat that was lost to the oil spill remains lost. A 2004 study⁴⁵² sponsored by the EVOS Trustee Coun-

446. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 20 (“The lack of recovery may reflect the extended time required for population growth for a long-lived mammal with a low reproductive rate, but it also could reflect the effects of continuing exposure to hydrocarbons, or a combination of both factors.”).

447. J.L. Bodkin et al., *Sea Otter Population Status and the Process of Recovery from the 1989 Exxon Valdez Oil Spill*, 241 MARINE ECOLOGY PROGRESS SERIES 237, 250 (2002); *see also* R.T. Paine et al., *supra* note 423, at 218 (highly critical of the official response to the distress of sea otters: “little seems to have been learned of significance for the conservation, restoration, and especially management of this ecologically conspicuous species”).

448. *Id.* at 237.

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

450. *See generally Ecosystem Response*, *supra* note 367, at 2082–86.

451. *Id.* at 2085.

452. Short et al., *supra* note 428, at 19.

oil “found some form of oil at 86% of the beaches [visited] and on 93% of the combined beaches of categories I and II.”⁴⁵³ The study used a random sampling approach “to provide a quantitative, probability-based estimate of the amount of oil remaining.”⁴⁵⁴ The study sampled three categories of beaches: (I) those that were “heavily oiled” at any time during the period from 1990–93; (II) those that were “moderately oiled” at any time during the same period; and (III) those that were heavily oiled in 1989 but had only light or no oil impact during subsequent years.⁴⁵⁵ The total length of beach sampled was 116.6 kilometers (approximately 72.5 miles).⁴⁵⁶ A grid was laid out on each beach tested and was searched visually for evidence of surface oil.⁴⁵⁷ Each oil patch was then classified according to types like “asphalt pavement/mousse,” “surface oil residue,” “tar balls,” “coat,” or “oil film.”⁴⁵⁸ Oil visually evident within the uppermost five centimeters (two inches) of a beach surface was considered “surface oil.”⁴⁵⁹ Test pits were dug to a depth of 0.5 meters (1.6 feet) to evaluate the presence of subsurface oil.⁴⁶⁰ Chemical analyses of oil found were compared to chemical “fingerprints” of *Exxon Valdez* oil, and to samples originating from known contamination released during the 1964 earthquake (“Monterey Formation” asphalt).⁴⁶¹

The results of the study show that the distribution of detected oil among the sampled beaches was highly variable.⁴⁶² Segments that were within sheltered embayments receiving the brunt of the initial oil landfall were the most heavily impacted.⁴⁶³ Persistent oil was also found on beaches with surface armoring of boulder or cobble, nearly level slopes of the middle intertidal, or a bedrock platform overlaid with sediment veneer.⁴⁶⁴ Again, some form of oil was found at nearly 90% of the beaches visited, and on over 90% of the category I and II beaches.⁴⁶⁵ Surface oil was found in all

453. *Id.* at 22.

454. *Id.* at 19.

455. *Id.*

456. *Id.*

457. *Id.*

458. *Id.* at 20.

459. *Id.*

460. *Id.*

461. *Id.* at 22.

462. *Id.*

463. *Id.*

464. *Id.*

465. *Id.*

three categories.⁴⁶⁶ The estimate of beach area contaminated by subsurface oil was 7.8 hectares (19.3 acres).⁴⁶⁷

Subsurface oil was most often found in the lower tidal elevations of the sampling grid.⁴⁶⁸ All of the subsurface oil was consistent with *Exxon Valdez* oil, and was usually less weathered than surface oil samples.⁴⁶⁹ Monterey Formation oil was usually found above +3 meters (9.8 ft) tide height, typically in the form of flattened tar balls adhered to cobbles and boulders, or occasionally as small tar mats.⁴⁷⁰ Petroleum derived from the Monterey Formation was estimated to account for less than 10% of the surface oil encountered.⁴⁷¹ The researchers did not find evidence that the oil found during the study originated from any other anthropogenic sources.⁴⁷²

The study suggested it underestimated the area of oil-contaminated beach.⁴⁷³ Though the volume of oil mass has fallen, this study suggests that the area of oiled beach has changed only slightly since 1992.⁴⁷⁴ “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.”⁴⁷⁵ Subsequent annual loss is estimated to be 20-26%, which is “substantially slower than anticipated.”⁴⁷⁶

4. *Could the Long-Term Adverse Effects Reasonably Be Anticipated by the Trustees?* The state of knowledge at the time of the *Exxon Valdez* settlement is best confirmed by the actions of the principals; for instance, in 1991 Exxon assured Judge Holland that

466. *Id.*

467. *Id.*

468. *Id.* at 23.

469. *Id.*

470. *Id.*

471. *Id.* at 24.

472. *Id.*

473. *Id.* (the estimate was perhaps too low 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- (+1.8 m/5.9 ft) intertidal elevation grid, suggests that subsurface oil may be encountered within the lower intertidal nearly as often as in the upper intertidal. *Id.*

474. *Id.*

475. *Id.*

476. *Id.*

Prince William Sound was “well on the way” to recovery.⁴⁷⁷ The Reopener was only a hedge against the improbable. Books would later be written on how nature could quickly rebound from traumas like the oil spill of the *Exxon Valdez*.⁴⁷⁸

This confidence unraveled relatively quickly. The cascades of unanticipated consequences came post-settlement, such as the 1992 and 1993 collapse of pink salmon runs, the first population collapse of Pacific herring in 1993, the 2001 documentation of the extent of buried oil, and a number of other developments.⁴⁷⁹

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:

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.⁴⁸⁰

Other examples are explained below. All of them support triggering the Reopener to combat the unanticipated and lingering effects of the *Exxon Valdez* oil spill.

a. Lingering Unweathered Oil in the Intertidal Zone.

The study of the persistence of oil from the *Exxon Valdez* oil spill described above is a dramatic example of an environmental impact

477. Alaska Action Network, Action Alert: 15 Years of Lingering Effects, <http://aknetwork.e-actionmax.com/showalert.asp?aaid=590> (last visited Oct. 27, 2005).

478. See, e.g., JEFF WHEELWRIGHT, DEGREES OF DISASTER: PRINCE WILLIAM SOUND: HOW NATURE REELS AND REBOUNDS (1994).

479. See, e.g., Scott Allen, *Deep Problems 10 Years After Exxon Valdez*, BOSTON GLOBE, Mar. 7, 1999, at A1 (“But the deep scars, and the unfinished business, of the *Exxon Valdez* disaster become clearer down on the water, where only two of the 23 most damaged species have fully recovered and an estimated 40 percent of the fishermen suffer depression over their decimated livelihoods. . . . True, some animals, such as bald eagles and, later, river otters, did seem to bounce back quickly. However, scientists at the National Marine Fisheries Service say Exxon’s claims are premature even now. Not only are some species, such as loons and harlequin ducks, showing no signs of recovering, but new research suggests that the *Exxon Valdez* spill may be killing today.”).

480. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 2.

that was unexpected at the time of settlement. In the words of the study's authors: "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."⁴⁸¹ Those "biological effects" have been most obvious in pink salmon and Pacific herring.

b. 1992-1993 Collapse of the Pink Salmon Fishery. Although there had been record harvests of pink salmon in Prince William Sound in 1990, an unprecedented event occurred in the summer of 1991. The adult salmon returned to the Sound, but instead of returning to their birth streams or hatcheries, the fish milled and ripened in deep water.⁴⁸² Then, during two weeks in August, millions of pink salmon migrated to the streams and hatcheries.⁴⁸³ This behavior was completely unexpected and overwhelmed the fishing industry's capacity to catch, transport, and process the fish. Many of these fish likely had been exposed to oil either in streams in 1989 or in nearshore environments in 1990.⁴⁸⁴ In 1992 and 1993 the pink salmon runs were exceptionally low. The settlement between the federal and state governments and Exxon, finalized in October 1991, did not take into account the possibility of this type of impact on 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.⁴⁸⁵ Although egg mortality and larval deformities were documented, the population-level effect of these injuries was not clearly established. Suddenly, in 1993, the Pacific herring population in the Sound fell dramatically.⁴⁸⁶ 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 likely caused by oil exposure.⁴⁸⁷ The fish looked horrible,

481. Short et al., *supra* note 428, at 25. Reports of buried oil from Alaska Natives and fishers prompted these studies of oil persistence. See OTT, *supra* note 3, at 361.

482. See OTT, *supra* note 3, at 258.

483. *Id.*

484. *Id.*

485. UPDATE ON INJURED RESOURCES AND SERVICES, *supra* note 183, at 16.

486. *Id.*

487. OTT, *supra* note 3, at 265.

swam around in circles, were covered with lesions, and the females reabsorbed their eggs.⁴⁸⁸ The herring population went from a twenty-year high to a twenty-year low.⁴⁸⁹

The fact that all funding was cut for herring research in 1992 is evidence that this population crash was completely unexpected and thus an unanticipated effect at the time of the EVOS settlement. Though there were small harvests in 1997 and 1998, the herring fisheries have been closed since 1999 to allow the stocks to recover.⁴⁹⁰ As a keystone species, the weak state of the herring impacts the entire Prince William Sound ecosystem, as well as the economic health of the human community.⁴⁹¹

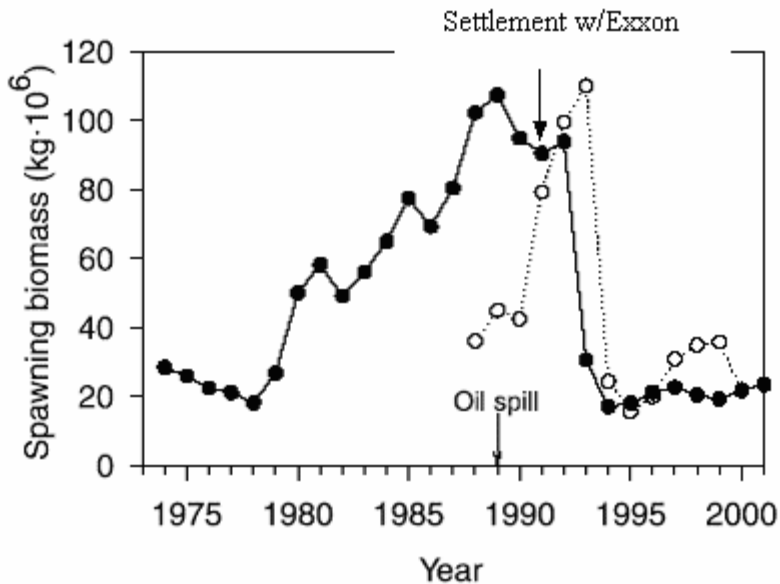


Figure 4. Biomass Estimates of Pacific Herring in Prince William Sound. Unexploited spawning biomass projected in the year before spawning (Alaska Department of Fish and Game, Cordova) and calculated after spawning (best estimate) using an age-structured assessment model modified by a disease index after 1993.

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

488. *Id.*

489. *Id.*

490. *Id.* at 380.

491. *Id.*

led to recognition of new paradigms and calls for innovative practices to assess ecological risks from oil in the oceans.⁴⁹² Most importantly, before the spill, impacts and risks from oil were believed to be primarily direct and short-term.⁴⁹³ After the *Exxon Valdez* spill, the long-term impacts are apparent, as oil has persisted in startling quantities and as indirect effects have caused significant damage.⁴⁹⁴ Moreover, residual oil has been sufficiently bioavailable to induce long-term impacts to marine species at the population level.⁴⁹⁵

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”) present in residual oil deposits were identified as persistent, bioaccumulative, and toxic pollutants (a category that includes mercury and PCBs).⁴⁹⁶ Researchers have discovered that oil had previously unknown, persistent, harmful effects to both humans and wildlife.⁴⁹⁷ “It now appears the remaining oil deposits may have become a chronic source of low-level oil pollution within the spill-affected area.”⁴⁹⁸

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.⁴⁹⁹ Again, impacts from oil on the marine habitat and species were originally believed to be short-term and caused by acute exposure.⁵⁰⁰

In contrast, recent research recognizes both acute and chronic effects even at low concentrations of oil, as well as impacts at the population level. A 2003 National Research Council study direly describes the toxic effects of petroleum hydrocarbons as follows: “Impairment of behavioral, developmental, and physiological

492. *Ecosystem Response*, *supra* note 367, at 2082.

493. OTT, *supra* note 3, at 393.

494. *Ecosystem Response*, *supra* note 367, at 2082.

495. *Id.* at 2083.

496. OTT, *supra* note 3, at 388.

497. *Id.* For an overview of impacts on human health, *see id.* at 389–92. 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. *Id.* at 388–96.

498. NOAA Fisheries, *The Exxon Valdez Oil Spill: How Much Oil Remains?*, http://www.afsc.noaa.gov/Quarterly/jas2001/feature_jas01.htm (AFSC Quarterly Research Report 2001) (last visited Oct. 27, 2005).

499. NAT'L RESEARCH COUNCIL, OIL IN THE SEA III: INPUTS, FATES, AND EFFECTS 120 (2003).

500. *Compare* NAT'L RESEARCH COUNCIL, OIL IN THE SEA 392 (1985) (“[i]t is important to reemphasize that significant reproductive impairment in oiled field conditions has seldom been observed”) *with* NAT'L RESEARCH COUNCIL, OIL IN THE SEA III, *supra* note 499, at 120–21.

processes may occur at concentrations significantly lower than acutely toxic levels; such responses may alter the long-term survival of affected populations.”⁵⁰¹ Oil is harmful to fish and wildlife at levels 1,000 times lower than those thought in the 1970s to be the toxic thresholds.⁵⁰² Recognition of oil’s unforeseen effects has contributed to changes in thinking related to shoreline habitat, oil toxicity to marine animals, and oil’s impact on coastal communities.⁵⁰³

First, regarding physical shoreline habitat, the old paradigm held that oil on shores (other than marshes) would be rapidly dispersed, degraded microbially, and “weathered” by ultraviolet light (photolysis).⁵⁰⁴ The emerging paradigm suggests that oil degrades at different rates depending on the environment, and that “subsurface sediments physically protected from disturbance, oxygenation, and photolysis retain[] contamination . . . for years.”⁵⁰⁵

Regarding fish toxicity, the old paradigm held that oil effects occurred only through short-term (approximately four days) exposure at parts per million concentrations.⁵⁰⁶ The emerging paradigm suggests 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.”⁵⁰⁷

Regarding marine mammals and seabirds, the old paradigm held that oil impacts occurred solely through short-term acute exposure and caused death from hypothermia, drowning, or poisoning by oil ingestion during preening.⁵⁰⁸ The emerging paradigm suggests that substantial effects occur over the long term, due to chronic toxic exposure from contaminated prey, through interactions between environmental stressors and the compromised health of exposed animals, and through disruption of reproductive behavior in socially organized species.⁵⁰⁹

Finally, regarding coastal communities, the old paradigm held that significant losses of shoreline plants and invertebrates only occurred through short-term toxic exposure to oil deposited at the shore or shallow seafloor, or via smothering.⁵¹⁰ The new paradigm

501. NAT’L RESEARCH COUNCIL, OIL IN THE SEA III, *supra* note 499, at 125.

502. OTT, *supra* note 3, at 413.

503. *Ecosystem Response*, *supra* note 367, at 2085.

504. *Id.*

505. *Id.*

506. *Id.*

507. *Id.*

508. *Id.*

509. *Id.*

510. *Id.*

reflects an understanding that clean-up efforts may 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 initial direct losses.⁵¹¹

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

a. *National Research Council Study and Other Projects.*

We believe the first thing the EVOS Trustee Council should do is hire the National Research Council (“NRC”) to develop a long-term oil spill restoration plan for Prince William Sound. The NRC can bring to bear top scientific expertise and spell out the particulars needed for a Reopener Restoration Plan (as required by the settlement).

There is no shortage of ideas the NRC could be asked to review. The EVOS Trustee Council has completed hundreds of studies assessing and monitoring the recovery of species and ecosystems of Prince William Sound.⁵¹² The Council should hire the NRC to evaluate the Sound’s situation, review the studies to date, and help formulate a restoration plan. NRC can develop 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 of the Council. The Council’s Summary of Restoration Strategies and Projects lists only twenty-two species.⁵¹³ Due to the interconnectedness of marine ecosystems, a broader look 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 its establishment in Abraham Lincoln’s administration. It borders on the bizarre for the EVOS Trustee Council to choose the Integral Corporation over the NRC for its swan-song studies. This confirms suspicions that the EVOS Trustee Council underestimates the remaining work.

In a January 2002 letter to Governor Knowles, Exxon’s Chief Executive Officer said he was “troubled” by the suggestion that there were grounds for invoking the Reopener, because he did not see any restoration projects that had not been implemented for

511. *Id.*

512. *E.g.*, EVOS Trustee Council, Summary of Strategies and Projects 2003, <http://www.evostc.state.ak.us/restoration/index.html> (last visited Oct. 16, 2005).

513. *Id.* (also listing human services such as “passive use” and “subsistence”).

lack of funding; in fact, there was (and still is) a cash reserve.⁵¹⁴ In the letter, Exxon advanced two ideas: (1) all the environment needs is a few good projects of limited scope, duration, and cost; and (2) the EVOS Council is an efficient and effective means of fulfilling the NRD mandate of the Clean Water Act (to restore, rehabilitate, or acquire the equivalent) and completing those projects. Taking the company at its word, there are a number of possible roads to be pursued; the cash reserve and additional funds could quickly be put to use.

Alaska citizens have ideas. For instance, Rick Steiner of the Coastal Coalition has urged a herring buy-back program.⁵¹⁵ Buying all commercial herring fishing permits would boost the herring population by preventing depopulation.⁵¹⁶ Even at pre-spill prices, the Coastal Coalition estimates that the permits could be purchased for a total cost of \$30 million.⁵¹⁷ The price of a permit has dropped from around \$300,000 to \$28,000 since the spill;⁵¹⁸ fishers could reasonably be expected to accept the offer, and the purchase costs might be even lower than this estimate.

Another viable project would be to identify marine protected areas and establish a system to monitor them; all that would need 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.⁵¹⁹ Potential benefits of marine reserves include: enhancing reproductive potential of marine species, maintaining species diversity, preserving habitat and ecosystem function, and supporting fisheries.⁵²⁰ Marine reserves benefit not only the ecosystem within them but also generate a spillover effect into adjacent areas.⁵²¹ Studies demonstrate that the size and abundance of exploited species increase in

514. Letter from L.R. Raymond, Chairman & CEO, Exxon Mobil Corp., to Gov. Tony Knowles, State of Alaska (Jan. 25, 2002) (on file with author).

515. Gay, *supra* note 162, at B1.

516. *Id.*

517. *Id.*

518. *60 Minutes: Ten Years Later*, *supra* note 249.

519. *E.g.*, STEPHEN R. PALUMBI, PEW OCEANS COMM’N, MARINE RESERVES: A TOOL FOR ECOSYSTEM MANAGEMENT AND CONSERVATION (2002), http://www.pewtrusts.com/pdf/pew_oceans_marine_reserves.pdf.

520. *See* Lydia K. Bergen & Mark H. Carr, *Establishing Marine Reserves: How Can Science Best Inform Policy?*, ENV’T, Mar. 2003, at 8, 10–11.

521. *Id.* at 11.

areas adjacent to marine reserves, and other evidence demonstrates that reserves also replenish larger regional populations.⁵²²

MPAs and marine reserves could be used as restoration projects to assess recovery from the *Exxon Valdez* oil spill, as well as to limit ongoing damage from human impacts. These are flexible options that can be tailored to the desired restoration goal. For instance, no-take marine reserves could be designated as permit-only scientific research. MPAs could be designated to 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 could be replaced by a Perpetual Stewardship Council, in which Alaska Natives would have a strong voice. The Natives were hardest hit and least represented in the frantic response to the spill.⁵²³ They will live with the consequences for 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.⁵²⁴ “I’m sorry, but those are extremely dirty beaches out there, and life continues to die because of that oil on the beaches.”⁵²⁵

Reopener funds could make it possible for the Natives to do for themselves what no promises have done 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.

Over the years, the Natives have fought furiously (to little avail) for a stronger voice on the EVOS Trustee Council. A 2004 paper by the Chugach Regional Resources Commission insists there have been no studies on the “impacts of this technological

522. PALUMBI, *supra* note 519, at 27. Replenishment occurs both through spill-over 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. *Id.*

523. The Chenega Bay Native community, whose name is embedded in the legal fallout of the oil spill, has seen its population plummet to forty-two—less than half the pre-spill number. See George Lewis, *Alaska Lives with an Unwanted Legacy*, MSNBC, Mar. 24, 1999, <http://msnbc.com/news/252495>.

524. *Id.*

525. *Id.*

disaster to the Tribes and Native Communities from their perspective.”⁵²⁶ Disruption was enormous at the outset (harvest losses in the first year following the spill were up to 77%)⁵²⁷ and the injury has not healed. Community involvement was not a successful program from the Native point of view.⁵²⁸ In 1999, the Council adopted a “recovery objective” for subsistence (that was not met then and has not been met now):

Subsistence will have recovered when injured resources used for subsistence are healthy and productive and exist at pre-spill levels. In addition, there is recognition that people must be confident that the resources are safe to eat and that the cultural values provided by gathering, preparing, and sharing food need to be reintegrated into community life.⁵²⁹

The Gulf Ecosystem Monitoring (“GEM”) program is the wind-down project for the EVOS Trustee Council.⁵³⁰ Native “community involvement” has wound down with it. This lapse was identified in a review of GEM by the National Research Council, which recommended strengthening “community involvement” in the way it is understood by the Natives.⁵³¹ This recommendation of a prestigious science advisory committee, in turn, is viewed as a “window of opportunity for the tribes to pursue their idea of establishing their endowment titled Tribal Ecosystem Stewardship Program.”⁵³² This tribal endowment has been formalized as follows:

The 20 communities affected by the *Exxon Valdez* Oil Spill are proposing that the EVOS Trustee Council establish an endowment of \$20 million to ensure meaningful Tribal and community involvement in the GEM research and monitoring projects and programs. Such an endowment will assist in promoting community-based scientific research and monitoring of the traditional natural resources on a continuous long term basis. This program will also serve as a forum for western science to gain valuable traditional ecological knowledge about the resources, and for the community members to learn more about the language and in-

526. *Id.* at 1.

527. *See id.* at 4 (citing JAMES A. FALL, *SUBSISTENCE USES OF FISH AND WILDLIFE BEFORE AND AFTER THE EXXON VALDEZ OIL SPILL* (1996)); *see also* LEE STRATTON, *RESOURCE HARVEST AND USE IN TATITLEK, ALASKA* (Alaska Dep’t of Fish & Game Technical Paper No. 181, 1990) (a fortuitous “baseline” paper discussing pre-spill (1988) use of 75 kinds of resources in Tatitlek, a town four miles from “ground zero” on Bligh Reef).

528. *See* Brown-Schwalenberg, *supra* note 141, at 8–17.

529. *UPDATE ON INJURED RESOURCES AND SERVICES*, *supra* note 183, at 27.

530. *See* Brown-Schwalenberg, *supra* note 141, at 14–16 (describing GEM).

531. *Id.* at 17–18 (describing the Committee to Review the Gulf of Alaska Ecosystem Monitoring program (“ROGEM”)).

532. *Id.* at 18.

tent of science and to receive certified technical on-the-job training in natural resource stewardship techniques.⁵³³

The recommendation for a Perpetual Stewardship Council for Alaska Natives is not some impossible dream. The institution of NRD 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 in settlement negotiations 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.

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.

533. Chugach Regional Res. Comm'n, *Tribal Ecosystem Stewardship Program: An Endowment for Tribal Involvement in the GEM Program* (undated proposal, on file with author).