The waters off of Alaska hold one of the richest fisheries in the world. However, it is also home to the Steller sea lion, a large marine mammal whose numbers have declined precipitously in the last several decades. The Steller sea lion was listed as an endangered species in 1990. Despite this action, fishing continues to encroach on the animal’s habitat which environmentalists argue is a major reason for their decline. As a result, in 1998, Greenpeace and a number of other environmental organizations brought suit challenging the agency regulations governing the fisheries encroaching on the Stellar sea lions' habitat. In litigation spanning six years and four trials before the District Court for the Western District of Washington, while faced with intervenors spanning various interests in the fishing industry, Greenpeace eventually succeeded in shaping agency policy to better suit the needs of the endangered mammal.

I. INTRODUCTION

This article examines a specific instance of the use of science in developing governmental protection for an endangered species. It concerns the series of litigation entitled *Greenpeace v. National Marine Fisheries Service*, presenting a conservationist challenge to...
agency protection of Steller sea lions. The *Greenpeace* decisions did not establish new law via judicial interpretation of existing endangered species law. Rather, the decisions applied the pioneering statutes of the American environmental protection movement to the complex issues of a complex fishery. By doing so, this case has established a precedent that will likely be used to evaluate future challenges to biodiversity in the North Pacific ecosystem.

The Steller sea lion (“SSL”) is a marine mammal estimated to have originated between three and four million years ago. The vast North Pacific ecosystem, including the Bering Sea/Aleutian Islands and Gulf of Alaska waters, make up the SSL’s natural habitat. The world’s largest population of SSL occupies the North Pacific. While in the 1950s that population numbered in excess of 240,000, the species declined by almost ninety percent in the 1970s.

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Nilly Zilly? How the Court Rules the Oceans (and Steller Sea Lions)” presented to the Western Regional Science Association conference in February, 2003. It presents research in the project “Decision-Making Under Uncertainty: Management of Commercial Fisheries and Marine Mammals,” partially funded by the Cooperative Institute for Arctic Research, under NOAA Cooperative Agreement no. NA 17RJ1224. I thank the funding agency but hold it harmless from errors of analysis and conclusions drawn in this paper. I also thank the court clerks, Western District of Washington (Seattle), for assistance in locating materials in the *Greenpeace v. NMFS* dockets (#C98-0492Z) from the time of the filing of the case in 1998 through June 2003. Graduate research assistant Ronald “Burr” Neely assisted this research by preparing under my direction “Steller Sea Lion Crisis: A Chronology.” A number of participants in the SSL controversy reviewed the conference paper and provided me with constructive criticism, including Timothy Ragen, Lowell Fritz, Tamra Fairis, Jonathan Pollard, Jack Sterne, Melanie Brown, Michael Payne, Brent Paine, Eric Jorgensen, Peter Jones, Beverly Li, Janis Searles, and Paul MacGregor. Three colleagues, Sue Hills, Sheila Fellerath, and Ian Urquhart, also reviewed the paper. I thank them all for their insights and suggestions, but am solely responsible for remaining errors and omissions. I would also like to acknowledge the work of the editors, particularly their work on the citations.


2. NAT’L RESEARCH COUNCIL, *DECLINE OF THE STELLER SEA LION IN ALASKAN WATERS* 6 (2003); see also *Greenpeace III*, 106 F. Supp. 2d at 1070 (discussing the history and current status of the SSL).


4. *Id.*

As a result, in 1990, the species was listed under the U.S. Endangered Species Act ("ESA") as threatened. Moreover, in 1997, the western stock of SSL, whose numbers have declined more radically than the eastern population, which is actually now increasing slightly, was listed as endangered in 1997.

Marine scientists propose several hypotheses to explain the decline of the SSL population including: (1) nutritional stress, i.e., competition between SSL and fisheries for prey; (2) climate shift; (3) predators, e.g., killer whales; (4) contaminants; (5) disease; (6) incidental take by fishermen; and (7) hunting by Alaska Natives. However, no definitive cause of SSL decline has been established. Nonetheless, it has been determined that the decline coincides with development and growth of industrialized groundfish fisheries, which target the same prey species that SSL principally use for survival—pollock, Atka mackerel, and Pacific cod. During the 1980s and 1990s, these fisheries, which collectively harvested more than four-billion pounds of fish annually, became increasingly concentrated in the critical habitat designated for the endangered SSL’s western population.

The National Marine Fisheries Service ("NMFS"), an office of the National Oceanographic and Atmospheric Administration in the U.S. Department of Commerce, is the federal agency responsible both for managing the groundfish fishery and for protecting the SSL. In 1998, Greenpeace, American Oceans Campaign, and the Sierra Club accused NMFS of failing to prevent jeopardy to the SSL and failing to protect its critical habitat. They brought a civil action against NMFS in the U.S. District Court for the Western

7. Greenpeace III, 106 F. Supp. 2d at 1071 ("Based on continued population declines, in 1997 NMFS classified the Steller sea lion into two distinct population segments east and west of 144 W longitude and reclassified the western population as endangered."); see also Nat’l Research Council supra note 2, at 1 (discussing the different population trajectories of the eastern and western populations).
District of Washington. Greenpeace challenged the agency's biological opinions in evaluating the interactions between these industrialized fisheries and the declining SSL population. This challenge effectively made the federal court, and Judge Thomas S. Zilly, the arbiter of fishery policy.

This article proceeds in three parts. First, it identifies the relevant endangered species law and agencies regulating fisheries management and the SSL habitat. Second, it examines the key aspects of the Greenpeace litigation: protesters who challenged management of the North Pacific fisheries, the interests they seek to protect, the authorities their challenge implicated, and the specific issues arising from their challenge. It also discusses the parties whose interests have been served by the status quo and who intervened in the legal challenges, as well as the specific issues arising from the defense of the fisheries. Third, the article examines how Judge Zilly made his quartet of decisions: Greenpeace v. NMFS (hereinafter “Greenpeace I”) in 1999, Greenpeace v. NMFS (hereinafter “Greenpeace II”) in January 2000, Greenpeace v. NMFS (hereinafter “Greenpeace III”) in July 2000, and Greenpeace v. NMFS (hereinafter “Greenpeace IV”) in December 2002. Examining the evidence presented in the cases and the factors most influential in shaping Judge Zilly’s decisions casts light on the status of marine mammal conservation in the North Pacific.

II. GOVERNANCE OF THE FISHERIES

In many respects, the Steller sea lion case is representative of recent national and global campaigns to protect biodiversity. This endangered species is an ancient mega-fauna, whose elimination would threaten not only ecosystem diversity, but also important symbolic values. The apparent human threat to the species is the efficient groundfish trawl fishery, with an annual business volume in excess of $1 billion. Those defending the species are environ-
mental organizations with local and global connections, which campaign persuasively for a sustainable and ecologically diverse future.

A. Federal Legislation

The National Environmental Policy Act ("NEPA")\(^{20}\) was the first comprehensive environmental legislation enacted in the United States.\(^{21}\) At its heart, it requires that before any major federal action is taken that would significantly affect the quality of the environment, an environmental impact statement must be completed.\(^{22}\) The impact statement must comprehensively examine potential effects of the action on the environment and clearly specify alternatives, with their environmental effects.\(^{23}\) Courts have treated NEPA as procedural legislation and typically have not required federal agencies to produce specific substantive outcomes, so long as alternatives are carefully considered.\(^{24}\) NEPA was one subject of the Greenpeace challenge because NMFS authorizes fisheries in the federal waters of the North Pacific,\(^{25}\) and these fisheries have adverse environmental effects. Greenpeace specifically cited NMFS for violating NEPA by not preparing a comprehensive supplemental environmental impact statement nearly twenty years following its initial impact statements in 1978 and 1981, while the fishery and environment had experienced significant transformations.\(^{26}\)

The most significant legislation affecting the management of the SSL is the Endangered Species Act of 1973 ("ESA").\(^{27}\) Congress enacted ESA to provide a means whereby ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be ap-

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21. Id. §§ 4321, 4331.
22. Id. § 4332(2)(C).
23. Id.
appropriate to achieve the purposes of treaties and conventions set forth in subsection (a) of this section.\textsuperscript{28}

ESA outlines a management process to provide for listing and protection of threatened and endangered species,\textsuperscript{29} which begins with an individual or group petition to the relevant agency.\textsuperscript{30}

Once a species is listed as threatened or endangered, the agency organizes a recovery team and develops a recovery plan to outline the potential causes of population decline with recommendations to promote species recovery.\textsuperscript{31} Section 4(3) of ESA requires that a “critical habitat” be designated within one year of the listing,\textsuperscript{32} defining “critical habitat” as “the specific areas within the geographic area occupied by the species [that is] . . . essential to the conservation of the species and [that] may require special management considerations or protection.”\textsuperscript{33} It may include an area that is not currently occupied by a species, but that will be needed for its recovery.\textsuperscript{34} After a critical habitat has been designated, which occurred for the SSL in 1993,\textsuperscript{35} more restrictive management regulations may be required to reduce adverse impacts to the species.

The most powerful section of ESA is section 7, which calls for consultation by federal agencies to ensure that “any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species . . . or result in the destruction or adverse modification of [its] habitat.”\textsuperscript{36} If a proposed action, for example authorizing a groundfishery to operate in any area of SSL decline, threatens the species, the action must be modified. If harm to the species or adverse modification

\textsuperscript{28} § 1531(b).

\textsuperscript{29} Lowell W. Fritz et al., The Threatened Status of Steller Sea Lions, Eumetopias jubatus, under the Endangered Species Act, 2 Marine Fisheries Rev. 14, 16 (1995).


\textsuperscript{31} 16 U.S.C. § 1531(b).

\textsuperscript{32} § 1533 (enumerating procedures for determining when a species is endangered and declaring a critical habitat).


\textsuperscript{34} 16 U.S.C. § 1532 (5)(A).

\textsuperscript{35} Fritz, supra note 29, at 16.

\textsuperscript{36} 16 U.S.C. § 1536(a)(2).
to its critical habitat cannot be avoided, the agency must consider mitigating alternatives or even abandon the action. 

Section 7 provides for a consultation process to define proposed actions regarding the species, to identify and involve affected interests, and to design attempts to mitigate adverse effects to the species. 

In the case of NMFS, the agency consults with itself. 

Significantly, decisions in the consultation process must be based on the “best scientific and commercial data available,” and not on the grounds of the economic or other interests affected.

The final result of a formal consultation process is a biological opinion (“BiOp”) that indicates whether a species is in jeopardy. The authority issuing BiOps for the SSL in the Gulf of Alaska and Bering Sea/Aleutian Island fisheries is the Alaska Region of NMFS. Recently, the North Pacific Fishery Management Council (“Council”) has been involved in the review of biological opin-

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38. NAT’L ACAD. OF PUB. ADMIN., supra note 30, at 32-33.
39. Section 7 of the ESA requires that when an action may affect a listed species or its critical habitat, the federal agency conducting or authorizing that action (the action agency) must consult with the federal agency charged with overseeing recovery efforts for the listed species (the expert agency). In cases where a federally managed fishery may interfere with the survival or recovery of certain marine mammals (seals, sea lions, porpoises, and whales), NMFS is both the action and the expert agency. These responsibilities are segregated within NMFS between the Office of Sustainable Fisheries, which has the responsibility for reviewing the fishery management plans, and the Office of Protected Resources, which has responsibility for implementing ESA regulations for listed species under its jurisdiction.
41. NAT’L RESEARCH COUNCIL, supra note 2, at 20.
42. The regional council for the North Pacific is called the North Pacific Fishery Management Council, and it covers the largest area of the eight federal regional councils. 16 U.S.C. § 1852(a)(G). The Council has eleven voting members, five of whom are from Alaska. Id. Seven members are appointed by the Secretary of Commerce. Id. Throughout the ensuing court proceedings, the Plaintiffs alleged that the Council had a pro-industry bias, perhaps influencing the actions of NMFS. Plaintiff Response to Industry-Intervenors’ Motion for Summary Judgment, Greenpeace I, 55 F. Supp. 2d 1248 (W.D. Wash. 1999) (No. 98-0492Z). The majority of Council members have alliances with the fishing industry. Leah R. Gerber, Endangered Species Act Decision Making in the Face of Scientific Uncertainty 31-38 (1993) (unpublished M.A. thesis, University of Washington).
ions. If the agency makes a finding that a species is in jeopardy or that adverse modification to its habitat will occur, it must issue a “reasonable and prudent alternative,” if one is available, which provides protection for the species, prior to any further federal action. Moreover, the process may be challenged in federal court with regard to whether a finding of “no jeopardy” or “jeopardy” was proper.

The Administrative Procedure Act outlines the procedures under which actions of administrative agencies, such as NMFS, may be challenged in federal court. Allegations of illegal conduct by agencies customarily are filed in a federal district court, and the judge employs the administrative record of the agency to make a determination as to the legality of such actions. Although district courts are trial bodies, the determination is based on the record and is not a de novo proceeding. Thus, the judicial proceeding is not based on canons of scientific investigation, experimentation, or certainty. Instead, judges merely ask whether the administrative record supports the complaint of illegal agency action. If the agency action does not conform to the judge’s interpretation of the law, the action is ruled “arbitrary and capricious” and is remanded to the agency for correction.

The plaintiffs in Greenpeace I challenged management of the groundfish fisheries in the North Pacific because they believed that agency actions had jeopardized the SSL and had adversely modified the species’ critical habitat. The plaintiff’s list of complaints included the following allegations: (1) the agency had not completed a comprehensive environmental impact statement, as required by NEPA; (2) the agency had not determined the cumulative impact of the changes in fisheries over time and their

Council’s prime function is to issue and amend fishery management plans, on the advice of NMFS. 16 U.S.C. § 1852(h)(1).
43. Minutes, North Pacific Fishery Management Council (NPFMC) Meeting 3 (Jan. 2001).
44. 16 U.S.C. § 1536(b).
45. The Statute gives legal standing to any person who “may commence a civil suit on his own behalf . . . to enjoin any person, including the United States . . . who is alleged to be in violation” of the ESA. Id. § 1540(g).
47. Id.
49. Id.
50. Id.
interactive effects on SSL; (3) NMFS had failed to provide protection for SSL in their foraging areas; (4) NMFS had allowed increased fish harvesting from SSL critical habitat; (5) NMFS had not taken into account significant increases in localized depletion of fish serving as prey for SSL; (6) NMFS had not imposed adequate time and space limitation on the fisheries; and (7) NMFS’s practices overall did not rationally follow the best scientific evidence available, most of which agency scientists had collected.  

B. Regulatory Regime

The National Marine Fisheries Service is the primary manager of the fisheries of the North Pacific. This agency has conflicting missions: the development of a sustainable fishery industry and the protection of marine animals. Moreover, NMFS’s mission in fisheries development and management brings it into close association with the fishing industry and exposes the agency to criticism that the economic interests it regulates dictates its actions.

Two laws provide most of the management authority for fisheries in federal waters: the Marine Mammal Protection Act and the Magnuson Fishery Conservation and Management Act. Before the population of SSL noticeably declined, Congress established a complex regime for managing marine mammals and their interaction with fisheries. The first law was the Marine Mammal Protection Act, passed by Congress in 1972. The purpose of the Act was to maintain or restore marine mammal populations in federal waters to healthy levels by prohibiting the killing, hunting, or harassment of any marine mammal, irrespective of population size. Under this Act, NMFS became the government agency responsible for managing most marine mammals, such as the SSL. Specifically, the agency must develop plans to govern interactions


53. See infra discussion outlining its authority in the development of a sustainable fishery in opposition to the responsibilities it has with respect to conservation of marine mammals.


55. § 1801.

56. See § 1361.


between commercial fisheries and marine mammals, including issuing commercial fisheries permits to allow for the “incidental take” of marine mammals during normal fishing operations.\(^{59}\)

The primary legislative authority for managing the North Pacific fisheries developed four years later. In 1976, Congress passed the Magnuson Fishery Conservation and Management Act,\(^{60}\) later amended as the Magnuson-Stevens Act (“MSA”).\(^{61}\) The Act’s objectives included elimination of foreign competition from the two-hundred nautical mile coastal zone of the U.S. and stimulation of a domestic fishing industry.\(^{62}\) The Exclusive Economic Zone covers about nine-hundred thousand square miles of waters off Alaska’s coast, and it is operated and managed under the authority of the Department of Commerce, the National Oceanographic and Atmospheric Administration, and NMFS.\(^{63}\) In the MSA, Congress provided for the management of U.S. fisheries by establishing eight regional fishery management councils that work with NMFS to develop fishery management plans with the objective of developing sustainable fisheries.\(^{64}\) Among other things, the fishery management plans are implemented by regulations that limit: (1) take by establishing total allowable catch ceilings to enhance sustainable fisheries;\(^{65}\) and (2) set quotas. The formulation of these mechanisms are all “actions” adopted by NMFS and must follow all applicable laws including NEPA and ESA section 7 consultation provisions.\(^{66}\)

III. CHALLENGES TO THE FISHERIES

Three environmental non-governmental organizations challenged the NMFS: Greenpeace, American Oceans Campaign, and the Sierra Club (“Plaintiffs”).\(^{67}\) However, Greenpeace’s involvement in the North Pacific began in the 1980s.\(^{68}\) It pressured NMFS

\(^{59}\) Id.

\(^{60}\) 16 U.S.C. §§ 1801–83 (2000); see also Fritz, supra note 29, at 15.

\(^{61}\) NAT’L ACAD. OF PUB. ADMIN., supra note 30, at 6.


\(^{63}\) NAT’L ACAD. OF PUB. ADMIN., supra note 30, at 6.

\(^{64}\) See generally 16 U.S.C. §§ 1852-1853.

\(^{65}\) See Fritz, supra note 29, at 15.

\(^{66}\) Gerber, supra note 42, at 28.

\(^{67}\) Greenpeace I, 55 F. Supp. 2d 1248 (W.D. Wash. 1999).

to list the SSL as threatened in the late 1980s.\textsuperscript{69} In 1992, in \textit{Greenpeace Action v. Franklin},\textsuperscript{70} the organization challenged NMFS to adopt protective measures for SSL, citing the increasing concentration of the trawl fishery and its negative impact on the SSL’s main dietary source.\textsuperscript{71} Greenpeace’s legal complaints go considerably beyond protection of the SSL. It also objected to the increase in the numbers and capacity of the trawl fishery, objected to their concentration in time periods and spatial locations, and alleged that these threatened not only the SSL but other species feeding on the same prey: harbor seals, fur seals, and marine birds, which also have registered rates of decline.\textsuperscript{72} Thus, the Greenpeace suit can be regarded as a comprehensive challenge to agency actions that it believed inadequately protected endangered species in the North Pacific ecosystem.

In the litigation against NMFS, the Plaintiffs challenged the agency’s protection of SSL under two pivotal laws enacted at the high point of the American environmental movement: NEPA and ESA.\textsuperscript{73} At the start of legal proceedings in 1998, two fisheries associations petitioned for intervention: the At-Sea Processors Association and the United Catcher Boats.\textsuperscript{74} Shortly thereafter, they were joined by Westward Seafoods, other on-shore processors, and the Aleutians East Borough.\textsuperscript{75} In a September 23, 1998 order, Judge Zilly consolidated the similar petitions of these parties.\textsuperscript{76} He allowed other associations to intervene in proceedings concerning

\begin{itemize}
  \item \textsuperscript{69} Id.
  \item \textsuperscript{70} 14 F.3d 1324 (9th Cir. 1992).
  \item \textsuperscript{71} Id. at 1326–28.
  \item \textsuperscript{74} Memorandum of Points and Authorities in Support of Motion of At-Sea Processors Association for Leave to Intervene, at 1-2, \textit{Greenpeace I} (No. C98-0492C); Memorandum of Authorities in Support of Motion to Intervene of United Catcher Boats, at 1-2, \textit{Greenpeace I} (No. C98-0492C).
  \item \textsuperscript{75} Proposed Intervenors’ Memorandum in Support of Motion to Intervene as Defendants, at 1, \textit{Greenpeace I} (No. C98-0492C); Memorandum in Support of Motion to Intervene by Aleutians East Borough at 1, \textit{Greenpeace I} (No. C98-0492C).
  \item \textsuperscript{76} Order Granting Proposed Intervenors’ Motions to Intervene in Part and Denying Their Motions in Part, at 1, 6, \textit{Greenpeace I} (No. C98-0492C).
\end{itemize}
ESA claims, but limited involvement with NEPA claims. These intervenors, and those who later associated themselves with the case, represented the range in diversity of the Alaska groundfish fisheries.

The defendant, NMFS, and the different intervenors disagreed on several aspects of the Plaintiffs’ challenges that parts of the fishery allegedly jeopardized and adversely modified SSL critical habitat. Among the issues on which the defendant and associated intervenors tended to agree included: (1) the North Pacific groundfish fishery was conservatively managed; there was little waste through by-catch, and no over-fishing; (2) The fisheries were not so concentrated in time and space as to jeopardize the SSL or adversely modify its critical habitat, although NMFS began to change its position on this issue in late 1998; (3) No causal link had been established between SSL declines and food shortages resulting from groundfish fishery removals; (4) the groundfish fishery might have beneficial effects on marine mammals, by removing cannibalistic older pollock that prey on young pollock, which in turn are prey for SSL; (5) no interactive effects of fisheries or other changes over time justified comprehensive environmental review; and (6) existing fisheries management measures were sufficient to protect the SSL. Indeed, when the court began consideration of SSL conservation, defendants and intervenors introduced a differ-

77. Id. at 6 (“The intervenor will also be permitted to participate in the injunctive relief portion of the NEPA claim to the extent they establish a direct, immediate, and harmful effect on a legally protectable interest.”).

78. The organizations differ in species of fish harvested: pollock, Atka mackerel, Pacific cod or flatfish, rockfish, and other species. They differ in size and capitalization, from the large ocean trawlers to the smaller catcher vessels to the under sixty foot-long boats plying coastal waters. They differ in location of effort, from completely offshore to onshore processors. They also differ in gear, from the trawl fishers to longliners. These differences are the basis for competitive tensions, only partly curbed by regulations. Nevertheless, the challenge of the Plaintiffs to the management of the North Pacific groundfish fishery produced a unified interest in the status quo and a unified litigation position. See generally Memorandum of Points and Authorities in Support of Motion of At-Sea Processors Association for Leave to Intervene, Greenpeace I (No. C98-0492C); Memorandum of Authorities in Support of Motion to Intervene of United Catcher Boats, Greenpeace I (No. C98-0492C); Proposed Intervenor-Defendants’ Memorandum in Support of Motion to Intervene as Defendants, Greenpeace I (No. C98-0492C); Memorandum in Support of Motion to Intervene by Aleutians East Borough, Greenpeace I (No. C98-0492C).

ent perspective from the plaintiffs, one strongly defensive of the status quo.

IV. ANALYSIS OF JUDICIAL DECISIONS

A. Greenpeace v. National Marine Fisheries Service (I)

The National Marine Fisheries Service had not been entirely unresponsive to declines in the SSL population. It listed the species as threatened in 1990 and formed the SSL recovery team. The agency also took three protective actions: (1) it established a three-nautical mile buffer (no transit) zone around rookeries in the Gulf of Alaska and Aleutian Islands; (2) it prohibited shooting at or near SSL; and (3) it reduced the allowable level of SSL take incidental to commercial fishing operations. Yet while the endangered species listing proceeded, NMFS increased opportunities for fisheries, by allowing, for example, a nearly eighty-percent increase in the total allowable catch level for the pollock stock in the Gulf of Alaska.

In 1991, prompted by a Greenpeace warning that it would seek relief in federal court if total allowable catch levels were not lowered, NMFS implemented further spatial and temporal restrictions in the Bering Sea/Aleutian Islands and Gulf of Alaska. New regulations included restricting pollock fishery operations (seasonal and year-round) from a ten- to twenty-nautical mile no-trawl buffer zone around rookeries, splitting the pollock allocation between eastern and western Gulf of Alaska areas, and limiting the total harvest during any quarter of the season. The next year, jarred by the filing of Greenpeace Action v. Franklin, NMFS began implementation of more restrictive measures, such as increasing buffer zones around select rookeries, seasonal fishing closures, and further spatial and temporal allocation of fish species. Its most significant action was the final designation of critical habitat for the SSL, announced in August 1993. This designation identified over one hundred haulouts and forty rookeries and extended

82. Gerber, supra note 43, at 60.
83. Id. at 67.
84. Id. at 68.
85. Id.
86. 14 F.3d 1324 (9th Cir. 1992).
offshore areas thought to be essential for foraging, reproduction, and sustainability of the SSL.\textsuperscript{89}

\textbf{FIGURE 1: MAP SHOWING DISTRIBUTION OF THE STELLER SEA LION}\textsuperscript{90}

NMFS staff conducted scientific studies which resulted in the differentiation between the eastern and western stocks of the SSL.\textsuperscript{91}

Based on this work and its own population viability analyses, the SSL recovery team reported that if current trends continued, chances of SSL extinction were significant.\textsuperscript{92} This led to the recommendation in 1995 that the western population of SSL be upgraded to an endangered listing.\textsuperscript{93} The listing process took over two years.\textsuperscript{94} In the interim, the fisheries continued to operate on a status quo basis with no significant alteration of the fishery management plans for the Bering Sea/Aleutian Islands or Gulf of Alaska regions. In fact, in 1996, NMFS concluded in a BiOp that

\begin{itemize}
\item \textsuperscript{89} Fritz, \textit{supra} note 29, at 16.
\item \textsuperscript{90} National Marine Mammal Laboratory, \textit{Stellar Sea Lion Distribution}, at http://nmml.afsc.noaa.gov/AlaskaEcosystems/sshome/distrib.htm (last visited Feb. 8, 2004).
\item \textsuperscript{91} \textit{National Research Council}, \textit{supra} note 2, at 1. These SSL are found west of 144 degrees west longitude by Cape Suckling, Alaska. See Figure 1.
\item \textsuperscript{92} See Memorandum in Support of Plaintiff’s Motion for Summary Judgment at 1, 3 \textit{Greenpeace I} (No. C98-0492C).
\item \textsuperscript{93} \textit{National Research Council}, \textit{supra} note 2, at 1; see also Memorandum in Support of Plaintiff’s Motion for Summary Judgment at 1, 3 \textit{Greenpeace I} (No. C98-0492C).
\item \textsuperscript{94} Id.
\end{itemize}
the current fishery management plan did not jeopardize the species.\footnote{\textsc{N}ational \textsc{a}cademy of \textsc{p}ublic \textsc{a}dministration, \textit{supra} note 30, at 34.}

After listing the SSL as endangered, NMFS proposed no immediate conservation measures. In December 1997, the agency accepted the Council’s recommendation for a sixty-percent increase in the western central pollock quota for the Gulf of Alaska (based on stock assessments) and only minor reductions in the total allowable catches for the Bering Sea/Aleutian Islands region.\footnote{See \textit{Greenpeace}, \textit{A Steller Sea Lion Chronology}, \textit{supra} note 30, at 34.} This prompted the Plaintiffs to file suit in federal court, in \textit{Greenpeace I.}\footnote{\textit{Greenpeace I}, 55 F. Supp. 2d 1248 (W.D. Wash. 1999).}

On December 3, 1998, the Office of Protected Resources of NMFS issued a BiOp ("BiOp 1") stating that the pollock fisheries jeopardized the recovery of the SSL in the Bering Sea/Aleutian Islands and Gulf of Alaska fisheries.\footnote{Jeremy D. Rusin, \textit{Management of the Western Alaska Steller Sea Lion, Eumetopias jubatus, Under the Endangered Species Act: Evolution of Interagency Consultation and Impacts on Alaska Groundfish Fisheries} 27 (2002) (unpublished M.A. thesis, University of Washington) (reviewing six recent biological opinions of the agency). BiOp 1 is the first biological opinion issued after the SSL was reclassified from threatened to endangered in 1997. It is the abbreviation used by the agency, court, and plaintiffs. \textit{See id.} at 22.} This was a significant shift in position by NMFS, which appears to have been the result of legal pressures from environmental organizations and increased public awareness of the SSL issue.\footnote{See, \textit{e.g.}, \textit{Pollock v. Sea Lions}, \textit{Seattle Times}, Dec. 16, 1998, at B4; Helen Jung, \textit{Environmentalists File Suit to Protect Steller Sea Lions?}, \textit{Anchorage Daily News}, Apr. 16, 1998, at A1; \textit{see also}, \textit{e.g.}, David Whitney, \textit{Sea Lions Join Endangered Species List}, \textit{Anchorage Daily News}, May 1, 1997, at A1.}

A finding of jeopardy under ESA requires the protective agency to outline specific "Reasonable and Prudent Alternatives" to avoid adverse impacts.\footnote{\textit{Greenpeace I}, 55 F. Supp. 2d at 1257.} Instead of spelling out detailed reasonable and prudent alternatives, NMFS crafted a three-part general framework for avoiding the likelihood of adversely impacting the SSL or modifying its critical habitat: (1) "temporal dispersion" of the fishing effort; (2) "spatial dispersion" of the fishing effort; and (3) protection from fisheries competition for SSL prey in waters adjacent to important rookeries and haulouts.\footnote{\textit{See id.} at 1264.} Thereupon, the Council prepared alternative management measures, which were incorporated in the BiOp as part of the reasonable and prudent al-
ternatives for all Alaska pollock fisheries and put into effect in an emergency listing in the Federal Register, to remain in effect until the end of December 1999. 102

Following the issuance of BiOp 1, the Plaintiffs amended their complaint to the court. 103 The environmental organizations maintained that the reasonable and prudent alternatives still did not adequately protect the SSL and that the proposed 1999 reasonable and prudent alternatives did not materially improve the conservation program for the SSL. 104 NMFS and the defendant intervenors disagreed, and, in a July 13, 1999 decision, Judge Zilly addressed this conflict, as well as the supplemental environmental impact statement issued by NMFS late in 1998. 105 The judge upheld the jeopardy finding for the pollock fisheries and found that reasonable and prudent alternatives developed by the Council were “arbitrary and capricious on this record.” 106 The judge also ruled that NMFS had violated NEPA by failing to prepare a comprehensive supplemental environmental impact statement. 107

1. NEPA Claims. The court held that the legal standard of review in NEPA cases is whether the agency took a “hard look” at the environmental consequences of federal action and whether the supplemental environmental impact statement it issued was a “reasonably thorough discussion of the significant aspects of the probable environmental consequences.” 108 The supplemental environmental impact statement that NMFS issued in December 1998 was the first since the original environmental impact statements had been prepared in 1979 and 1981 for the Gulf of Alaska and Bering Sea/Aleutian Islands groundfisheries, respectively. This was an almost twenty-year period during which the fisheries and the North Pacific environment had changed dramatically. 109 Judge Zilly noted that, from the early 1990s, internal agency criticism focused on the inadequacy of existing environmental impact statement documents and on the environmental assessments that had been prepared at each major amendment to the fishery management plans; however,

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102. Id.
104. See id. at 20-21, Greenpeace I (No. C98-0492C).
106. Id. at 1268-69, 1276.
107. Id. at 1273.
108. Id. at 1269 (quoting Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 800, 809 (9th Cir. 1999); Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1211 (9th Cir. 1989)).
109. See id. at 1270–71.
NMFS waited until 1997 to begin preparation. The supplemental environmental impact statement did update scientific information about the North Pacific ecosystem, but its analysis was limited to a range of alternative total allowable catch levels under which the fisheries would be conducted. Judge Zilly agreed with the plaintiffs’ allegation that the scope of the supplemental environmental impact statement was too narrow and the range of alternatives considered was insufficient.

The supplemental environmental impact statement focused on just one aspect of Fishery Management Plans, the total allowable catch, and formulated alternatives in terms of different total allowable catch levels. Judge Zilly found that the statement did not consider how new information about the ecosystem related to other aspects of the fisheries regulated by fishery management plans, such as “time and area closures, gear restrictions, bycatch limits of prohibited species, and allocations of [total allowable catch levels] among vessels.” The judge noted that NMFS also promised that the supplemental environmental impact statement would discuss such issues in its scoping notice. He agreed with the plaintiffs’ interpretation of this language to imply that the agency was obliged to consider effects of fishery management plans as a whole, and that a “narrow [supplemental environmental impact statement] dealing only with [total allowable catch] levels would not satisfy NEPA.”

The judge’s second reason for finding the scope of the supplemental environmental impact statement too narrow was NEPA’s requirement of cumulative impact analysis:

The Court has no doubt that the vast changes to the [fishery management plans] have reached the threshold of “cumulatively significant impact on the environment,” thereby requiring preparation of [a supplemental environmental impact statement] addressing these vast changes. For the same reasons, NMFS cannot then break the [fishery management plans] down “into small component parts” by analyzing only the setting of [total allowable catch] levels rather than these [fishery management plans] in their entirety.

110. See id. at 1271.
111. Id.
112. Id. at 1271-76.
113. Id. at 1271.
114. Id. at 1271-72 (quoting evidence in the record at S2-350 at 9).
115. Id. at 1272.
116. Id. at 1273.
117. Id. at 1274.
Judge Zilly’s analysis of the range of alternatives flowed from his findings that the supplemental environmental impact statement lacked a broad, programmatic analysis of the fishery management plans as a whole. Also, he asked what advice decision makers could derive from alternatives spelled out in terms of total allowable catch levels. He commented: “It does not help future decision-makers assess whether the fisheries should continue to be conducted under the current structure of the [fishery management plans], or whether other alternatives would be more beneficial.” He seemed to be influenced by the objection to the supplemental environmental impact statement from EPA, added to the record by Greenpeace, to the effect that NEPA dictated “‘inclusion of more comprehensive alternatives which look at and programmatically address all elements of the [fishery management plan].’” Finally, the court rejected NMFS’s contention that it should defer to the agency’s determination of the scope of the supplemental environmental impact statement, remarking that “the government’s failure to explain the connection between setting various [total allowable catch] levels and the impact of other fishery regulations is not entitled to deference, and even if the Court were to defer, the result would be the same.”

2. *ESA Claims.* Judge Zilly’s order primarily concerned BiOp 1 and the reasonable and prudent alternatives developed from it. The Plaintiffs agreed with the agency’s jeopardy assessment for the pollock fishery, but intervenors objected to it. The plaintiffs disagreed with the agency’s finding of no jeopardy regarding the Atka mackerel fishery, but the intervenors agreed. The plaintiffs also challenged the final reasonable and prudent alternatives, which the intervenors objected to as well. Judge Zilly steered a middle course, agreeing with both the agency’s jeopardy finding regarding the pollock fishery and the finding of no jeopardy regarding Atka mackerel, but opposed the final reasonable and prudent alternatives because he could not ascertain from the record how they resolved jeopardy.

118. *Id.*
119. *Id.*
120. *Id.* (quoting Pl.’s Ex. 3, at 5).
121. *Id.* at 1275.
122. See *id.* at 1259-69.
123. *Id.* at 1260.
124. *Id.*
125. *Id.* at 1264.
126. *Id.* at 1269.
“Challenges to Biological Opinions issued,” under the terms of ESA, can be reviewed by courts under the Administrative Procedure Act, using the review standard of whether the opinion is “‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’” Judge Zilly cited four clarifications: (1) “‘whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment’”127; (2) whether “‘the agency has relied on factors which Congress has not intended it to consider . . . entirely failed to consider an important aspect of the problem, offered an explanation . . . that runs counter to the evidence, . . . or is so implausible that it could not be ascribed to a difference in view’”128; (3) when it “‘fails to articulate a satisfactory explanation for its actions’”129, and (4) “‘the focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court.’”130

Of particular relevance to the discussion of the role of science and uncertainty in decision-making on SSL issues are Judge Zilly’s clarifications on the deference a court should pay to an administrative agency with scientific expertise but without certain knowledge concerning the species it protects:

“Deferece to an agency’s technical expertise and experience is particularly warranted with respect to questions involving engineering and scientific matters.” . . . When scientific evidence is equivocal, a court is to defer to an agency’s reasonable interpretation of that evidence. . . . “When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.” . . . “The deference a court must accord an agency’s scientific . . . expertise is not unlimited, however. Thus the presumption of agency expertise may be rebutted if its decisions, even though based on scientific expertise, are not reasoned.”132

Then the judge proceeded to evaluate whether NMFS had in fact insured that its actions in the management of the North Pacific fisheries did “not ‘jeopardize’ endangered species or ‘adversely

127. Id. at 1259 (quoting 5 U.S.C. § 706(2)(A) (2000)).
130. Id. (quoting N. Spotted Owl v. Hodel, 716 F. Supp. 479, 482 (W.D. Wash. 1989)).
131. Id. (citing Camp v. Pitts, 411 U.S. 138, 142 (1973)).
132. Id. (internal citations omitted).
modify’ their critical habitat,” with respect to BiOp 1 assessments of the pollock fishery, the Atka mackerel fishery, and the pollock reasonable and prudent alternatives.  

Judge Zilly considered three objections of the intervenors regarding the pollock fishery jeopardy assessment: 1) whether NMFS considered “relevant information contrary to its conclusion”; 2) whether “existing scientific data” supported the agency’s conclusions; and 3) whether the agency’s methodology was speculative. The industry’s first objection had focused on recent evidence of climate shift and environmental change as well as “reduced ‘carrying capacity’” of the North Pacific ecosystem as a whole. This issue had been discussed by NMFS, but the BiOp concluded that “[t]he existence of a strong environmental influence on sea lion trends does not rule out the possibility of significant fisheries-related effects.” Zilly agreed with the agency’s use of “discretion to rely on the reasonable opinions of its own qualified experts.”

Second, the judge supported NMFS’s “competition theory,” which suggests that SSL and the fisheries competed with each other for available prey. The third point is probably the most contentious in the SSL controversy: the lack of conclusive evidence about the cause of decline in the endangered species population. In its response to the plaintiffs’ and defendant’s motions for summary judgment, the defendant-intervenors (“Industry”) asserted: “Scientists who have analyzed data at any level of detail have found consistently that the gross correlations (decline of SSL coinciding with

133. Id. at 1259-60. The implementing regulations of ESA define these two terms. They recognize “jeopardize” as “the continued existence of means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” Id. at 1260 (quoting 50 C.F.R. § 402.2 (2003)). “Destruction or adverse modification” is defined as “a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species . . . [including] alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.” Id.

134. Id.


136. Greenpeace I, 55 F. Supp. 2d at 1261 (quoting evidence in the record at S1-55 at 73).


138. Id.

139. Id. at 1261–62.
prosecution of large scale trawl fisheries) Greenpeace used do not establish a cause/effect relationship between the fisheries and the SSL decline.\footnote{140} Judge Zilly acknowledged that the evidence was not conclusive, but referred to ESA, which requires only that decisions be made on the basis of “the best scientific and commercial data available.”\footnote{141} Then the judge lauded the two-step approach NMFS had taken to support its jeopardy assessment, which had considered and rejected a series of “potential non-fishery causes of SSL decline,” such as predation, toxic substances, research, natural environmental changes, and prey quality.\footnote{142} Then NMFS made three assumptions, which it supported with detailed evidence:

1. “The abundance of any species in a particular space at a particular time is finite”; therefore removing hundreds of thousands of tons of fish per day must, “at least on a very local scale and for short periods of time, reduce the biomass of the [remaining] targeted fish,”\footnote{143};

2. The likelihood of localized depletions rises when fish are patchily distributed, as pollock are\footnote{144}; and

3. “[I]f the reductions in schools of pollock or mackerel occur within the foraging areas of the endangered western population of Steller sea lions, the reduced availability of prey is likely to reduce the foraging effectiveness of sea lions.”\footnote{145}

Judge Zilly found these assumptions to be reasonable and, although the fisheries were not the sole cause of SSL decline or the major factor preventing recovery, they nevertheless were likely to jeopardize the continued existence of the SSL population.\footnote{146} He concluded: “NMFS provided a reasonable interpretation of equivocal evidence, to which this court must defer.”\footnote{147}

Greenpeace argued that for the same reasons NMFS found that the pollock fishery jeopardized SSL, it should find the Atka mackerel fishery in jeopardy, but the court upheld NMFS’ determination.\footnote{148} The judge noted that the Atka mackerel fishery took a much smaller part of the overall groundfish catch in the Bering

\footnote{140. Memorandum of Defendant-Intervenors in Response to Plaintiff’s and Defendant’s Motions for Summary Judgment at 3, \textit{Greenpeace I} (No. C98-0492C).}
\footnote{142. \textit{Id.}}
\footnote{143. \textit{Id.}}
\footnote{144. \textit{Id.}}
\footnote{145. \textit{Id.}}
\footnote{146. \textit{Id.}}
\footnote{147. \textit{Id.} (citing Cent. Arizona Water Conservation Dist. v. U.S. EPA, 990 F.2d 1531, 1540 (9th Cir. 1993)).}
\footnote{148. \textit{Id.} at 1262–63 (citing evidence in the record S1-55, at 17–19).}
Sea/Aleutian Islands than the pollock fishery.\textsuperscript{149} Of greater importance, the Atka mackerel fishery operated under different spatial and temporal rules, and the Council, accepting NMFS’ advice, had reduced the competitive threat of the fishery to SSL.\textsuperscript{150}

The last area of examination considered the solutions NMFS had proposed to problems identified in BiOp 1: the reasonable and prudent alternatives.\textsuperscript{151} The judge sided with Greenpeace, which challenged both the proposed and final reasonable and prudent alternatives because they failed to analyze jeopardy and adverse modification separately.\textsuperscript{152} Additionally, the court faulted the Council for having weakened recommendations in the BiOp for greater temporal dispersion of the fisheries.\textsuperscript{153} The crux of the judge’s decision was that the agency had not rationally based the “reasonable and prudent alternatives” on general principles in the BiOp.\textsuperscript{154} For example, BiOp 1 called for temporal dispersion of the fisheries to lessen competition with SSL for prey, but the final reasonable and prudent alternatives did not disperse the fishery temporally.\textsuperscript{155} The judge commented: “NMFS has completely failed to analyze how these individual measures avoid jeopardy or adverse modification. NMFS also has not explained how the various management measures work together.”\textsuperscript{156} When the judge questioned NMFS’ counsel about the analysis used in formulating the “reasonable and prudent alternatives,” counsel responded “NMFS is relying on the statistics. We’re relying on the numbers. . . .”\textsuperscript{157} NMFS’ \textit{Endangered Species Act Consultation Handbook} made it clear that the agency had to provide analysis, meaning “a thorough explanation of how each component of the alternative is essential to avoid

\textsuperscript{149} Id. at 1263.
\textsuperscript{150} See id. The Council split the mackerel season and total allowable catch into two parts. \textit{Id.}
\textsuperscript{151} Id. at 1264. Judge Zilly clarified the regulatory definition for reasonable and prudent alternatives found in 50 C.F.R. § 402.02 (2003). Any valid RPA must meet four tests: “[I]t must (1) be consistent with the purpose of the underlying action; (2) be consistent with the action agency’s authority; (3) be economically and technically feasible; and (4) ‘avoid the likelihood’ of jeopardy or adverse modification.” \textit{Id.}
\textsuperscript{152} Id. at 1265.
\textsuperscript{153} Id. at 1265–66.
\textsuperscript{154} Id. (stating that the three principles are “temporal dispersion, spatial dispersion, and protection of rookeries and haulouts.”).
\textsuperscript{155} Id.
\textsuperscript{156} Id. at 1267.
\textsuperscript{157} Id.
jeopardy and/or adverse modification. The court was therefore left with no alternative but to find the "reasonable and prudent alternatives" arbitrary and capricious, consistent with prior ESA decisions such as *Defenders of Wildlife v. Babbitt*. Where an agency fails to articulate a 'rational connection between the facts found and the choice made, . . . [the court or counsel] may not supply a reasoned basis for the agency's action that the agency itself has not given.

The judge's final question was whether the "reasonable and prudent alternatives" were arbitrary and capricious because NMFS failed to meet the ESA test that alternatives must be "economically and technologically feasible." Curiously, the judge prefaced his analysis with the statement: "it remains an open question whether this requirement should be interpreted as referring only to whether the [reasonable and prudent alternatives are] feasible for the agency, or whether it relates to the effects on third parties." Judge Zilly then closed the question by citing *Tennessee Valley Authority v. Hill*, in which the court enjoined the opening of a nearly completed dam because its opening would eliminate an endangered species' critical habitat. He affirmed "[t]he 'guiding standard' for determination of [reasonable and prudent alternatives] is jeopardy[,] . . . not economic impact on third parties such as the fishing industry." Third party concerns could be considered, but only as the second step after the agency had first formulated a range of possible measures, none of which jeopardized the species. NMFS' error had been to approve "changes in management measures based solely on an attempt to minimize the impact on the fishing industry, without explicitly considering what effect the changes would have on the Steller sea lions." On this point, Judge Zilly appears to have been influenced by correspondence

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158. *Id.* (quoting U.S. FISH AND WILDLIFE SERVICE ET AL., ENDANGERED SPECIES ACT CONSULTATION HANDBOOK 4-41 (1998)).
159. *Id.*
161. *Id.* at 679.
162. *Greenpeace I*, 55 F. Supp. 2d at 1267 (quoting 50 C.F.R. § 402.02 (2002)).
163. *Id.* (emphasis added).
165. *Id.* at 193-94.
167. *Id.*
168. *Id.*
from an NMFS scientist in the administrative record indicating confusion in NMFS regulatory priorities.\textsuperscript{169}

Following his decision, Judge Zilly remanded both BiOp 1 and the supplemental Environmental Impact Statement to the NMFS.\textsuperscript{170} By invalidating the reasonable and prudent alternatives, the court had required the agency to prepare revised final reasonable and prudent alternatives consistent with its order, which the agency was not able to produce until October of the following year.\textsuperscript{171} By invalidating the supplemental environmental impact statement, the judge effectively re-opened the environmental review process in the agency and did so by putting NMFS on a clock: its administrator was required to make progress reports to the court every 60 days.\textsuperscript{172} The agency appeared to heed criticism of its environmental review process, particularly provisions on public comment and development of meaningful alternatives. This lengthened the review, and the agency did not complete its draft programmatic supplemental environmental impact statement until 2001.\textsuperscript{173} Before concluding the process, NMFS withdrew the document to consider more carefully any environmental alternatives.\textsuperscript{174} The agency planned to issue the final programmatic supplemental environmental impact statement and record of decision by late 2005, but Judge Zilly, responding to Greenpeace’s complaint in 2002, required that the work be finished by September 1, 2004.\textsuperscript{175}

B. \textit{Greenpeace v. National Marine Fisheries Service (II)}\textsuperscript{176}

\textit{Greenpeace II} continued the \textit{Greenpeace I} litigation, but it established little new legal ground. Whereas the first Greenpeace ac-

\begin{itemize}
\item \textsuperscript{169} \textit{Id.} “[P]rotective measures for [sea lions] appear to be less urgent than consideration of impacts to the fishing industry. I thought that we were still in the role of the consultation agency in deciding what needed to be done for the Stellers and later, as action agency, we would find the best way to implement [reasonable and prudent alternatives] with industry concerns in mind. Have I misunderstood the process, or does it appear that several steps are going on at the same time here?” \textit{Id.} at 1268 n.31.
\item \textsuperscript{170} \textit{Id.} at 1277.
\item \textsuperscript{171} \textit{Greenpeace III}, 106 F. Supp. 2d 1066, 1069 (W.D. Wash. 2000).
\item \textsuperscript{173} \textit{See} \textit{National Marine Fisheries Service (Alaska Region), Steller Sea Lion Protection Measures: Final Supplemental Environmental Impact Statement} (2001).
\item \textsuperscript{174} \textit{See} Defendants’ Motion of Filing, Declaration of Ronald Berg, at 4-5, \textit{Greenpeace I} (W.D. Wash. 2001) (No. C98-0492Z).
\item \textsuperscript{175} \textit{See} Order at 3, \textit{Greenpeace I} (W.D. Wash. 2003) (No. C98-0492Z).
\item \textsuperscript{176} 80 F. Supp. 2d 1137 (W.D. Wash. 2000).
\end{itemize}
tion considered the flaws in BiOp 1 of December 3, 1998, the second concerned inadequacies in a second BiOp (“BiOp 2”), issued by NMFS on December 22, 1998.\footnote{177}

The subject of this court opinion was the comprehensiveness of the biological opinion for fishery management plans, adopted by the North Pacific Fisheries Management Council with the guidance of NMFS, which also served as the implementing agency. Under authority of the Magnuson-Stevens Fishery Conservation and Management Act,\footnote{178} the Council developed two original plans, one for the Bering Sea and Aleutian Islands in 1978 and the second for the Gulf of Alaska fishery in 1982.\footnote{179} Since their original adoption, the fishery management plans had been amended dozens of times.\footnote{180} The plans “utilize[d] a myriad of interrelated regulations to manage the fisheries” concerning when, where, and how the fisheries are conducted.\footnote{181}

Before issuing its December 1998 BiOp, NMFS had consulted twice on the environmental effects of the Bering Sea/Aleutian Islands and Gulf of Alaska groundfish fishery management plans.\footnote{182} In April 1991, NMFS issued two biological opinions examining the effects of the fisheries on species listed under the Endangered Species Act, including the Steller sea lion.\footnote{183} Then, four years later, NMFS reinitiated consultation, and in January 1996, it again issued biological opinions on the overall impacts of the North Pacific fishery management plans on listed species.\footnote{184} NMFS had concluded that this opinion remained valid for the 1998 Bering Sea/Aleutian Islands groundfish fishery, even after the western SSL had been reclassified as endangered in 1997.\footnote{185} However, because of a sixty percent increase in the total allowable catches of Gulf of Alaska pollock for 1998, NMFS reinitiated consultation on that fishery, concluding in a March 1998 biological opinion that it was not likely to jeopardize the SSL or adversely modify its critical habitat.\footnote{186}

These two biological opinions, the 1996 opinion for the Bering Sea/Aleutian Islands and the March 1998 opinion for the Gulf of

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\begin{itemize}
  \item \textit{Id.} at 1139.
  \item Pub. L. No. 94-265, 90 Stat. 331.
  \item \textit{Greenpeace II}, 80 F. Supp. 2d at 1139–40.
  \item \textit{Id.} at 1140.
  \item \textit{Id.}
  \item \textit{Id.} at 1141.
  \item \textit{Id.}
  \item \textit{Id.}
  \item \textit{Id.}
  \item \textit{Id.}
\end{itemize}
Alaska, were the subject of Greenpeace’s April 1998 suit.\textsuperscript{187} NMFS argued at the time that the litigation should be stayed because it was preparing a new supplemental environmental impact statement addressing the two fishery management plans, and that it was consulting on a biological opinion under section 7 of ESA that would “examine all Federally-managed fisheries in the [Bering Sea/Aleutian Islands] and [Gulf of Alaska].”\textsuperscript{188} Based on the agency’s promises, Judge Zilly granted the stay.\textsuperscript{189} In December 1998, NMFS issued the supplemental environmental impact statement as well as two biological opinions. The first, BiOp 1, treated the pollock and Atka mackerel fisheries, and the second, BiOp 2, encompassed the entire groundfish fisheries.\textsuperscript{190} Following the court’s order of remand for preparation of revised reasonable and prudent alternatives and a comprehensive supplemental environmental impact statement, NMFS “[took] back” BiOp 2 and reinitiated consultation on the effects of the entire groundfish management scheme.\textsuperscript{191}

From NMFS’ perspective, BiOp 2 was adequate for the 1999 fisheries, but because it had been withdrawn to reinitiate consultation, the issue of its adequacy was moot—a perspective with which industry agreed.\textsuperscript{192} To Greenpeace, the 1998 biological opinion was flawed because it did not measure the cumulative effects of the fishery on the SSL.\textsuperscript{193} If, on the other hand, the opinion were in consultation, and thus not available for legal challenge, then no opinion governed the fishery, which was a violation of ESA.\textsuperscript{194} The court agreed with Greenpeace.\textsuperscript{195}

In his decision, the judge relied extensively on \textit{Conner v. Burford},\textsuperscript{196} which held that biological opinions under ESA must be “coextensive” with the agency action, and that the action had to be construed broadly.\textsuperscript{197} In the context of the North Pacific fisheries, the relevant action was permitting the groundfishery pursuant to

\begin{itemize}
  \item \textsuperscript{187} \textit{Id.}
  \item \textsuperscript{188} \textit{Id.} at 1142 (quoting Defendant’s Memorandum in Support of Stay at 4, \textit{Greenpeace I} (No. C98-0492Z)).
  \item \textsuperscript{189} \textit{Id.}
  \item \textsuperscript{190} \textit{Id.}
  \item \textsuperscript{191} \textit{Id.} at 1143 (quoting Defendant’s Memorandum in Support of Motion to Dismiss at 2, 7, \textit{Greenpeace I} (No. C98-0492Z)).
  \item \textsuperscript{192} \textit{Id.}
  \item \textsuperscript{193} \textit{Id.}
  \item \textsuperscript{194} \textit{Id.} at 1152.
  \item \textsuperscript{195} \textit{Id.}
  \item \textsuperscript{196} 848 F.2d 1441 (9th Cir. 1988).
  \item \textsuperscript{197} \textit{Greenpeace II}, 80 F. Supp. 2d at 1143-44 (quoting \textit{Conner}, 848 F.2d at 1458).
\end{itemize}
fishery management plans, and thus ESA could be satisfied only with a comprehensive biological opinion coextensive in scope with the fishery management plans. Industry argued that NMFS’ authorization of the 1999 fishery indicated sufficiency in scope of the BiOp 2, to which the judge responded in an unusual statement of judicial power that the court and not the agency had the responsibility of defining agency action subject to consultation.

Judge Zilly required the fishery management plans to contain “all of the rules, regulations, conditions, methods, and other measures” necessary to “rebuild, restore, and maintain any fishery resource.” The regulatory scheme was designed to apply to all groundfish species managed under the North Pacific fishery management plans. However, the judge pointed out three omissions or flaws in the BiOp 2. First, it failed to analyze critically “how core management measures such as the processes for deriving acceptable biological catch, overfishing, and total allowable catch impact endangered species.” Second, the agency had not examined the cumulative effects of the fisheries on the SSL. The BiOp contained “no explanation of how the various groundfish fisheries and fishery management measures interrelate and how the overall management regime may or may not affect Steller sea lions.” Finally, the agency did not appraise the effect of the fishery management plans on SSL critical habitat.

NMFS itself repeatedly concludes in BiOp 2 that it simply lacks the information to make any determination one way or the other [on whether the fisheries compete with the SSL for prey]. . . . Thus, NMFS’s analysis is admittedly incomplete and its conclusions inconclusive. Although inconclusive data does not necessarily render a particular scientific conclusion invalid, the limited scope and quality of analysis that is contained in BiOp2 serves to highlight its overall inadequacy. . . . NMFS entirely ignored relevant factors and admittedly failed to analyze and develop projections based on information that was available.

198. Id. at 1144-45.
199. Id at 1145.
200. Id. at 1146.
201. Id. at 1147 (citing 16 U.S.C. § 1802(5) (2000)).
202. Id.
203. Id. at 1148-49.
204. Id. at 1148.
205. Id. at 1149.
206. Id.
207. Id.
208. Id. at 1150.
In effect, the judge did not fault the agency for lack of knowledge about SSL, but for the way it treated the information it had.

NMFS had argued that the issue was moot because it had “taken back” BiOp 2, and that by reinitiating consultation, there was no final agency action for a court to consider, as required by the Administrative Procedure Act. The judge pointed out that this did not remove requirements under ESA for protection of the listed species, which the court would continue to enforce. Thus, NMFS was obliged to provide a comprehensive biological opinion that addressed the full scope of the fishery management plans. The 1998 BiOp 2 was legally inadequate. Moreover, if the agency had withdrawn it, nothing remained that fulfilled the dictates of ESA: “Either way, NMFS is in violation of the ESA until such time as a comprehensive biological opinion is in place.” The judge concluded by castigating the agency for its tardiness.

C. *Greenpeace v. National Marine Fisheries Service (III)*

In *Greenpeace III*, the plaintiffs again sought an injunction, specifically focusing on the harm that continued trawl fishing posed to the SSL and its critical habitat. Previously, Greenpeace had sought to enjoin the pollock fisheries in 1998 because the “reasonable and prudent alternatives” of the 1998 BiOp were flawed, but the court declined to issue an injunction pending preparation of revised reasonable and prudent alternatives, issued by the agency in October 1999.

The judge’s decision in *Greenpeace II* left the agency operating under the revised final reasonable and prudent alternatives and emergency regulations. This permitted the 2000

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209. *Id.* at 1150–51.
210. *Id.* at 1151–52.
211. *Id.* at 1152.
212. *Id.*
213. *Id.*
214. *Id.*
216. *Id.* at 1067.
217. *Id.*
218. *Id.* at 1070.
North Pacific groundfish fisheries to continue fishing with a large part of them doing so within SSL critical habitat.

Judge Zilly’s order of July 2000 noted several important changes in the situation of the North Pacific fishery. First, from the 1950s through the 1990s, the total annual removal of groundfish in Alaska had increased over 7,500%.\textsuperscript{219} Second, the SSL population had continued to decline, based on NMFS’ estimates, approximately 24% between 1990 and 1998 (see Figure 2).\textsuperscript{220} Third, despite the agency’s protective measures, much of the SSL critical habitat remained open to fishing.\textsuperscript{221} In 1999, some 350,000 metric tons of pollock, 79,000 metric tons of Pacific cod, and 29,000 metric tons of Atka mackerel (36%, 50%, and 52% of annual catches, respectively) were caught in critical habitat zones of the Bering Sea/Aleutian Islands.\textsuperscript{222} Given the fact that “nutritional stress” caused by lack of food availability remained the primary scientific hypothesis for the decline in SSL population, these changes were ominous.\textsuperscript{223}

\begin{enumerate}
\item \textsuperscript{219} Id.
\item \textsuperscript{220} Id. at 1071.
\item \textsuperscript{221} Id. Trawl exclusion zones extended only to ten nautical miles. Id.
\item \textsuperscript{222} Id.
\item \textsuperscript{223} Id. at 1070.
\end{enumerate}
FIGURE 2: INDICATING THE DECLINE OF VARIOUS SEA LION STOCKS

![Figure 2: Estimated Total Population of Steller Sea Lions](image)

Injunctive relief is warranted if the challenger demonstrates likelihood of “success on the merits” and “irreparable injury” to the species if relief is not granted.\(^{224}\) *Greenpeace II* indicated that NMFS was in substantial violation of the procedural requirements of ESA, and that the further implementation of the fishery management plans and the authorization of annual fisheries under them continued the violation of ESA.\(^{226}\) Thus, the plaintiffs had demonstrated their likelihood of success on the merits, leaving for the court to decide whether they had met the burden of showing irreparable injury under the ESA.\(^{227}\)

In interpreting ESA, Judge Zilly contrasted section 9, which defendants and intervenors sought to apply, with section 7, which the plaintiffs sought to apply:

\(^{224}\) National Marine Mammal Laboratory, Steller Sea Lion Decline, at [http://nmml.afsc.noaa.gov/AlaskaEcosystems/sslhome/decline.htm](http://nmml.afsc.noaa.gov/AlaskaEcosystems/sslhome/decline.htm) (last visited Feb. 12, 2004). The dark line indicates Steller sea lion population decline of the western stock. *Id.*

\(^{225}\) *Greenpeace III*, 106 F. Supp. 2d at 1072.

\(^{226}\) *Id.*

\(^{227}\) *Id.* at 1072–73.
Under ESA section 9, “harm” to a species is a term of art which falls within the regulatory definition of “take.” Thus, under ESA section 9, a showing of future “harm” is required in order to prove that “a violation of the ESA is at least likely in the future.” Unlike section 9 which is strictly prohibitory in nature, section 7 imposes a “rigorous” affirmative duty on federal agencies to “insure” that their actions do not result in jeopardy or adverse modification and prescribes the procedures for compliance . . . This duty must be fulfilled before initiation of agency action.228

Judge Zilly also made reference to the Ninth Circuit case Thomas v. Peterson,229 using it as the standard for injunctive relief.230

Thomas concerned the U.S. Forest Service’s failure “to prepare a biological assessment to determine the potential effects of construction of a logging road and related timber sales on the endangered Rocky Mountain gray wolf.”231 The Ninth Circuit held that “[g]iven a substantial procedural violation of the ESA [building the road] in connection with a federal project, the remedy must be an injunction of the project pending compliance with the ESA,” and that “irreparable damage is presumed to flow from a failure to properly evaluate the environmental impact of a major federal action.”232 In short, stringent enforcement of ESA’s procedural requirements was essential; without such compliance, “there can be no assurance that a violation of the ESA’s substantive provisions will not result.”233

Applying Thomas, Judge Zilly found that NMFS had violated ESA: “[b]y authorizing the yearly fisheries in the absence of an adequate, comprehensive biological opinion, NMFS has failed to ‘insure’ that these fisheries will not likely jeopardize the Steller sea lion or adversely modify its critical habitat. This failure is not merely a technical oversight.”234 The agency had not critically analyzed whether core management measures would affect the SSL or whether large catch levels within critical habitat would conserve the species.

The judge further contended that even when applying a tougher standard of harm—placing the burden on the plaintiffs to

228.  Id. at 1075 (citations omitted).
229.  753 F.2d 754 (9th Cir. 1985).
231.  Id.
232.  Id. (quoting Thomas, 753 F.2d at 764).
233.  Id.
234.  Id. at 1075.
235.  Id. An example of a core management measure is the process used to determine the level of total allowable catch.  Id.
prove that on-going trawl fishing in SSL critical habitat presented a “reasonably certain threat of imminent harm”—the standard had been met and an injunction was warranted.\textsuperscript{236} A significant portion of the 1999 catch had come from the critical habitat of the sea lions.\textsuperscript{237} The catch yet to be taken from June to December 2000 represented over 25 percent of the total remaining allowable catch.\textsuperscript{238} These large removals of pollock had diminished the value of critical habitat as a prey resource.\textsuperscript{239} Also, the judge stated that trawl nets would create temporary “localized depletions” of prey as well as change the “schooling dynamics of target schools by affecting their density, size and persistence, thus further disadvantaging sea lion foraging and exaggerating the fisheries’ competitive effects.”\textsuperscript{240}

The judge reasoned that the potential adverse effects of the fisheries on the SSL had been demonstrated with “reasonable scientific certainty” because “although the actual effects of the fisheries and the efficacy of mitigation measures are uncertain, the significant and demonstrated potential negative effects of these large fisheries constitute a clear threat to appreciably diminish the value of critical habitat for Steller sea lions.”\textsuperscript{241} Therefore, he rejected NMFS’ assertion that Greenpeace’s claims of harm are speculative because scientific uncertainties prevented conclusive determination of the fisheries’ actual effects on the SSL.\textsuperscript{242} He stated that though Greenpeace’s claims of harm were not conclusive, “the standard did not require conclusive proof, but only that decisions . . . be based on the best scientific data available.”\textsuperscript{243}

Unlike the previous complaints, \textit{Greenpeace III} considered expert opinion as well as the administrative record because the issue concerned injunctive relief. Each of the parties—plaintiffs, defendants, and intervenors—introduced declarations to the court without objection.\textsuperscript{244} Most persuasive to Judge Zilly was the decla-

\begin{itemize}
\item \textsuperscript{236} \textit{Id.} at 1076. “Harm” under this standard was defined as “jeopardy” or “adverse modification” as those terms were utilized by ESA. \textit{Id.}
\item \textsuperscript{237} \textit{Id.}
\item \textsuperscript{238} \textit{Id.} at 1077.
\item \textsuperscript{239} \textit{Id.}
\item \textsuperscript{240} \textit{Id.}
\item \textsuperscript{241} \textit{Id.}
\item \textsuperscript{242} \textit{Id.}
\item \textsuperscript{243} \textit{Id.} “If NMFS’s scientific conclusions were sufficiently certain to conclude that actual jeopardy and adverse modification were likely, NMFS cannot now be heard to say that this same evidence is insufficiently certain to conclude that such harm is unlikely.” \textit{Id.} at 1078.
\item \textsuperscript{244} \textit{Id.} at 1078. However, Judge Zilly remarked that NMFS’s search for proof outside the administrative record in order to defend actions for which it had not
RATION OF DAVID LAVIGNE, A PINNIPED SPECIALIST FOR SOME THIRTY YEARS, WHO WAS THE PLAINTIFF’S EXPERT. THE JUDGE APPROVINGLY CITED LAVIGNE’S STATEMENTS WITH RESPECT TO THE ADVERSE IMPACT OF REDUCTION IN PREY AVAILABILITY ON THE SSL, THE FAILURE OF SPATIAL AND TEMPORAL DISPERSION MEASURES TO PROTECT THE SSL BECAUSE FISHERY EFFECTS COULD NOT BE ISOLATED TO THE TIME AND PLACE OF FISHING, AND THE LIMITED UTILITY OF STOCK ASSESSMENTS IN DETERMINING WHETHER OR NOT PREY HAD BEEN DEPLETED ON A LOCAL LEVEL. Moreover, Lavigne pointed out that the combined effects of removing several prey species from SSL critical habitat would likely amplify adverse effects: “[S]ynergistic and cumulative effects of the removal of these important sea lion prey species, together with the other groundfish fisheries, are necessarily more significant than any one of the fisheries considered individually.”

The judge considered the other declarations but did not need to choose among them. It was sufficient that the Thomas standard had been met because “based on the particular factual and procedural stance of this case, where significant, potentially harmful activity is presently on-going in the face of a substantial, unremedied procedural violation of the ESA, the ‘institutionalized caution’ mandated by section 7 strikes the balance in favor of the endangered Steller sea lion.” The judge concluded that Greenpeace had proven that trawl fishing did pose “a reasonably certain threat of imminent harm” to the SSL and its critical habitat. He enjoined all groundfish trawl fishing in SSL critical habitat in the Bering Sea/Aleutian Islands and Gulf of Alaska west of 144 degrees west longitude, effective August 8, 2000.

D. Greenpeace v. National Marine Fisheries Service (IV)

The fourth decision in this quartet of court orders concerns supplemental complaints of Greenpeace about the management of the fisheries after the early August injunction. It encompasses important changes and political involvement in NMFS’ fisheries management strategy, yet the changes were insufficient to satisfy the court.

245. Id. at 1079.
246. Id.
247. Id. at 1080.
248. Id.
249. Id.
Judge Zilly closed the trawl fishery in August 2000, at a time when most fishing had been concluded, but the prospect of continued closure at the January 2001 opening of the first pollock season mobilized the agency to prepare a biological opinion and reasonable and prudent alternatives that would avoid jeopardy and adverse modification to the SSL’s critical habitat. In a process that eventually involved the national headquarters, the agency issued a biological opinion called the fishery management plan BiOp on November 30, 2000, with a jeopardy and adverse modification finding, and developed a reasonable and prudent alternatives statement to accompany it. Thereupon, the judge lifted the injunction, and fishing was allowed to proceed.

However, the reasonable and prudent alternatives contained severe measures for the North Pacific fishery: closure of two-thirds of SSL critical habitat to all fishing for pollock, Pacific cod, and Atka mackerel, and both spatial distribution and temporal redistribution of fishing within the rest of the critical habitat. Both the council and industry objected to what they called draconian measures and immediately sought assistance from Alaska’s senior Senator Ted Stevens, chair of the Senate Appropriations Committee. Following the fishery management plan BiOp issuances, an industry committee prepared text for the Stevens’ rider attached to an appropriations bill before Congress to limit the implementation of the reasonable and prudent alternatives. The Clinton Administration insisted on modifications to the rider, which Congress adopted on December 15, 2000.

The Stevens rider transformed terms of the discussion. It allowed the fishery to proceed in January 2001 with no more restrictions than in the early 2000 season. It mandated that the Council

253. Id.
254. Id.
255. Id.
259. § 209(c); see also Greenpeace IV, 237 F. Supp. 2d 1181, 1187 (W.D. Wash. 2002) (stating that the legislation resulted in amended reasonable and prudent alternatives that reopened areas of fishing closed by the prior one and removed the
and agency consult and review the fishery management plan BiOp RPA with respect to developing measures to protect the SSL and its critical habitat.\textsuperscript{260} The rider allocated $30 million in disaster relief assistance for coastal Alaska communities, which had suffered because of near shore closures, and it provided $20 million more for scientific research into the causes of SSL decline.\textsuperscript{261}

Following the passage of the rider, the Council emerged as a more equal partner to the agency. The Council formed an RPA committee to propose changes to the fishery management plan BiOp’s RPA. The committee was representative of affected stakeholders, but only three environmental non-governmental organization representatives sat on it, as compared to eleven industry representatives.\textsuperscript{262} In response, Greenpeace alleged that the committee was “industry-dominated” from the start.\textsuperscript{263}

The RPA committee significantly weakened the original RPA by, for example, reopening closed areas to fishing from ten to twenty nautical miles in SSL critical habitat, and reducing or eliminating temporal and spatial dispersion measures.\textsuperscript{264} Meanwhile, the agency re-initiated consultation on the fishery management plan. Based on its review of six new studies and new telemetry data discussed below, the agency issued the 2001 BiOp in October 2001.\textsuperscript{265} This opinion did not reach a jeopardy or adverse modification finding. It announced that the fishery management plan BiOp would remain in effect “as NMFS’ coverage at the plan level, and this opinion will address the project level effects on listed species that would be likely to occur if the Council’s preferred action were implemented.”\textsuperscript{266} The 2001 BiOp found that the RPA committee’s measures were not likely to jeopardize the SSL or adversely modify its critical habitat.\textsuperscript{267} Greenpeace posed two challenges to the agency under Section 7 of the Endangered Species Act, claiming that the biological opinions were arbitrary and capricious under the temporal and spatial distributions effected by the prior reasonable and prudent alternatives).

\textsuperscript{260} Greenpeace IV, 237 F. Supp. 2d at 1187.
\textsuperscript{261} Consolidated Appropriations Act § 209(d)(e).
\textsuperscript{262} Plaintiffs’ Motion and Memorandum in Support of Motion for Summary Judgment, at 5 (n.1), Greenpeace I (W.D. Wash. 2002) (No. C98-0492Z).
\textsuperscript{263} Id.
\textsuperscript{264} Id. at 6.
\textsuperscript{266} 2001 BiOp, p. 8, cited in Greenpeace IV, 237 F. Supp. 2d at 1187.
\textsuperscript{267} Greenpeace IV, 237 F. Supp. 2d at 1187.
Administrative Procedure Act and failed to protect the SSL. The main issues are addressed below and concern the global fishing rate established by the agency, its new zonal approach to mitigation within critical habitat, and the soundness of agency analysis.

1. Challenge to the Global Fishing Rate. Greenpeace claimed that both the fishery management plan BiOp of 2000 and the 2001 BiOp were flawed because determination of jeopardy and adverse modification would not occur until SSL prey populations dropped below target population thresholds. First, Greenpeace objected to the overall level of fishing, contending that it adversely influenced the carrying capacity of the SSL critical habitat. The judge favorably cited the fishery management plan BiOp’s statement that there existed “no significant, relevant evidence that the current exploitation strategy (which reduces the biomass to between 40 and 60% of the predicted unﬁshed biomass) adversely affects listed species by reducing their likelihood for survival and recovery in the wild.” Judge Zilly approved of the finding notwithstanding one sentence in the same BiOp stating that “biomass reductions of Steller sea lion prey species, along with other factors such as climate change, natural predators, etc., were a significant contributing factor of the reduction and current decline of the population of Steller sea lions.” The judge found evidence in the administrative record and two biological opinions that by sufficiently considering the ecosystem-wide effects of prey removal and forage availability in light of the chief concern of localized depletion, the agency did not act arbitrarily or capriciously in its assessments and conclusions.

The second part of this challenge concerned the efficacy of the global control rule implemented by the agency in the 2001 BiOp, which was somewhat weaker than that in the fishery management plan BiOp. Both rules provided more protection than available

270. Id. at 1188.
271. Id. at 1188, 1190.
272. Id. at 1188 (quoting 2000 BiOp).
273. Id. at 1190.
274. Id.

The global control rule is a protective measure that alters the allowable biological catch (“ABC”) of pollock, Pacific cod, and Atka mackerel on a sliding scale basis as projected prey stocks drop. The goal of the global control rule is to prevent a decline
before 2000, when NMFS did not reduce fishing until prey stocks fell below 40% of unfished levels and did not ban fishing until stocks fell to 2% of unfished levels. Yet the 2001 BiOp limited fishing at a slower rate than the 2000 rule, between 40% and 20%, at which point it prohibited fishing. At oral argument, the plaintiff acknowledged that ESA did not require agencies to declare a line beyond which jeopardy or adverse modification would occur. The court found the 20% line rational and sufficiently protective, particularly because none of the primary prey species had declined nearly that far. In short, the judge agreed that the agency had developed defensible harvest rates and global control rules, which conformed to ESA requirements.

2. Challenge to the Zonal Approach. Judge Zilly held differently concerning the agency’s application and analysis of the zonal approach. In the 2001 BiOp and its embedded reasonable and prudent alternatives, NMFS adopted a new method for acquiring data—telemetry—in order to differentiate the SSL’s critical habitat. On the basis of the more detailed telemetry information, the agency concluded that three-fourths of SSL foraging occurred within ten nautical miles of shore and only one-fourth beyond ten nautical miles. Then, in the 2001 BiOp, the agency ranked areas of critical habitat by different levels of importance and allowed fishing in far-from-shore areas previously excluded from use.

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275. Id.
276. Id. at 1190 n.7.
277. Id. at 1192.
278. Id. The court particularly noted that the 2001 BiOp would ban fishing when stock was ten times the level used in 2000. Id.
279. Id.
280. Id. at 1199.
281. Since 1990, NMFS had tracked movement of SSL by satellite telemetry. Scientists attached a small package of electronics including a satellite linked time-depth recorder to the back of the SSL. The recorder transmitted information on depth to an orbiting satellite, which then triangulated the source beam to estimate the SSL’s location. See 2001 BiOp at 135, cited in Cross-Motion for Summary Judgment and Memorandum of Defendant-Intervenors in Opposition to Plaintiff’s Motion for Summary Judgment, Greenpeace IV at 40–41 n.16, and also discussion at 40–43 (No. C98-0492Z).
283. Id. at 1194.
284. Id.
Greenpeace claimed that telemetry data were not new and that NMFS’ use of it to justify an expanded zone for fishing was arbitrary and capricious. The plaintiffs based this claim on *Motor Vehicle Manufacturers Ass’n v. State Farm Mutual Automobile Insurance Co.*, where the Court held that “an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance.”

Judge Zilly acknowledged that the agency was using new data that did not necessarily require the reversal or rescission of previous considerations. He agreed with the agency that improvements in data collection made possible “a more refined approach to reviewing impacts on critical habitat,” and that the cumulative nature of knowledge was significant. Although Judge Zilly determined that the zonal approach was built on analysis done previously by NMFS and was not a radical departure from past approaches, the judge took a different view of the way the agency treated biases in the data.

Both sources of bias in the telemetry data were products of the method itself. First, the agency noted that although telemetry pointed out the location of sampled SSL, it could only be inferred that the SSL were foraging at those locations. The agency’s position was that SSL could not forage where they were not present, justifying separate treatment of near shore and offshore locations. Greenpeace challenged this assumption, arguing that it was equally likely that all foraging took place outside the near shore (0-10 nautical miles) zone, or that it occurred equally in each zone. The court, however, agreed that the agency had used the best science available and that there was no contrasting theory demonstrating whether “there are areas of ocean, a time of day or distance from land that is more or less important or effective for a foraging Steller sea lion.”

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285.  *Id.*
287.  *Id.* at 42.
289.  *Id.* (emphasis added). By noting that NMFS was refining the considerations rather than “changing its course,” the court nullified the plaintiffs’ argument that the changes were arbitrary and capricious. *Id.* at 1195–96.
290.  *Id.* at 1196.
291.  *Id.*
292.  *Id.* at 1196–97.
293.  *Id.* at 1197 (quoting 2001 BiOp).
The second instrument bias related to measurement of SSL behavior. Near shore, the SSL spend much time on the surface of the water, where transmitters effectively send data.\textsuperscript{294} Offshore, they engage in more deep diving, when transmitters do not function.\textsuperscript{295} In an effort to counter the likely near-shore bias of the data, the agency filtered the data by “discounting 90\% of at-sea locations from the 0-2 nautical mile zone.”\textsuperscript{296} Then the agency concluded that both filtered and unfiltered data revealed that the 0-3 and 3-10 nautical mile zones were most important to SSL “except for adults in the winter and pups and juveniles in the summer.”\textsuperscript{297} Both Greenpeace and Judge Zilly criticized the agency’s analysis using these filtered data as not being rationally related to expert data on the SSL distribution.\textsuperscript{298} Carefully distinguishing among data on pups, juveniles, lactating females, and other adults, and distinguishing winter and summer records, the judge found that the 3-10 and 10-20 nautical mile zones were “of more or less equal foraging importance for the most critical population segment.”\textsuperscript{299} For this reason, the agency could not rationally distinguish the two zones by allowing fishing in portions of the latter while prohibiting it in the former (3-10 nautical miles).\textsuperscript{300} This led the judge to agree with Greenpeace that the agency’s no jeopardy and no adverse modification conclusions in the 2001 BiOp were arbitrary and capricious.\textsuperscript{301}

3. Challenge to Agency Analysis. The third and final challenge by Greenpeace alleged a lack of analysis by NMFS of the effects of opening some portions of the 10-20 nautical mile zone to fishing.\textsuperscript{302} The environmental organization asked why, in the 2001 BiOp, the agency did not answer the seven questions it had addressed in the fishery management plan BiOp.\textsuperscript{303} Such questions evaluate whether the fisheries would adversely affect the SSL’s critical habitat or jeopardize their survival, for example, by overlapping temporally and spatially.\textsuperscript{304} The court found that the

\textsuperscript{294} Id.
\textsuperscript{295} Id. This creates a “bias in the data because of the nature of satellite telemetry.” Id.
\textsuperscript{296} Id.
\textsuperscript{297} Id. (quoting 2001 BiOp).
\textsuperscript{298} Id. at 1198-99.
\textsuperscript{299} Id. at 1198.
\textsuperscript{300} Id. at 1199.
\textsuperscript{301} Id.
\textsuperscript{302} Id. at 1200.
\textsuperscript{303} Id.
\textsuperscript{304} Id. at 1200 n.20.
agency's three-step inquiry\^305 satisfied ESA requirements as easily as the earlier seven-question test.\^306 Further at issue, however, was whether NMFS had evidence to support its no jeopardy and adverse modification conclusions in the 2001 BiOp.\^307

The judge particularly noted Greenpeace's argument that fishing in the 10-20 nautical mile zone would have an impact on SSL foraging near shore (called the "edge effect"), because prey migrated across the zones.\^308 Judge Zilly reasoned that "[f]ishing outside the forage zones may cause localized depletions within the forage zones, which could then cause adverse modification of the 'high' importance areas of critical habitat and impact the Steller sea lion."\^309 The judge failed to find in the administrative record evidence that allowing fishing in the 10-20 nautical mile zone would not adversely affect the listed species and its habitat.\^310 Thus, by not "articulat[ing] a rational connection between the facts found and the choice made,"\^311 the agency violated the ESA.\^312

4. Summary. The 2000 fishery management plan BiOp and the 2001 BiOp provided justification for the continued operation of the huge groundfish fishery in the North Pacific, however the methods used and subsequent conclusions made failed to alleviate concerns for the SSL's lack of protection. Judge Zilly had no difficulty with the fishery management plan BiOp, which took a highly conservative approach to fishery management in order to protect the endangered SSL. He acknowledged the agency's expertise when it produced new data and methods in the 2001 BiOp, which created the zonal approach and allowed fishing in once prohibited

\^305. This three-step inquiry required NMFS to:

(1) Identify the probable direct and indirect effects of the proposed action on the action area, (2) Determine whether reductions in Steller sea lion reproduction, numbers, or distribution would reasonably be expected, and (3) Determine if any reductions in Steller sea lion reproduction, numbers, or distribution could be expected to appreciably reduce the Steller sea lion's likelihood of surviving and recovering in the wild.

\^306. Id. at 1201 n.21.
\^307. Id. at 1201.
\^308. Id. at 1202 n.23.
\^309. Id. at 1203.
\^310. Id.
\^311. Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 982 (9th Cir. 1985).
\^312. Greenpeace IV, 237 F.2d at 1204.
However, what concerned the court was NMFS' failure to consistently and rationally apply the new methods and its failure to demonstrate in its record of decision-making that the new methods and approaches would avoid jeopardy to the SSL and adverse modification to its critical habitat. For these reasons, Judge Zilly remanded the 2001 BiOp to NMFS to remedy the flaws highlighted by Greenpeace IV. By mutual agreement of plaintiffs, defendants, and intervenors, Judge Zilly concluded Greenpeace v. National Marine Fisheries Service on April 1, 2003, shortly before the fifth anniversary of its filing.

V. CONCLUSION

This article has asked how decisions were made in the absence of conclusive evidence on the causes of SSL decline. It noted that NMFS was not required by legislation to decide only when it possessed certain knowledge. ESA only requires agencies to act based on the “best scientific and commercial data available.” NMFS contracts for the best information available on the Steller sea lion and the North Pacific groundfish fishery. The Greenpeace challenges reveal a failure by the agency to analyze and rationally apply the information it possessed. The agency waited nearly three years after it had recommended the reclassification of the western stock of SSL as endangered before declaring, in BiOp 1, that the large fisheries jeopardized and adversely modified the SSL’s critical habitat. Then the agency failed to develop reasonable and prudent alternatives consistent with its own biological opinion and explain why these conclusions avoided jeopardy for the SSL’s critical habitat. Under pressure of the court injunction, the agency produced a satisfactory biological opinion (the fishery management plan BiOp of 2000), which threatened the fishing industry. Then, NMFS nearly capitulated to the Council and industry by issuing the 2001 BiOp, which opened closed sections of the fishery without explaining why this did not jeopardize the listed species. NMFS’ actions described a pattern of tardiness, equivocation, and inconsistency, which prompted the Greenpeace challenges.

The court did not demand certainty from the agency. It pointed out that endangered species law tolerates uncertainty, but it requires institutional caution and consistency in agency imple-
mentation. A careful reading of the dockets on the quartet of court orders indicates that the court was willing to defer to the agency when it mobilized its expertise to implement its charge of species protection. However, the court was unwilling to permit irresponsibility and inconsistency. *Greenpeace v. National Marine Fisheries Service* did not establish new law through judicial interpretation of NEPA and ESA. Instead, it applied the pioneering statutes of the American environmental movement to the complex issues of a complex fishery. By doing so, this case has established a precedent that likely will be used to evaluate future challenges to biodiversity in the North Pacific ecosystem.