Steller Sea Lions: The Effects of Multi-Statute Administration On the Role of Science in Environmental Management

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I.
INTRODUCTION

On July 13, 1999, January 25, 2000, and July 19, 2000, the Federal District Court of Western Washington held that the National Marine Fisheries Service ("NMFS") failed to comply with its obligations under the Endangered Species Act ("ESA") and the National Environmental Policy Act ("NEPA") concerning two Alaskan groundfish fisheries ("Alaskan Fisheries") and their interactions with the Steller sea lion ("Steller").[2] These rulings were the latest and most politically charged events in the extensive administrative and judicial legal history surrounding the Stellers and the Alaskan Fisheries, stretching back to their initial comprehensive regulation in the late 1970's. During those two-plus decades a single federal agency, the NMFS, has held the numerous, changing, overlapping, and sometimes conflicting administrative responsibilities in both regulating the Alaskan Fisheries and protecting the Stellers. Over the same time period, Steller populations rapidly and steadily declined, and continue to decline today,[3] despite the application of the ESA, the NEPA,

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2. *See* Greenpeace v. Nat'l Marine Fisheries Serv., 55 F. Supp. 2d 1248 (W.D. Wash. July 13, 1999) [hereinafter *Order#1*]; Greenpeace v. Nat'l Marine Fisheries Serv., 80 F. Supp. 2d 1137 (W.D. Wash. Jan 25, 2000) [hereinafter *Order#2*]; Greenpeace v. Nat'l Marine Fisheries Serv., 106 F. Supp. 2d 1066 (W.D. Wash. July 19, 2000) [hereinafter *Order#3*].

3. *See* NAT'L MARINE FISHERIES SERVICE, AUTHORIZATION OF BSAI AND GOA GROUNDFISH FISHERIES BASED ON TAC SPECIFICATIONS: BIOLOGICAL OPINION 2000 at 60-61 (Dec. 22, 1999) *available at* http://www.fakr.noaa.gov/protectedresources/stellers.htm#consultations [hereinafter BiOp2000].

and the Marine Mammal Protection Act ("MMPA") with their various provisions for environmental analysis and regulation for conservation using the best available science.

This paper examines the effects of the diversity of the NMFS's statutory responsibilities on the use of science in protecting the Steller. This introductory section continues with descriptions of the Steller, the fish, and the Alaskan Fisheries. Section two details the legal history, statute by statute, of the Steller and the Alaskan Fisheries and then briefly summarizes important events and decisions in an integrated time line. Section three analyzes the role of science in the legal decisions surrounding the Stellers and hypothesizes some effects of multi-statutory management in this case-study. The final section offers a brief policy analysis of those possible effects.

The Steller Sea Lion

The Northern or Steller sea lion (*Eumetopias jubatus*) is the largest of the sea lions, measuring up to 11 feet long and weighing up to a ton.[4] Its closest living relatives include the fur seals and other seal lions, from which it diverged at least 3 million years ago.[5] Stellers look very similar to the familiar California sea lion, except are roughly twice the size and the male bulls have no head crest.[6] Stellers feed on a variety of prey items including fish and mollusks.[7] Groundfish including Walleye pollock and Atka mackerel represent a significant portion of their diet.[8]

The Stellers are found in coastal areas along the Northern Pacific Rim, from Southern California to Northern Japan, with the center of their distribution in the Gulf of Alaska and Aleutian Islands.[9] Along their range, Stellers divide into two reasonably

4. *See* THE MARINE MAMMAL CENTER, THE STELLER OR NORTHERN SEA LION *available at* http://www.tmmc.org/stellarsl.htm; (2000); LOUGHLIN, T.R., ET AL., EUMETOPIA JUBATUS MAMMALIAN SPECIES ACCOUNT NO. 282, (Amer. Soc. Mammalogists 1987).

5. *See* NAT'L MARINE FISHERIES SERVICE, AUTHORIZATION OF BSAI ATKA MACKEREL, AND BSAI AND GOA WALLEYE POLLOCK FISHERIES UNDER THE FMP BETWEEN 1999-2002, at 43 (Dec. 3, 1998) *available at* http://www.fakr.noaa.gov/protectedresources/stellers.htm#consultations (last visited Feb. 25, 2001) [hereinafter BiOp#1].

6. *See* The Marine Mammal Center, *The Steller or Northern Sea Lion* (last visited March 1, 2001) http://www.tmmc.org/stellarsl.htm; LOUGHLIN, *supra* note 4.

7. *See* BiOp#1, *supra* note 5 at 52.

8. *See id.*

9. *See id.* at 43-44.

distinct population segments, a Western population and an Eastern population.[10] Over the last three decades, the Western population of Stellers has declined as much as 80% from the hundreds of thousands to the tens of thousands.[11] Meanwhile the Eastern population of Stellers actually has increased slightly from around fifteen thousand to around twenty thousand individuals.[12]

Walleye Pollock

Walleye pollock or Alaskan pollock are bottom-dwelling fish belonging to the cod family.[13] Their range extends throughout the North Pacific.[14] The younger pollock school mostly in the mid-water column and feed on small invertebrates.[15] As they age, pollock spend more time further and further down in the water column and increasingly feed on fish, including smaller Walleye pollock.[16] Spawning usually begins in February and continues, moving northward, until early summer.[17] Walleye pollock populations have fluctuated significantly in recent years.[18] For example, in the east Bering Sea, the population was 2 million metric tons (mmt) in the mid 1960's, 8 mmt in 1971, 4 mmt in 1978, 14 mmt in 1984, 8 mmt in 1990, 12 mmt in 1993, and down to 7 mmt in 1997.[19] Walleye pollock's main predators include marine mammals, sea birds, other fish, and man.[20]

Atka Mackerel

Atka mackerel are bottom-dwelling fish belonging to the greenling family.[21] Their range extends throughout much of the North Pacific with a center of abundance in the Aleutian Islands.[22] The Atka mackerel spend most of the year in the open

10. *See id.* at 56.
11. *See id.* at 58.
12. *See* NAT'L MARINE FISHERIES SERVICE, 2001 STOCK ASSESMENT: EASTERN STELLER SEA LION POPULATION (2001) *available at* http://www.nmfs.noaa.gov/prot_res/PR2/Stock_Assessment_Program/Pinnipeds/Steller_(East)/AKD00stellersealion_East.pdf (last visited Mar. 1, 2001).
13. *See* BiOp#1, supra note 5, at 21.
14. *See id.*
15. *See id.*
16. *See id.*
17. *See id.*
18. *See id.* at 25.
19. *See id.*
20. *See id.* at 17-18, 23.
21. *See id.* at 6.
22. *See id.*

ocean but move to shallower waters to spawn in late summer.[23] During spawning, the mackerel aggregate into dense schools near the ocean bottom.[24] Atka mackerel populations have fluctuated significantly in recent years.[25] For example, the estimated population in the Bering Sea/Aleutian Island area has fluctuated from 1 mmt in 1981 to 0.75 mmt in 1986 to 1.3 mmt in 1991 and then down to 0.6 mmt in 1998.[26] Atka mackerel's main predators include marine mammals, other fish and man.[27]

North Pacific Fishing Industry

The North Pacific covering the east Bering Sea/Aleutian Island region ("BSAI") and the Gulf of Alaska ("GOA") contains the largest fishing industry in the United States.[28] The major target species is the Walleye pollock.[29] Over the last two decades, fishers have caught an estimated 7-15% per year of the pollock in the east Bering Sea area of the BSAI.[30] During a similar period fishers caught an estimated 4-10% per year of the pollock in the GOA.[31] The pollock are marketed frozen and processed into fillets, blocks and surimi.[32] Also, their roe have a significant market and can fetch high prices relative to the meat of the fish.[33] Other significant North Pacific fisheries include Atka mackerel, Pacific cod, and Flatfish.[34] The predominant catch method in all the fisheries is trawling, which involves towing enormous scoop-shaped nets to trap fish.[35]

The Alaska pollock fishery has been one of the largest Alaskan fisheries for a long time but has changed in many other ways

23. *See id.*
24. *See id.*
25. *See id.* at 7.
26. *See id.*
27. *See id.* at 17-18.
28. *See* NAT'L MARINE FISHERIES SERVICE, ALASKA GROUNDFISH FISHERIES DRAFT PROGRAMMATIC SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT at 2.7.2.9 (Jan. 2000) *available at* http://www.fakr.noaa.gov/sustainablefisheries/seis/intro.htm (last visited Mar. 2, 2001) [hereinafter Draft PSEIS]; *Order#1, supra* note 2, at 1254.
29. *See id.*
30. *See* BiOp#1, *supra* note 5, at 31.
31. *See id.* at 32.
32. *See* FishBase, *Species Summary for Theragra chalcogramma: Alaska Pollack, at* http://www.fishbase.org/Summary/SpeciesSummary.cfm?genusname=theragra&speciesname=chalcogramma (last visited Feb. 25, 2001).
33. *See id.*
34. *See* Draft PSEIS, *supra* note 28, at 3.3.
35. *See id.* at 3.2.

over the past three decades. Until the 1970's, few American vessels caught and processed fish off Alaska.[36] Numerous foreign vessels, however, targeted pollock in the BSAI.[37] Declines in pollock abundance by the early 1970's lead the NMFS, as the overseer of domestic fisheries, to require lower catches.[38] Concurrently, the same vessels began fishing smaller numbers of pollock in the GOA.[39] The mid-1970's saw increased United States interest in fisheries development.[40] The NMFS, as the regulatory agent of this new mandate, allocated more and more of the Alaskan pollock fishery to joint-venture operations between domestic fishers and foreign processing ships.[41] Over the decade that followed, the domestic fishers subsumed the processing business as well.[42] By the late 1980's the Alaskan pollock fishery was almost entirely domestic.[43]

When and where vessels fished for the pollock also changed. Until the late 1980's the pollock fishery operated mostly in spring and summer.[44] As the fishery started targeting more valuable roe-bearing fish, however, more and more of the total catch came during fall and winter.[45] The NMFS ultimately split the pollock fishery into multiple seasons because of the expanded winter roe harvest.[46] Meanwhile, as the pollock fishery increasingly exploited near-shore spawning aggregations more and more fishing effort occurred closer to shore and closer to Steller habitat.[47]

The fleet composition of the pollock fishery also changed significantly. Throughout much of the 1970's and 1980's, on-board processing vessels dominated the fishery.[48] More recently, however, shore-based processors partnered with catch-only vessels have replaced many of the processing vessels.[49] By 1996, for example, of the 166 vessels or plants in the BSAI pollock fishery

36. *See* BiOp#1, *supra* note 5, at 25.
37. *See id.*
38. *See id.* at 26.
39. *See id.*
40. *See* Draft PSEIS at 2.7.1.
41. *See* BiOp#1, *supra* note 5, at 26.
42. *See id.*
43. *See id.*
44. *See id.*
45. *See id.*
46. *See id.*
47. *See id.* at 27.
48. *See* Draft PSEIS, *supra* note 28, at 2.7.1.
49. *See id.*

there were 8 onshore plants, 37 catcher-processors, 118 catcher-only vessels, and 3 processor-only vessels.[50]

The Alaskan Atka mackerel fishery is the other fishery of central importance to the case study but has always been much smaller and more localized than the pollock fishery.[51] Most of the fish are caught at recurring aggregation sites in the BSAI.[52] Most of these locations are in Steller habitat.[53] A couple dozen large catcher-processor vessels dominate the mackerel fishery.[54] For many years the mackerel season occurred in spring and summer.[55] In the last decade, however, the season has moved earlier and compressed into March and April.[56]

II.

FIVE STATUTES, TWO DECADES OF MANAGEMENT

This section summarizes the history of the NMFS management of the Alaskan Fisheries and the Steller under five different federal statutes. Rather than presenting a straightforward chronology, however, this section purposefully offers discrete administrative histories for each statute. Accompanying these histories are brief explanations of relevant components of the statutes themselves. The author acknowledges that this separation by statute may prove less tractable to the reader seeking a unified administrative history up front. This paper, however, concerns the effects of multi-statutory administration by a single agency. The result is no different than five independent agencies each administering separate statutes. The immediate subdivision by statute is, therefore, the necessary organization of background information from which to launch the historically integrated analysis in the next section. For summary and easy reference, this section concludes with a combined bullet-point chronology.

The Magnuson Act and Amendments ("MSA")[57]

The Magnuson Act of 1976 establishes the legal framework for the federal management of the Alaskan Fisheries. Its stated pur-

50. *See* BiOp#1, *supra* note 5, at 28.
51. *See id.* at 8, 17.
52. *See id.* at 8.
53. *See id.* at 17.
54. *See id.* at 8.
55. *See id.* at 7.
56. *See id.* at 7-8.
57. Pub. L. No. 94-265, 90 Stat. 331, (1976) (codified as amended in scattered section of 16 U.S.C.).

poses include establishing a national program for the management of fisheries resources, developing underutilized or not utilized fisheries, and collecting reliable data essential to the effective management and scientific understanding of fisheries resources.[58] As a curious indication of the importance of the Alaskan groundfish fishery, it is the only fishery explicitly mentioned in the Purposes and Findings section of the MSA.[59] It is given as an example of under-utilization. Importantly, the MSA represents a mostly economic-based approach to fisheries management.[60] Its clearest cause and concern involves achieving and maintaining optimal harvest for U.S. fisheries.[61]

To help accomplish these goals, the Act establishes eight Regional Fishery Management Councils charged with designing and proposing fishery management measures within their respective geographic areas.[62] These proposed measures include Fishery Management Plans ("FMPs") and their implementing regulations.[63] The NMFS, acting under the authority of the Secretary of Commerce, can accept or reject all or part of the Regional Councils' proposals.[64] Upon rejecting a proposed measure, the NMFS may recommend revisions by a Regional Council, but cannot alter the proposal itself.[65] The MSA does authorize the NMFS, however, to implement independently emergency or interim fisheries management regulations in crisis situations or when no FMP is in place.[66]

The MSA envisions FMPs as detailed and comprehensive regulatory schemes. Each FMP must include, among other things, a detailed set of management measures, a description of the fishery, the optimal yield or catch level that would provide the greatest benefit to the nation, and the expected portion of the harvest to be caught by U.S. vessels.[67] The implementing regulations for FMPs usually include Total Allowable Catch ("TAC") limits, gear restrictions and specifications, temporal and spatial restrictions, and the allocation of TAC among sub-sections of the fish-

58. *See* 16 U.S.C. § 1801(a)(6-8) (2000).
59. *See id.* § 1801(a)(7).
60. *See generally id.* §§ 1801, 1851.
61. *See generally id.*
62. *See id.* § 1852(a)(1)(A-H).
63. *See id.* § 1852(h)(1)(A).
64. *See id.* § 1854(a-b).
65. *See id.*
66. *See id.* § 1854(c)(1).
67. *See id.* § 1853(a)(1-4).

ery for example by vessel type, delivery location, and time of year.[68] Importantly, the Councils must base all proposed management measures on the best scientific information available.[69]

The North Pacific Fishery Management Council ("NP Council") issues management proposals for the Alaskan Fisheries. The NP Council covers the States of Alaska, Washington, and Oregon and has authority over the fisheries in the Arctic Ocean, Bering Sea, and Pacific Ocean seaward of Alaska.[70] Pursuant to the MSA, the NP Council has 11 voting members, including 7 appointed by the Secretary of Commerce with 5 from Alaska and 2 from the State of Washington.[71] The Secretary of Commerce chooses the 7 appointees upon recommendation of the governors of Alaska and Washington.[72] The governors submit 3 names for each vacancy and may indicate a preferred choice.[73] Terms of appointment last 3 years.[74] An appointed member cannot serve more than three consecutive terms.[75] In addition to the appointed members, the NP Council has four mandatory voting members – the directors of the state fisheries management agencies for Alaska, Washington, and Oregon and the Alaska Regional Director of the NMFS.[76] The NP Council also has four non-voting members – the Executive Director of the Pacific States Marine Fisheries Commission, the Area Director of the U.S. Fish & Wildlife Service, the Commander of the 17th Coast Guard District, and a representative from the U.S. State Department.[77]

The NP Council also has an Advisory Panel and a Scientific and Statistical Committee.[78] The Advisory Panel presumably represents all components of the fishing industry, including catching and processing, subsistence and commercial, observers,

68. *See, e.g.*, Draft PSEIS, *supra* note 28, at 2.4.1.2; 16 U.S.C. § 1853 (2000); *Order#1, supra* note 2 at 1255.

69. *See* 16 U.S.C. § 1851(a)(2) (2000).

70. *See id.* §1852(a)(1)(G).

71. *See id.*

72. *See* North Pacific Fisheries Management Council, *Council Members, at* http://www.fakr.noaa.gov/npfmc/council.htm (last visited March 1, 2001).

73. *See id.*

74. *See* 16 U.S.C. § 1852(b)(3) (2000).

75. *See id.*

76. *Council Members, supra* note 72.

77. *See id.*

78. *See* North Pacific Fisheries Management Council, *About the Council, at* http://www.fakr.noaa.gov/npfmc/about.htm (last visited Feb. 16, 2001); *see also* 16 U.S.C. 1852(g)(1-2) (2000).

consumers, environmentalists/conservationists, and sport fishermen.[79] The 1999 Advisory Panel, however, consisted of 21 members almost all of whom came from commercial fishing.[80] The Scientific and Statistical Committee presumably consists of leading scientists in biology, economics, statistics, and social science.[81] The 1999 committee had 12 members representing a fairly even distribution between disciplines and between academic and government scientists.[82] The NP Council appoints Advisory Panel and Scientific and Statistical Committee members to renewable one-year terms with selection taking place annually at a December meeting.[83]

In 1978, the NP Council produced a FMP for the GOA groundfish fishery, including Walleye pollock and Atka mackerel.[84] In 1981 the NP Council followed with a FMP for BSAI groundfish.[85] The NMFS both approved a FMP and promulgated the proposed implementing regulations.[86] The regulations included both a set of procedures determining seasonal quotas and other limits and substantive restrictions such as permitting allowances and gear specifications.[87] Since then the NMFS has promulgated over sixty amendments proposed by the NP Council for each of the two FMPs and their implementing regulations.[88] The new regulations included additional gear restrictions, new TAC determination processes, new time and area closures, new seasons, and new allocations of allowable catch.

In 1996, Congress reauthorized and amended the Magnuson Act, renaming it the Magnuson-Stevens Fisheries Conservation

79. *See* North Pacific Fisheries Management Council, *Advisory Panel*, at http://www.fakr.noaa.gov/npfmc/about.htm (last visited Feb. 16, 2001).

80. *See id.*

81. *See* North Pacific Fisheries Management Council, *1999 Scientific and Statistical Committee (SSC) Members, at* http://www.fakr.noaa.gov/npfmc/ssclist.htm (last visited May 10, 2000).

82. *See id.*

83. *See id.*

84. *See* Foreign Fishing; Groundfish of the Gulf of Alaska, 43 Fed. Reg. 52,709 (Nov. 14, 1978) (to be codified at 50 C.F.R. pt. 611).

85. *See* Foreign Fishing; Groundfish of the Bering Sea and Aleutian Islands Area, 46 Fed. Reg. 63,295 (Dec. 31, 1981) (to be codified at 50 C.F.R. pt. 611); Foreign Fishing; Groundfish of the Bring Sea and Aleutian Islands Area, 47 Fed. Reg. 4,083 (Jan. 28, 1982) (to be codified at 50 C.F.R. pt. 611).

86. *See* Draft PSEIS, *supra* note 28, at 2.7-39.

87. *See id.*

88. *See id.* at 2.4.1.2.

and Management Act.[89] The amendments are also known separately as the Sustainable Fisheries Act ("SFA"). The changes and additions largely reflected new concerns over conservation, long-term sustainability, negative environmental impacts, and waste.[90] Though the Alaskan Fisheries continued strong as ever, numerous other fisheries with FMPs had severely declined or collapsed entirely.[91] Responding to these failures, the new Act included strong conservationist language.[92] Significantly, one amendment requires that the Councils consider economics but not as the only factor in proposed management measures.[93] Other amendments require FMPs to specify objective and measurable criteria for identifying whether a fishery is overfished, to describe and identify essential fish habitat, and to minimize "to the extent practicable" adverse effects on such habitat.[94] The SFA also requires FMPs and their implementing regulations to address by-catch and associated waste.[95]

Since the SFA, the NMFS has implemented several amendments by the NP Council to the Alaskan Fisheries's FMPs.[96] The SFA requires implementation of its new provisions in the existing FMPs by October 1998,[97] so some of the recent FMP amendments serve that purpose.[98] Other FMP amendments involve provisions and language implementing the American Fisheries Act ("AFA"), discussed below.[99]

The National Environmental Policy Act ("NEPA")[100]

The NEPA requires the federal government to prepare Environmental Impact Statements ("EISs") prior to major federal actions that significantly affect the quality of the human

89. *See* Pub. L. No. 104-297, 110 Stat. 3559 (1996) (codified as amended in scattered sections of 16 U.S.C.).

90. *See id.* at §101 amendments.

91. *See id.*

92. *See generally* Pub. L. No. 104-297, 110 Stat. 3559 (1996); NAT'L OCEANIC AND ATMOSPHERIC ADMINISTRATION, OFFICE OF GENERAL COUNSEL, A GUIDE TO THE SUSTAINBLE FISHERIES ACT (1997), *available at* http://www.nmfs.gov/sfa/sfaguide/ (last visited Feb. 26, 2001).

93. *See* Pub. L. No. 104-297, §108 amendments, 110 Stat. 3559 (1996); *see also* A GUIDE TO THE SUSTAINBLE FISHERIES ACT, *supra* note 92.

94. *See* Pub. L. No. 104-297, §108(a) amendments, 110 Stat. 3559 (1996).

95. *See id.*

96. *See Draft PSEIS, supra* note 28, at 2.7-51.

97. *See* Pub. L. No. 104-297, §108(b) amendments, 110 Stat. 3559 (1996).

98. *See Draft PSEIS, supra* note 28, at 2.4.1.2.

99. *See id.*

100. 91 Pub. L. No. 190, 83 Stat. 852 (1970).

environment.[101] Major actions can include legislation or executive activities that may have significant environmental impact and are "potentially subject to Federal control and responsibility."[102] Each EIS must contain a "reasonably thorough discussion of the significant aspects of the probable environmental consequences."[103] Specifically, the document must list any adverse impacts, examine possible alternatives to the proposed action, and analyze the relationship between short-term uses and long-term productivity.[104] Despite possessing some language to the contrary, the NEPA is a purely procedural act.[105] Beyond requiring environmental analysis under stringent criteria, the NEPA does not bind agency action.[106] Of course, the environmental analyses produced pursuant to the NEPA can help guide agency decision-making and may provide valuable ammunition in the political arena or for legal challenges under other statutes.

FMPs are major federal actions triggering the NEPA.[107] Consequently, the NMFS produced EISs for the GOA and BSAI groundfish FMPs in 1979 and 1981 respectively.[108] These documents addressed numerous issues including allowable catch levels, temporal and spatial catch distribution, catch methods, by-catch, habitat destruction, socio-economics, and effects on marine mammals.[109] Both EISs determined that the Alaskan Fisheries did not pose a risk to the Stellers and moreover found that the Steller population was at its optimal sustainable level.[110]

The NEPA also requires additional environmental analysis for potentially significant changes involving on-going federal action that originally required an EIS. The agency involved in the on-going action must conduct major additional environmental analysis and prepare a Supplemental Environmental Impact Statement ("SEIS") when either (1) the agency makes substantial changes in the on-going action that are relevant to environmental concerns or (2) there are significant new circumstances or informa-

101. *See* 42 U.S.C. § 4332(C)(i) (2000).
102. *See* 40 C.F.R. § 1508.18 (2001).
103. Muckleshoot Indian Tribe v. U.S. Forest Serv., 177 F.3d 800, 809 (9th Cir. 1999) (quoting Neighbors of Cuddy Mountain v. United States Forest Serv., 137 F.3d 1372, 1376 (9th Cir. 1998)).
104. *See* 40 C.F.R. § 1502 (2001).
105. *See generally* 42 U.S.C. § 4321 (2000).
106. *See generally id.*
107. *See Order#1, supra* note 2, at 1257.
108. *See id.*
109. *See id.* at 1258.
110. *See id.*

tion relevant to environmental concerns involving the on-going action.[111] The agency need not act on new circumstances or information it does not think trigger preparation of an SEIS. When, however, the federal agency changes the on-going action it must produce an Environmental Assessment ("EA"), usually a few simple paragraphs, finding whether those changes warrant additional environmental analysis.[112] If the answer is no, the agency produces a Finding of No Significant Impact ("FONSI"), usually together with the EA, concisely stating that the SEIS was not necessary.[113] The SEIS, on the other hand, is a comprehensive document that presents, examines, and compares alternatives to the proposed agency action.[114]

In over a decade following the initial EISs, the NMFS amended the FMPs dozens of times, the Alaskan Fisheries changed tremendously, and significant new information emerged concerning its potential environmental impacts. During that time, the NMFS did not take NEPA action and did not produce any SEISs. For each amendment the NMFS fulfilled its evaluative obligations with an EA/FONSI.[115]

Many of the FMP amendments implemented minor changes.[116] Others, however, significantly altered major components of the FMPs such as determining TAC, splitting the pollock fishery into multiple seasons, and allocating the TAC among seasons, harvest location, and gear type.[117] Combined, the changes reflected substantial shifts in fishing pressures since the late 1970's.

In 1991, Greenpeace sued the NMFS over management of the Alaskan Fisheries.[118] Concerned about an apparent lack of appreciation by the NMFS for the Alaskan Fisheries's potential role in the continuing decline of the Steller, Greenpeace alleged violations of both the NEPA and the ESA.[119] The ESA claim will be discussed later. The NEPA claim argued that the NMFS implementation of the NP Council's proposal for a 41% increase in the 1991 pollock TAC in the GOA required a full EIS, whereas

111. *See* 40 C.F.R. § 1502.9(c) (2001).
112. *See id.* §1508.9.
113. *See id.* § 1508.13
114. *See id.* § 1502.14.
115. *See Order#1, supra* note 2, at 1258.
116. *See* Draft PSEIS, *supra* note 28, at 2.4.1.2., 2.7.2.5.-.2.9.
117. *See id.*
118. *See* Greenpeace Action v. Franklin, 14 F.3d 1324 (9th Cir. 1992).
119. *See id.* at 1344-5.

the NMFS had only issued an EA/FONSI.[120] The District Court for the Western District of Washington found for the NMFS.[121] In late 1992 the Ninth Circuit affirmed on appeal.[122] While acknowledging scientific disagreement over the NMFS's findings, the Ninth Circuit held that the agency's determination of no significant impact survived the arbitrary and capricious standard of review.[123]

In March 1997, after many more FMP amendments with EA/FONSI's, the NMFS issued notice of intent to produce an SEIS for the Alaskan Fisheries's FMP amendments.[124] The NMFS issued the Draft SEIS in September 1998 for public review and comment and then published the final SEIS on December 18, 1998.[125] The SEIS examined a variety of potential impacts and alternative actions specifically relating to the amendments of the FMP's that redesigned the process by which the NP Council establishes and proportions proposed TAC specifications and prohibited species catch limits.[126]

In April 1998, Greenpeace, along with the American Oceans, Campaign and the Sierra Club, once again sued the NMFS for violations of the ESA and the NEPA ("Greenpeace2").[127] The ESA claim will be discussed later. The NEPA component of the initial complaint challenged the NMFS's failure to produce an adequate EIS for the management actions surrounding the Alaskan Fisheries.[128] Later that year Plaintiffs amended the complaint to challenge the adequacy of the new SEIS.[129] Both the scoping notice for the SEIS and the SEIS contained language suggesting that the NMFS was to complete a comprehensive programmatic analysis concerning the environmental impacts of the FMPs.[130] As mentioned above, however, the actual SEIS only addressed impacts related to TAC determination.[131] In July 1999, the Western District Court of Washington granted Plaintiffs

120. *See id.* at 1346.
121. *See id.* at 1347.
122. *See id.*
123. *See id.* at 1354.
124. *See* 62 Fed. Reg. 15,151 (Mar. 31, 1997) (to be codified at 50 C.F.R. pt. 671).
125. *See* 63 Fed. Reg. 71,285 (Dec. 24, 1998).
126. *See* 62 Fed. Reg. 15,151 (Mar. 31, 1997) (to be codified at 50 C.F.R. pt. 671).
127. *See Order#1, supra* note 2, at 1253.
128. *See id.*
129. *See id.*
130. *See id.* at 1271-1276.
131. *See* 63 Fed. Reg. 71,285 (Dec. 24, 1998).

motion of summary judgment on the NEPA claim.[132] The Court then remanded the SEIS of December 1998 to the NMFS to complete preparation of a "programmatic [SEIS] analyzing the environmental impacts of the FMPs as a whole on the North Pacific ecosystem."[133]

The new programmatic SEIS ("PSEIS") is still in preparation. As part of its remand order, the Court required the NMFS to deliver notices of progress every 60 days.[134] In October 1999 the NMFS hired a full-time PSEIS coordinator and also retained the professional services of an environmental consulting firm.[135] In January 2001, NMFS issued the first draft PSEIS for public comment.[136] At its scheduled pace the NMFS anticipates issuing the Final PSEIS by late summer 2001.[137] Greenpeace continued its request for injunctive relief and in late July 2000, the Court enjoined all groundfish trawling in Steller critical habitat until the NMFS completed its administrative obligations.[138]

The Endangered Species Act ("ESA")[139]

The ESA is one of the nation's most potent environmental laws, strictly regulating human impacts on imperiled species. Perhaps the ESA's two most significant protective provisions involve the direct prohibition of a litany of impacts on designated species and the requirement for federal agencies to consult with the National Fish and Wildlife Service or the NMFS over actions that may further imperil those species.[140]

Between the late 1970's and 1989 the Western Steller stock had already dropped in half from over a hundred thousand to just over 50 thousand.[141] During that same time, the Alaskan Fisher-

132. *See Order#1, supra* note 2.
133. *See id.* at 1276.
134. *See* Decl. for Nat'l Marine Fisheries Serv. by Ronald J. Berg at 1, Greenpeace v. Nat'l Marine Fisheries Serv., 55 F. Supp. 2d 1248 Civ. (W.D. Wash. filed October 1, 1999) (No. C98-0492Z) (filed Aug. 6, 1999).
135. *See* Decl. for Nat'l Marine Fisheries Serv. by Ronald J. Berg, Greenpeace v. Nat'l Marine Fisheries Serv., Civ. (W.D. Wash. filed October 1, 1999) (No. C98-0492Z) (filed Nov. 29, 1999); Decl. for Nat'l Marine Fisheries Service by Ronald J. Berg, Greenpeace v. Nat'l Marine Fisheries Serv., Civ. (W.D. Wash. 1999) (No. C98-0492Z) (filed Oct. 1, 1999).
136. *See* Draft PSEIS, *supra* note 28,.
137. *See id.*
138. *See Order#3, supra* note 2.
139. *See* 16 U.S.C. § 1531 (2000).
140. *See id.* § 1536, 1538.
141. *See BiOp#1, supra* note 5, at 58.

ies had expanded and significantly changed their operations. Much of the fishing pressure had moved into the principal Steller habitat during the animals' prime feeding months. In response to growing concern over the Steller, in November 1989 the Environmental Defense Fund and 17 other environmental groups petitioned the NMFS under the ESA to issue an emergency rule listing the Steller as endangered and to initiate the process for a regular listing.[142]

Section 4 of the ESA establishes the procedure for the regular and emergency listing of species as threatened or endangered for the purposes of the Act.[143] Importantly, the threatened or endangered designation triggers the ESA's protective provisions.[144] Regular listing proposals can either come from the listing agency for the species in question, which is the NMFS in the case of marine mammals, or by citizen petition.[145] In the latter case, the listing agency must then determine within ninety days whether the petition presents sufficient evidence to warrant consideration.[146] A finding that consideration is not warranted is subject to judicial review.[147] Once a petition survives the 90-day finding, the agency has 12 months to determine whether to list the species and must base its decision "solely on the . . . best scientific and commercial information available."[148] Commercial information means biological data obtained from commercial sources.[149] The 1982 ESA amendments specifically added "solely" to that provision to prohibit a consideration of economic impacts in a listing,[150] implicitly proscribing the application of Executive Order 12,291 requiring economic analysis to accompany all agency actions. The NMFS must consider five factors for determining whether a listing is warranted, summarized as follows: 1) habitat degradation, 2) overutilization, 3) disease or predation, 4) inadequacy of existing regulatory mechanisms, and 5) other factors affecting its continued existence.[151] A final finding denying a listing is also subject to judicial review.

142. *See* 55 Fed. Reg. 49,204 (Nov. 26, 1990) (to be codified at 50 C.F.R. pt. 227).
143. *See* 16 U.S.C. § 1533 (2000).
144. *See, e.g., id.* §§ 1531(b)-(c), 1536(a)(1)-(2), 1538.
145. *See id.* § 1533.
146. *See id.* § 1533(b)(3).
147. *See id.*
148. *See id.* § 1533(b)(1)(a).
149. *See* H.R. REP. No. 97-567 at 20 (1982).
150. *See id.*
151. *See* 16 U.S.C. § 1533(a)(1)(A)-(E) (2000).

Under the ESA emergency listing procedures, the NMFS may bypass most of the standard listing requirements in the face of "a significant risk to the well-being of any species of fish or wildlife or plants."[152] The emergency listing begins upon publication in the Federal Register and continues for 240 days during which time the agency might complete a regular listing process if warranted.

Section 4(f) of the ESA requires the listing agency to develop and implement a Recovery Plan for each listed species.[153] Recovery plans must include "site-specific" management recommendations, "objective measurable criteria" for delisting, and estimates of the resources, time, and money necessary for recovery.[154] Though ESA language portrays the plans as explicit recovery strategies,[155] they are mostly guidance documents.[156] To create each Recovery Plan, the listing agency either contracts out and only supervises preparation or establishes its own expert team which usually consists of agency personnel and representatives, outside scientists, and industry representatives.[157] The public must have notice and opportunity to comment on recovery plans prior to approval.[158] Importantly, the Recovery Plans themselves possess very limited and unclear legal authority.[159] The listing agency, however, at its discretion can of course give the Recovery Plans more teeth by promulgating implementing regulations.

Section 4 of the ESA also requires the listing agency to designate critical habitat when listing a species.[160] The ESA basically defines critical habitat as (1) areas within the species range with features essential to the conservation of the species and requiring special management and (2) areas outside the species range essential for the conservation of the species.[161] The ESA provides

152. *See id.* § 1533(b)(7).
153. *See id.* § 1533(f)
154. *See id.* § 1533(f)(1)(B)(i)-(iii).
155. *See id.*
156. *See, e.g.*, Mem. In Support of Defs.' Mot. To Dismiss, Hawaii Audubon Soc'y v. Lujan, 906 F. Supp. 549 (D. Hawaii 1991) (No. 91-00191), *quoted in* Robert Meltz, *Where the Wild Things Are: the Endangered Species Act and Private Property*, 24 ENVTL. L. 369, 376 (1994)).
157. *See* STANFORD ENVTL. LAW SOC'Y, ENDANGERED SPECIES ACT HANDBOOK, Ch. 2, § F.2 (2001).
158. *See* 16 U.S.C. § 1533(f)(4) (2000).
159. *See* STANFORD ENVT'L LAW SOC'Y, *supra* note 157, at Ch. 3 § F.5.
160. *See* 16 U.S.C. § 1533(b)(2) (2000).
161. *See id.* § 1532(5)(A).

exemption from this requirement if the listing agency finds that either insufficient information exists for the necessary analyses or the biological needs of the species are not known to the extent necessary to designate critical habitat.[162] The designation of critical habitat often takes considerable time for the listing agency because of the substantial resources necessary for the determination.[163] Besides providing guidance in management decisions concerning an endangered or threatened species, critical habitat plays a potentially important role in the protections afforded under Section 7 discussed below.

By February 1990, the NMFS determined that the Steller petition presented considerable evidence warranting emergency listing and initiated several processes to address concerns about the decline of the Steller. Pursuant to ESA public notice requirements, the NMFS began by opening a six-week comment period on the proposed emergency action.[164] Next, in March 1990, the NMFS appointed a Recovery Team for the preparation of a Recovery Plan and recommendation of emergency protective measures.[165] At around the same time, the NMFS also began a Steller biological research program including population surveys, health and fitness assessments, stock identification, fisheries impact analysis, and blood and tissue analysis.[166]

Finally, in April, the comment period closed and the NMFS published the emergency listing rule for the Stellers with accompanying protective regulations as recommended by the Recovery Team.[167] These regulations aimed to minimize direct disturbance, harm, or mortality of Stellers, especially around rookeries.[168] Measures included the establishment of buffer zones around rookeries, prohibitions against shooting near Stellers, and provisions for an incidental kill quota.[169] Just as importantly, the listing for the first time subjected activities impacting the Steller to the direct protective requirements and prohibitions of the ESA.

In late July 1990, the NMFS proposed a regular listing of the Steller as threatened and proposed protective regulations similar

162. *See* 50 C.F.R. § 424.12(a)(2)(i)-(ii) (2001).
163. *See* 63 Fed. Reg. 10,931, 10,933 (Mar. 5, 1998).
164. *See* 55 Fed. Reg. 6,301 (Feb. 22, 1990).
165. *See* 55 Fed. Reg. 12, 645 (Apr. 5, 1990) (to be codified at 50 C.F.R. pt. 227).
166. *See* 55 Fed. Reg. 29,793 (July 20, 1990) (to be codified at 50 C.F.R. pt. 227).
167. *See* 55 Fed. Reg. 12,645 (Apr. 5, 1990) (to be codified at 50 C.F.R. pt. 227).
168. *See id.*
169. *See* 55 Fed. Reg. 29, 792 (1990) (to be codified at 50 C.F.R. pt. 227).

to those in the emergency rule.[170] On the same day, the NMFS issued a notice of rulemaking soliciting public comments for more comprehensive protective regulations and the designation of critical habitat for Stellers.[171]

Finally, in November 1990, the NMFS officially listed the Steller as threatened and issued a limited set of protective measures, anticipating more complete measures including a designation of critical habitat to come out of the rulemaking process initiated in July.[172] The NMFS wanted to avoid a lapse in the listing of the Stellers as the emergency listing would expire on December 3rd.[173] The limited protective measures were basically the same as those in the emergency rule.

Section 7 of the ESA requires that all Federal agencies insure that their actions do not jeopardize or adversely modify the critical habitat of endangered or threatened species.[174] For any action that might have either of those negative impacts, the acting agency must formally consult with the listing agency.[175] This consultation results in the production of a Biological Opinion ("BiOp") which determines whether and why, or why not, jeopardy or adverse modification is likely to occur.[176] The ESA defines "jeopardy" as reasonably expected to reduce appreciably the likelihood of both the survival and recovery of the species.[177] "Adverse modification" means an appreciable diminishment of the value of the critical habitat for both the survival and recovery of the species.[178]

In 1991 and again in 1996, the NMFS completed formal internal consultations and produced BiOps for the impacts on the Steller of its own management actions in the Alaskan Fisheries.[179] More precisely, the consultations took place between the NMFS Office of Sustainable Fisheries which implements the MSA and the NMFS Office of Protected Resources as the ESA expert agency.[180] These BiOps concluded that management of

170. *See id.* at 29, 793.
171. *See id.* at 29, 792.
172. *See* 55 Fed. Reg. 49,204 (Nov. 26, 1990) (to be codified at 50 C.F.R. pt. 227).
173. *See id.*
174. *See* 16 U.S.C. § 1536(a) (2000).
175. *See id.* § 1536(a)(2).
176. *See generally id.* § 1536; 50 C.F.R. § 402.14 (2001).
177. *See* 50 C.F.R. § 402.02 (2001).
178. *See id.*
179. *See* BiOp#1, *supra* note 5, at 4.
180. *See id.*

the Alaskan Fisheries properly considered impacts on the Steller and that actions relating to the FMP's did not jeopardize the Steller or adversely modify its critical habitat.[181] These consultations examined the possibility of prey depletion or other fishing impacts as causes of Steller decline, but resolved that the relationship was as yet undetermined.[182]

Meanwhile in June 1991, January 1992, and March 1993, the NMFS implemented more protective measures, using the MSA, to reduce the potential impacts of the Alaskan Fisheries on the Steller.[183] These regulations mostly expanded buffer zones around Steller rookeries. In January 1993, the NMFS published a Steller Recovery Plan[184] and that August it also published the Steller critical habitat.[185] The critical habitat covered rookeries, haulouts, buffer zones around these areas, and three aquatic foraging areas in the North Pacific.[186]

The 1991-1992 Greenpeace lawsuit against the NMFS took place during this time. Its ESA claim challenged the NMFS's compliance with the Section 7 consultation requirements for management of the GOA pollock fishery.[187] Essentially, Greenpeace argued that the 1991 BiOp was inadequate and did not consider the best scientific and commercial information available concerning the impact of the fishery on the Steller.[188] As with the NEPA claim, the Western District Court of Washington found for the NMFS and on appeal the Ninth Circuit affirmed.[189]

In November 1994, the NMFS reconvened the Steller Recovery Team to update its advice on the species, thereby beginning a process which ultimately led to the reclassification of most of the Stellers as endangered over two years later.[190] Coming out of that two day meeting, the Recovery Team's new recommendations included splitting the Steller into Eastern and Western stocks, upgrading the Western stock to endangered status, imple-

181. *See id.*

182. *See Order#1, supra* note 2, at 1256.

183. *See* 58 Fed. Reg. 13, 561 (Mar. 12, 1993); 57 Fed. Reg. 2,683 (Jan. 23, 1992) (to be codified at 50 C.F.R. pts. 672, 675); 56 Fed. Reg. 28,112 (June 19, 1991) (to be codified at 50 C.F.R. pt. 672).

184. 58 Fed. Reg. 3,008, 3,009 (Jan. 7, 1993).

185. 58 Fed. Reg. 45,269 (Aug. 27, 1993) (to be codified at 50 C.F.R. pt. 226).

186. *See id.* at 45, 270.

187. *See* Greenpeace Action v. Franklin, 14 F.3d 1324,1347 (9th Cir. 1992).

188. *See id.*

189. *See id.* at 1347, 1356.

190. *See* 60 Fed. Reg. 51,968, 51969 (Oct. 4, 1995) (to be codified at 50 C.F.R. pts. 222, 227).

menting measures to reduce Alaskan Fisheries's competition with Steller prey items, especially near rookeries, and incorporating more peer review in the research process to assess the need for changes in research direction and priorities.[191] In October 1995, the NMFS formally proposed the splitting and reclassification of the Stellers as recommended by the Recovery Team.[192] Following over a year of meetings and comment periods, in 1997, the NMFS officially split the Steller into an endangered Western stock and a threatened Eastern stock.[193] The main difference of the stock split was the recognition of two distinct populations with different trends and perhaps different management needs.[194] Perhaps the main practical difference of the new endangered status was its declaratory importance. The upgraded status offered some additional prohibitions under Section 9 of the ESA,[195] though none that has played a significant role as yet in the case-study.

In early 1998, the NMFS conducted another Steller BiOp consultation, but only for the 1998 GOA FMP.[196] In response to an increased pollock stock assessment, the NP Council had proposed and the NMFS had implemented a 60% increase in the GOA pollock TAC for 1998.[197] Much of the added fishing pressure occurred in Steller critical habitat.[198] The BiOp, however, once again found no jeopardy or adverse modification.[199]

One month after the GOA BiOp in 1998, Greenpeace filed Greenpeace2 against the NMFS.[200] The ESA claim charged the NMFS with violating the Section 7 consultation provisions for both the GOA and BSAI FMP.[201] Greenpeace argued that neither of the current consultations, the 1996 BiOp for the BSAI FMP and the March 1998 BiOp for the GOA FMP, was adequate in scope having ignored cumulative impacts of multiple fisheries

191. *See id.* at 51,969, 51, 670.

192. *See id.* at 51,968.

193. *See* 62 Fed. Reg. 24,345 (May 5, 1997) (to be codified at 50 C.F.R. pts. 222, 227).

194. *See id.*

195. *See* 16 U.S.C. § 1538 (2000).

196. *See* BiOp#1, *supra* note 5, at 5.

197. *See Order#2, supra* note 2, at 1141.

198. *See* BiOp#1, *supra* note 5, at 5; *see, e.g.*, 63 Fed. Reg. 60,288 (Nov. 9, 1998) (to be codified at 50 C.F.R. pt. 679).

199. *See Order#2, supra* note 2, at 1141.

200. *See Order#1, supra* note 2, at 1253.

201. *See id.*

on the Steller.[202] Shortly, however, the NMFS began an ESA consultation for the on-going GOA and BSAI groundfish FMP which by early December produced a new, more comprehensive BiOp.[203] Greenpeace then amended its complaint challenging the adequacy of this latest consultation.[204]

The new BiOp ("BiOp#1") for the first time in the consultation history for the Steller found the likelihood of jeopardy and adverse modification of critical habitat by the GOA and BSAI pollock fisheries.[205] While acknowledging a lack of direct evidence of harmful competition for pollock between the Stellers and the fisheries, the BiOp#1 concluded that such impact is likely from outside evidence.[206] Particularly, the fishery operated in Steller feeding grounds during critical times of year for the animal, the fishery targeted similar depths to where Stellers feed, and the fishery targeted the same size pollock as the Steller.[207] The BiOp#1 found those empirics to suggest a high likelihood of potentially harmful localized depletion of prey items for the Steller.[208]

At the same time, the BiOp#1 found no jeopardy or adverse modification from the mackerel fisheries.[209] Curiously, the BiOp#1 found that new direct evidence showed localized depletions of mackerel by the fishery in Steller critical habitat.[210] The BiOp#1, however, concluded that a series of precautionary measures recommended by the NP Council and implemented by the NMFS in the FMP minimized risks to the Steller that might result in jeopardy or adverse modification.[211]

A conclusion of jeopardy or adverse modification from a Section 7 consultation triggers new protective duties under the ESA.[212] Specifically, the acting agency must offer Reasonable and Prudent Alternatives ("RPA") to the proposed action which meet four distinct requirements: consistency with the purpose of the underlying action, consistency with the agency authority, eco-

202. *See Order#2, supra* note 2, at 1141.
203. *See id.* at 1142.
204. *See id.*
205. *See* BiOp#1, *supra* note 5, at 114.
206. *See id.* at 108, 111.
207. *See id.* at 75-84, 108, 111.
208. *See id.*
209. *See id.* at 114.
210. *See id.* at 103.
211. *See id.* at 104.
212. *See* 16 U.S.C. § 1536(b)(3) (2000).

nomic and technical feasibility, and avoidance of the likelihood of jeopardy or adverse modification.[213] To comply with the last requirement, the RPA must adequately address the specific concerns upon which the BiOp based its conclusions.[214] A BiOp which finds jeopardy or adverse modification, therefore, should offer significant specific guidance and proposals for RPA.[215]

Within almost two weeks of the BiOp#1, the NP Council approved and the NMFS implemented Final RPA for the GOA and BSAI pollock FMPs.[216] The BiOp#1 suggested temporal and spatial dispersion and trawl exclusion zones as potential focus areas for RPA and offered examples of acceptable alternative measures as Draft RPA.[217] The Final RPA's presented a significantly altered version of some of these suggested measures.[218] In January and February, the NMFS promulgated emergency protective regulations implementing the limited provisions of the Final RPA.[219]

Greenpeace then amended its complaint, as mentioned above, claiming that the Final RPA were inadequate and parts of BiOp#1 were arbitrary and capricious.[220] For the BiOp#1, Greenpeace challenged the finding of no jeopardy or adverse modification for the mackerel and the adequacy of the RPAs guidance.[221] For the Final RPA, they argued that the NMFS and the NP Council had only produced cosmetic changes, largely ignoring the problems and suggestions presented in the BiOp#1.[222]

Around the same time, members of the fishing industry sued the NMFS over the conclusions of the BiOp#1 regarding the pollock fishery and the Final RPA.[223] For the BiOp#1, they challenged the finding of jeopardy and adverse modification for the pollock in the absence of direct evidence of localized depletions

213. *See* 50 C.F.R. § 402.02 (2001).

214. *See Order#1, supra* note 2, at 1264-67.

215. *See id.*

216. *See id.* at 1257; *see also* Fisheries of the Exclusive Economic Zone Off Alaska, 65 Fed. Reg. 3892 (Jan. 25, 2000) (to be codified at 50 C.F.R. pt. 679).

217. *See* BiOp#1, *supra* note 5, at 116-24.

218. *See Order#1, supra* note 2, at 1257.

219. *See* Fisheries of the Exclusive Economic Zone Off Alaska, 64 Fed. Reg. 3437 (Jan. 22, 1999) (to be codified at 50 C.F.R. pt. 679); Fisheries of the Exclusive Economic Zone Off Alaska, 64 Fed. Reg. 7814, 9375 (Feb. 25, 1999) (to be codified at 50 C.F.R. pt. 679).

220. *See Order#1, supra* note 2.

221. *See id.* at 1253.

222. *See id.* at 1257.

223. *See id.* at 1257, 1260.

of prey caused by the pollock fisheries in Steller critical habitat.[224] For the Final RPA, they challenged the alternatives' economic and technical feasibility.[225]

Meanwhile, in late December 1998, the NMFS reinitiated internal consultation and produced another BiOp ("BiOp#2") for the Alaskan Fisheries including the 1999 management measures.[226] The BiOp#2 concluded that the 1999 measures would not result in jeopardy or adverse modification conditioned on the development and implementation of RPA in accordance with the BiOp#1 consultation.[227]

In its July 1999 decision, the Western District Court of Washington ruled in part for both Greenpeace and the NMFS on motions for summary judgment for the ESA claims.[228] The Court held that the NMFS's determinations in the BiOp#1 of jeopardy and adverse modification for pollock and none for mackerel were not arbitrary and capricious.[229] On the other hand, the Court held that the Draft RPA in the BiOp#1 and the Final RPA were both inadequate in their measures to avoid the likelihood of jeopardy and adverse modification.[230] The Court remanded the RPA to the NMFS for revision.[231]

Following the BiOp#2, Greenpeace had again amended its complaint to add a claim against the adequacy of this latest consultation.[232] The new claim mirrored the original challenges against the adequacy of the scope of the 1996 BSAI FMP and the March 1998 GOA FMP.[233] As before, Greenpeace argued that the consultation ignored the likely cumulative impacts of all the relevant fisheries on the Steller.[234] In late January 2000, the Western District Court of Washington granted Greenpeace summary judgment on this claim.[235] It held that the proper scope of

224. *See id.* at 1257.
225. *See id.* at 1264.
226. *See* NAT'L MARINE FISHERIES SERVICE, AUTHORIZATION OF BSAI AND GOA GROUNDFISH FISHERIES BASED ON TAC SPECIFICATIONS: BIOLOGICAL OPINION 2 (1998), *available at* http://www.fakr.noaa.gov/protectedresources/stellers/section7.htm [hereinafter BiOp#2].
227. *See id.* at 119.
228. *See Order#1, supra* note 2, at 1276.
229. *See id.*
230. *See id.*
231. *See id.* at 1277.
232. *See Order#2, supra* note 2, at 1143.
233. *See id.*
234. *See id.*
235. *See Order#2, supra* note 2.

the BiOp#2 should have been the Alaskan Fisheries's FMP in their entirety.[236]

By summer the NMFS had not produced the appropriate BiOp, but anticipated completing the consultation by the end of October.[237] Greenpeace continued its request for injunctive relief and in late July 2000, the Court enjoined all groundfish trawling in Steller critical habitat until the NMFS completed its administrative obligations.[238]

The Marine Mammal Protection Act[239]

The Marine Mammal Protection Act of 1972 ("MMPA") and amendments heavily restrict the legal harming or killing of marine mammals and charge the NMFS with specific duties for the conservation and management of cetaceans and pinnipeds, excluding walruses.[240] The MMPA also establishes an independent Marine Mammal Commission, including a Committee of Scientific Advisors, to suggest how the NMFS might comply with the provisions of the Act.[241] For the interactions with marine mammals incidental to commercial fishing, the Act sets forth a distinct regime of restrictions and procedures largely expanded by its 1994 amendments.[242] Specifically, the NMFS must prepare stock assessments for all marine mammals in U.S. waters, develop and implement Take Reduction Plans ("TRPs") for depleted stocks, and study pinniped-fishery interactions.[243]

The MMPA has played only a minor role in the management of the Alaskan Fisheries and its interactions with the Steller. For the most part, the NMFS has interpreted the Act only to restrict the direct harming or killing of marine mammals, for example through entanglement in fishing gear.[244] Between 1988 and 1994, the incidental takes of Stellers in the Alaskan Fisheries fell within the Interim Marine Mammal Exception Program of the

236. *See id.* at 1150.

237. *See Order#3, supra* note 2, at 1069.

238. *See Order#3, supra*, note 2.

239. Marine Mammal Protection Act, 16 U.S.C. §§ 1361-1421 (2000).

240. *See id.*

241. *See id.* § 1401.

242. *See* Marine Mammal Protection Act of 1972, Pub. L. No. 103-238, 108 Stat. 532 (1994); 16 U.S.C. § 1387.

243. *See* 16 U.S.C. §§ 1386-87.

244. *See, e.g.*, Taking of Threatened or Endangered Marine Mammals Incidental to Commercial Fishing Operations, 60 Fed. Reg. 45,399 (Aug. 31, 1995).

MMPA.[245] Since 1994, the NMFS has issued for the relatively small number of Stellers directly harmed or killed by the Alaskan Fisheries an Incidental Take Permit pursuant to its MMPA exemption authority for commercial fisheries.[246] Otherwise, the NMFS has taken no significant actions under the Act. Importantly, most NMFS actions under the MMPA, such as whether to produce TRPs and how to implement them remain discretionary.[247]

The American Fisheries Act[248]

The American Fisheries Act of October 1998 ("AFA") establishes various permitting, allocation and buyout provisions for the management of the Alaskan Fisheries, effectively removing most catcher/processors and shifting their allocated catch to other vessel types over a few year period.[249] The main purpose of the AFA is to remove foreign fishing efforts still remaining in the GOA and BSAI after the passage of the Anti-reflagging Act of 1987, whose purpose was to fully domesticize the Alaskan Fisheries.[250] A loophole in the 1987 Act, however, allowed foreign rebuilt vessels to operate in the U.S. North Pacific.[251] Most of these vessels were catcher/processor factory trawlers. Curiously, efforts to pass the AFA fostered an alliance between several conservative senators and Greenpeace, who relished removing the factory trawlers from the GOA and BSAI.[252] The AFA only affects fleet composition.[253] Overall fishing pressure and practice otherwise go unaffected by its provisions.

245. *See* Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under Endangered Species Act, 60 Fed. Reg. 51,968, 51,974 (proposed Oct. 4, 1995) (to be codified at 50 C.F.R. pts. 222, 227).

246. *See* Taking of Threatened or Endangered Marine Mammals Incidental to Commercial Fishing Operations, 60 Fed. Reg. 45,399 (Aug. 31, 1995).

247. *See generally* 16 U.S.C. §§ 1361-1421.

248. American Fisheries Act of October 1998, Pub. L. No. 105-277, §§ 202-210, 112 Stat. 2681, 617-31 (1998).

249. *See id.*

250. *See* 144 CONG. REC. S12,777 (daily ed. Oct. 21, 1998) (statement of Sen. Stevens).

251. *See id.*; *see also* 46 U.S.C. § 12108 (2000).

252. *See* Earl Comstock, Greenpeace, *A Guide To S. 1221, The American Fisheries Act, A Greenpeace Briefing Paper* (Mar. 25, 1998), *available at* http://www.greenpeaceusa.org/media/publications/afatext.htm; *see also* John Carlisle, The National Center for Public Policy Research, *The American Fisheries Act: Special Interest Politics at Its Worst*, (Aug. 1998) *available at* http://www.nationalcenter.org/NPA209.html.

253. *See generally* §§ 202-210, 112 Stat. at 617-31.

BRIEF CHRONOLOGY

	1960's	Large trawlers first begin fishing the BSAI
	1978	FMPs for the GOA fishery; associated EIS
	1981	FMPs for the BSAI fishery; associated EIS
	1980's	Fishing increases; Stellers decline; dozens of FMPs amendments and associated EA/FONSI
Nov 21	1989	NGO's petition to list the Steller as endangered
March	1990	The NMFS appoints a Steller Recovery Team
April 5	1990	The NMFS emergency-lists the Steller as threatened
Nov 26	1990	The Steller officially listed as threatened
April 18	1991	BiOps for both FMPs – no jeopardy or adverse modification
	1991	Suit against the NMFS – ESA & NEPA claims
	1992	Dist. Court holds that the 1991 amendments to the FMPs did not require a full EIS
	1993	Recovery Plan and Critical Habitat Designation
Oct 4	1995	The NMFS proposes to reclassify the Steller as endangered
Jan 26	1996	BiOp's on the FMPs
	1996	MSA reauthorization (SFA)
	1997	The Steller reclassified as two stocks – Western stock endangered
March	1997	The NMFS notice of intent to produce a SEIS
March	1998	BiOp for the GOA FMPs only – no jeopardy or adverse modification
April	1998	Greenpeace2 suit against the NMFS – ESA and NEPA claims
Sept	1998	Draft SEIS for public review and comment
Oct 21	1998	AFA
Dec 3	1998	BiOp#1 — jeopardy and adverse modification; Draft RPA
Dec 16	1998	The NMFS approves Final RPA
Dec 18	1998	1st SEIS for FMP amendments
Dec 22	1998	BiOp#2
Jan, Feb	1999	Emergency regulations and corrections
July 9	1999	Dist. Court order — RPA and SEIS inadequate
Jan 25	2000	Dist. Court order – BiOp#2 inadequate
July 19	2000	Dist. Court order – fishing enjoined in Steller critical habitat

III.
HYPOTHESES

What makes this case study particularly interesting is that a single Federal agency, the NMFS, administered all the major statutes. An examination of its decisions relating to the Steller might reveal some of the effects of multiple-statute administration in particular on the role of science in environmental management. However, while it is easy to see what the NMFS did throughout the case study, it is very difficult to learn why or how it really made those decisions. Except for the most ministerial actions, it is safe to assume that much decision-making occurred off the record and will never become available. This section, therefore, offers two non-provable propositions about the effects of the multiple statute administration on the role of science in this case-study. For each of the hypothesized effects, the paper first suggests why that effect seems likely under the circumstances and then presents observations supporting its occurrence in the case-study. Sources of evidence for the analysis include the contents of the statutes, the structure of their administration, the contents of the enormous administrative record, and documents and testimony from the most recent lawsuit.

Hypothesis #1

The first hypothesis regarding the effect of multiple-statutory administration on the role of science is that gestalt-type analysis drove the NMFS decision-making concerning the Steller. That is, rather than treating separate statutes as independent charges of responsibility, the NMFS would effectively weigh together all the statutory mandates, outside interests, economics, and science to attempt reasonable management solutions. As long as the NMFS fulfilled its non-discretionary obligations under each of the separate statutes, the gestalt solutions could sell as the net outcome of objective compliance with those independent duties. This paper will refer to this hypothesized effect of multi-statutory administration on the role of science in environmental management as the gestalt effect.

One reason this effect seems likely is the clear importance of the interrelationships among the statutes to how the NMFS must apply each statute individually for management concerning the Steller. Numerous responsibilities under the different statutes share legal, technical, and political connections. It seems unlikely that the NMFS could operate insensitive to such direct in-

tra-agency feedback loops and administer the separate statutes as discrete operations requiring discrete decision-making analyses.

First of all, actions under some of the statutes trigger duties under other statutes. For example, FMPs for the MSA, TRPs for the MMPA, and the required regulations of the AFA might all demand NEPA analysis and perhaps might also require ESA Section 7 consultation. Meanwhile, the TRPs for the MMPA, the BiOp for the ESA, the EISs for the NEPA, and the provisions of the AFA may all require new or amended FMPs and implementing regulations. Consequentially, the NMFS must handle a cascade of new obligations under different statutes for many of its potential management decisions.

Second, the information gathered under the provisions of one statute influences the execution of other statutes. This effect might occur when the new information directly triggers a duty in another statute as mentioned above. For example, government observers placed on fishing vessels to monitor and compile catch statistics pursuant to the MSA and the AFA[254] might reveal by-catch of endangered species thereby triggering the ESA.[255] The expansion of the official record is another very important influence of information-gathering between statutes. Many agency decisions pursuant to the statutes require consideration of the best available information.[256] With multiple interrelated statutes, decisions under one statute must therefore often consider information whose collection was not required by that statute but by other statutes with other purposes. For instance, an examination of the causes of decline of the Steller for a MMPA assessment might benefit from the substantial fishing pressure information gathered pursuant to the MSA. In the absence of substantial non-government information, the contents of the administrative record might largely define the informational basis for agency decision-making. Independent application of the information-gathering provisions of multiple statutes might reduce agency power to use information-gathering as a source of discretion in complying with those statutes individually. Given the importance of the same record of Steller and Alaskan Fisheries information to the

254. *See, e.g.*, 16 U.S.C. §§ 1821, 1853, 1862, 1881 (2000).

255. *See, e.g.*, Turtle Island Restoration Network, *Complaint in Turtle Island Restoration Network v. NMFS*, (Mar. 23, 2000), *available at* http://www.seaturtles.org/pdf/drift_gillnet_complaint.pdf (a recent ESA claim filed by environmental NGO's against the NMFS largely based on observer by-catch statistics).

256. *See, e.g.*, 16 U.S.C. § 1801(a)(3) (2000); 16 U.S.C. § 1851(a)(2) (2000); 16 U.S.C. § 1533(b)(1) (2000); 42 U.S.C. § 4332 (2000); *see also* 5 U.S.C. § 706 (2000).

NMFS's application of numerous statutes, the NMFSs seems unlikely to make decisions regarding gathering information under one statute blind to impacts to its decision-making under other statutes.

Finally, conflict of mandates between the multiple statutes influences their separate application and encourages gestalt analysis. Several of the statutes important to management of the Steller contain irreconcilable mandates. For example, a central purpose of the MSA is to achieve commercial fishery harvests at maximum sustainable yield[257] while a central purpose of the MMPA is to reduce mortality of marine mammals, a truly unavoidable externality of major fishing operations, to zero by May 2001.[258] As another example, consider similar conflicts between the MSA and the strictly preservationist ESA. The Greenpeace2 Court even commented that "[the NMFS] struggled to reconcile the Magnuson Act requirements with ESA mandates."[259]

Some of these statutes even contain basic internal conflicts. For example, the MSA contains some mandates to safeguard short-term economic interests incongruous with the broader purpose of insuring long-term sustainability.[260] Disharmony of general purpose between these interrelated statutes dissuades administrative initiative beyond compliance with strict black-letter responsibilities in their independent application.

In fact, it dissuades their independent application altogether. Federal agencies retain a tremendous amount of discretion in non-ministerial decision-making. Under the Administrative Procedure Act,[261] courts review most decisions against the extremely deferential arbitrary and capricious standard.[262] This standard embodies Congress's intent to leave much decision-making to agency expertise. If Congress wants to remove agency discretion it explicitly describes ministerial responsibilities. This administrative arrangement has greatly benefited Congress by both reducing workload and providing political shelter from unpopular administrative action. The NMFS as the executor of numerous

257. *See* 16 U.S.C. §§ 1801(a)(5)-(7), 1851(a)(1), 1853(a)(4) (2000).

258. *See* 16 U.S.C. § 1387(b) (2000).

259. *See Order#1, supra* note 2, at 1269.

260. *See generally* 16 U.S.C. § 1801; *cf.* 16 U.S.C. § 1801(a)(7), 1851(a)(8), 1853(d), 1863 (2000).

261. Administrative Procedure Act, 5 U.S.C. §§ 550-76, §§ 551-59 (2000).

262. *See* 5 U.S.C. § 706 (2000).

controversial actions,[263] probably understands this administrative relationship with Congress as well as any other agency. The NMFS might easily interpret conflicting mandates under different statutes as a mandate to weigh the conflicting purposes against each other case-by-case. In other words, to engage in a gestalt analysis where Congress was not willing to. Even if the NMFS could execute the ministerial and black-letter specifics of the separate statutes without direct conflict, as a policy-minded expert agency it seems very unlikely to be able to ignore conflicting broad mandates altogether. The alternative is gestalt analysis.

Another reason the gestalt effect seems likely is that many of the same people probably made or oversaw many of the administrative decisions for the different statutes. Such direct and personal involvement, investment, and power in the administration of multiple statutes tightens the intra-agency feedback loops discussed earlier. Tighter feedbacks should promote the broader, multi-statutory oriented analyses described by the gestalt effect.

As an example of managerial overlap, the Director for the Alaska Regional Office of the NMFS sits on the MSA Regional NP Council, is boss to the Director of the Alaska Fisheries Science Center which makes assessments for both Alaskan groundfish and Stellers, and is boss to the Regional Protected Resources Division which conducts and reviews MMPA TRP activity and ESA Section 7 consultations.[264] In another example, the coordinator appointed to oversee the development of a new programmatic revised SEIS is a fishery biologist who also served as Deputy Executive Director of the MSA Council for ten years.[265] That said, some of the information gathering itself seems to take place from a variety of sources. Though often difficult to determine, these sources include agency scientists, academic scientists, hired consultants,[266] and international treaty

263. *See, e.g.*, NATIONAL RESEARCH COUNCIL, IMPROVING MANAGEMENT OF U.S. MARINE FISHERIES (1994).

264. *See* NAT'L MARINE FISHERIES SERVICE, NMFS ORGANIZATIONAL CHART: ALASKA, *available at* http://www.fakr.noaa.gov/general/orgchart1999.pdf (May 2000).

265. *See* Decl. for Nat'l Marine Fisheries Serv. by Ronald J. Berg at 4, Greenpeace v. Nat'l Marine Fisheries Serv., 55 F. Supp. 2d 1248 (W.D. Wash. 1999) (No. C98-0492Z) (filed August 6, 1999).

266. *See* Decl. for Nat'l Marine Fisheries Serv. by Ronald J. Berg for at 3, Greenpeace v. Nat'l Marine Fisheries Serv., (W.D. Wash. 1999) (No. C98-0492Z) (filed Nov. 29, 1999) at 3.

agency consultants such as IUCN.[267] As an overall sense from the outside, however, the discretionary decisions about which information to gather and how to interpret and apply that information seem to come from closely connected bureaucracies.

Scientific uncertainly also invites the gestalt effect. To the extent that information key to administrative decision-making remains unavailable or indefinite, the NMFS might engage in insurance calculations to price that uncertainty. These calculations in turn demand risk analyses that, by definition, include a weighing of all costs and benefits with their probabilities. Such calculations in the context of substantial agency discretion seem likely to promote the gestalt analysis.

The NMFS has managed the Steller and the Alaskan Fisheries against a background of substantial scientific uncertainty. Though suspicions have abounded for decades regarding fishing as a possible significant contributor to Steller decline, substantial empirical evidence has gone largely ungathered.[268] The major cause-in-fact hypothesis concerning fishing pressure and Steller decline was that even though the NMFS and the NP Council manage the Alaskan Fisheries sustainably over their large ranges, focal points of fishing pressure in parts of the Steller habitat create localized depletions detrimental to young Stellers during critical growth periods.[269] That said, alternative causal hypotheses also seem likely.[270] Perhaps pollution, predation, disease, environmental fluctuations or a combination of these factors formed the determinant cause of the population decline.[271] Meanwhile, due to the limitations of fishery surveying and monitoring, even the basic fish population and catch information carried substantial error.[272]

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267. *See* Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under the Endangered Species Act, 62 Fed. Reg. 24,345, 24,347 (May 5, 1997) (to be codified at 50 C.F.R. pts. 222, 227).

268. *See, e.g.*, BiOp2000, *supra* note 3, at 74-79; BIOP#1, *supra* note 5, at 75-84; Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under the Endangered Species Act, 62 Fed. Reg. at 24,353-54.

269. *See, e.g.*, Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under Endangered Species Act, 60 Fed. Reg. 51,968, 51,970 (proposed Oct. 4, 1995) (to be codified at 50 C.F.R. pts. 222, 227).

270. *See* BiOp2000, *supra* note 3, at 67-89.

271. *See id.*

272. *See, e.g.*, NAT'L MARINE FISHERIES SERVICE, DRAFT EA/REGULATORY IMPACT REVIEW FOR THE EMERGENCY RULE TO IMPLEMENT REASONABLE AND PRUDENT STELLER SEAL LION PROTECTIVE MEASURES IN THE POLLOCK FISHERIES OF THE BERING SEA AND THE ALEUTIAN ISLANDS AREA AND THE GULF OF ALASKA (Jan. 2000) at 121, 145, *available at* http://www.fakr.noaa.gov/sustainablefisheries/

Four types of observations support the possibility that the gestalt effect actually occurred: instances when the NMFS appeared to weigh other information in its analysis than that mentioned for the record, procedural imports between statutes, congruity in activity levels and in shifts of discretionary activity under different statutes, and gestalt language.

The weighing of information other than that mentioned for the record suggests that the NMFS engaged in broader decision-making analyses than it wanted to reveal. Perhaps the NMFS engaged in statutorily discrete decision-making relying on the best available science but withheld some valuable information from the record, maybe with some hope of legal or political protection. It seems more likely, however, that the NMFS would want the record to show every bit of appropriate information supporting its decision. Also, deference to agency discretion already provides substantial shelter. Most likely, therefore, the weighing of information not in the record suggests public analysis to fit private conclusions and the consideration of inappropriate factors indicative of the gestalt effect.

First, the NMFS appeared to weigh more information privately than publicly when its official conclusions did not follow from the evidence and reasoning given in the record. Consider, for example, the BiOp#1's examination of jeopardy and adverse modification for the pollock and mackerel fisheries. The BiOp#1 described that local depletions provide evidence of potential detrimental competition between the Alaskan Fisheries and the Steller.[273] It then found direct evidence of localized depletions in the mackerel fishery and no direct evidence in the pollock fishery.[274] Yet the BiOp#1 concluded jeopardy and adverse modification in the pollock fishery and none in the mackerel fishery.[275] While the Court in Greenpeace2 found these determinations to pass the arbitrary and capricious standard it noted that "the BiOp's presentation of [the reasoning for its mackerel determination] is confusing and opaque at best."[276] Nonetheless, the NMFS provided at least some rational reason for each conclusion

sf_ea/ssl_ea/default.htm; NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL, A GUIDE TO STOCK ASSESSMENT OF BERING SEA AND ALEUTIAN ISLAND GROUNDFISH, (Sept. 1997) *available at* http://www.fakr.noaa.gov/npfmc/Reports/bsstock.htm.

273. *See* BiOp#1, *supra* note 5, at 20.

274. *See id.* at 17-23.

275. *See id.* at 115.

276. *See Order#1, supra* note 2 at 1263 n.20.

– minor differences in management including more use of temporal dispersion as a protective measure for the mackerel than for the pollock.[277] Truth be told, however, following the passage of the AFA before the BiOp#1, the pollock fishery promised equal if not greater temporal dispersion than the mackerel fishery through the reduction of quota races by the establishment of a fishing cooperative.[278] Also, the pollock fishery had other protective measures for the Steller.[279]

Similar incongruity appeared in the NMFS's development of Draft and Final RPA. The Greenpeace2 Court found that the guidelines stated in the BiOp#1 for the RPAs were not followed by many of the individual measures of the Draft RPAs in that same BiOp or in the Final RPA.[280] Those guidelines were temporal and spatial dispersion of the fishery and protection of the rookeries and haulouts by implementation of additional no-trawl zones.[281] In fact, the RPA provided no temporal dispersion and limited spatial dispersion.[282]

Also, while the NMFS found both jeopardy and adverse modification of critical habitat it strangely and without explanation treated them as a single problem in the Draft RPA and moreover did not explain how the RPA's would address either problem.[283] Yet under the ESA, RPA must meet separate requirements for both findings.[284] For example, jeopardy requires an examination of what fishing pressure might "reduce appreciably the likelihood of both the survival and recovery" of the Steller, while adverse modification requires an examination of what fishing pressure might "appreciably diminish the value of critical habitat."[285] Nonetheless, the Draft RPA only suggested reducing fishing pressure in a reasonable manner for both the pollock fishery and

277. *See id.* at 1263; BiOp#1, *supra* note 5, at 102-04.

278. *See* Decl. for Nat'l Marine Fisheries Service by Karl Haflinger, Greenpeace v. Nat'l Marine Fisheries Serv., (W.D. Wash.1999) (No. C98-0492Z) (filing date unavailable).

279. *See* Nat'l Marine Fisheries Service, *Draft EA/Regulatory Impact Review for The Emergency Rule to Implement Reasonable and Prudent Steller Seal Lion Protective Measures in the Pollock Fisheries of the Bering Sea and the Aleutian Islands Area and the Gulf of Alaska,* (Jan. 2000) *available at* http://www.fakr.noaa.gov/protectedresources/stellers.htm#consultations.

280. *See Order#1, supra* note 2, at 1266.

281. *See* BiOp#1, *supra* note 5, at 114-20.

282. *See Order#1, supra* note 2, at 1266.

283. *See id.* at 1265.

284. *See id.*

285. *See* 50 C.F.R. § 402.2 (2000).

the Steller based on historical fishing practice, without answering the required questions.[286]

Also, the NMFS's ESA Section 7 Consultation Handbook requires "thorough explanation of how each component of the [RPA] is essential to avoid jeopardy and/or adverse modification."[287] Yet as mentioned, the NMFS provided no such explanation of the reasons for or intended effects of its suggestions for fishing pressure reduction or any other Draft or Final RPA measure. The Greenpeace2 Court stated that "without some rational explanation [of how the RPA measures address jeopardy and/or adverse modification] it cannot conduct a meaningful review" and found the RPA arbitrary and capricious.[288] The mis-fit between the BiOp including the RPA guidelines and the RPA themselves, along with the lack of explanation, suggests the use of outside information.

Judge Zilly of the Greenpeace2 Court expressed similar impressions in his presiding over oral argument. Contrary to some arguments made by industry intervenors for the defense, the ESA requirement for RPA to consider economic and technical feasibility does not mean that the NMFS can weigh economic costs against species protection in producing RPA. According to the Court, "such a result would be fundamentally inconsistent with the purposes of the ESA and the case law interpreting the Act."[289] However, during oral argument discussion of the RPAs, when Judge Zilly asked counsel for the NMFS whether the agency applied economic considerations, counsel seemed to shift the subject by replying, "a jeopardy determination needs to be made exclusive of economic considerations."[290] Immediately returning to the subject of the RPA, the Judge responded "some of the changes [in the RPA's] seem to have been made for economic reasons. Don't you have some obligation to explain how the RPA's will or won't avoid jeopardy?"[291]

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286. *See Order#1, supra* note 2 at 1265.

287. *See* U.S. FISH AND WILDLIFE SERVICE & NAT'L MARINE FISHERIES SERVICE, ESA SECTION 7 CONSULTATION HANDBOOK (1998) at 4-41, *available at* http://endangered.fws.gov/consultations/s7hndbk/s7hndbk.htm.

288. *Order#1, supra* note 2, at 1267.

289. *Id.*

290. E-mail from Ken Stump to Earth Island Institute regarding 5/13/99 Court Hearing in Greenpeace v. Nat'l Marine Fisheries Serv., Civ. No. C98-0492Z (W.D. Wash.) [hereinafter *Oral Argument*].

291. *Id.*

Similar incongruity appeared between the NMFS's reasoning in the BiOp#2 and its finding of no jeopardy or adverse modification for the 1999 fishery management. The scoping statement for the BiOp#2 indicated that the consultation involved only the proposed 1999 pollock fishery management actions based on the 1999 TAC determination.[292] The BiOp#2 justified this limited consultation by disclaiming that its conclusions were conditional upon the Final RPA's produced a week earlier.[293] Nonetheless, a conclusion of no jeopardy or adverse modification for the 1999 fishery, given the opposite finding for the entire FMP three weeks earlier in the BiOp#1, would require an analysis of the full FMP with the RPA and the 1999 management plans.[294]

No such analysis took place. In fact, the BiOp#2 seemed to contain little more than parts of the BiOp#1 with pieces of the SEIS that the NMFS published 5 days previous,[295] yet with a new conclusion.[296] Moreover, when the Greenpeace2 Court found both the RPA's upon which the BiOp#2's conclusion depended and the SEIS constituting some of the BiOp#2's major additions from the BiOp#1 inadequate, the NMFS still stuck by its finding of no jeopardy or adverse modification for the 1999 fishery management.[297] Also, what new analysis there was in the BiOp#2 was grossly inadequate, especially in addressing the conclusions of the BiOp#1 to the extent that would seem necessary to reverse them. In finding the BiOp#2 inadequate, the Court stated "[the BiOp#2] does not even include such basic information as the estimated level of fishing in critical habitat, information that is key to analyzing the effects of fishing in those areas NMFS itself has designated as critical to sea lion recovery and survival."[298] Yet, the BiOp#2 found no adverse modification.[299]

The Court further noted with respect to examining competition between the Alaskan Fisheries and Steller that "meaningful analysis is virtually non-existent."[300] Instead, "[NMFS] repeatedly concludes in the BiOp#2 that it simply lacks information to

292. *See* BiOp#2, *supra* note 226, at 6.
293. *See id.* at 119.
294. *See Order#2, supra* note 2.
295. *See* Greenpeace's Second Amended Complaint, Greenpeace v. Nat'l Marine Fisheries Serv., (W.D. Wash. 1999) (No. C98-0492Z) (filing date unavailable); *see generally* BIOP#2, *supra* note 226.
296. *See* BiOp#2, *supra* note 226, at 119.
297. *See Order#2, supra* note 2.
298. *See id.* at 1149.
299. *See* BiOp#2, *supra* note 226, at 119.
300. *See Order#2, supra* note 2, at 1150.

make any determination one way or the other."[301] Then later the NMFS "relies substantially on its conclusion that many of the target groundfish species are not important [Steller] prey, despite uncertain evidence."[302] It seems that the NMFS might have weighed considerable unmentioned information in its analyses, once again suggesting gestalt analysis.

More evidence of the weighing of information other than that in the record comes from the inconsistency between the NMFS's recognition of what information would help resolve uncertainties concerning competition impacts between the Steller and the Alaskan Fisheries and its apparent neglect to vigorously gather that information.[303] The essential science seems like it was most likely not limited by resources or know-how. The lack of focused information gathering occurred while the NMFS sponsored numerous other technical studies concerning Steller decline assessing groundfish stocks, Steller stocks, and Steller physiology.[304] The apparent avoidance suggests the NMFS did not really need or want that science for its analyses. Yet that information would have filled a seemingly essential gap in the record upon which the NMFS purportedly based its decisions. Most likely, therefore, the NMFS relied on other information in its analyses.

Implicit and explicit references by the NMFS to the potential significance of the Alaskan Fisheries competition with the Steller for prey items dot the administrative record. The proposed rule to list the Western Steller population as endangered, for example, stated that "when [fisheries] occur in important [Steller] foraging habitat and [catch] Steller sea lion prey species (as the pollock and Atka mackerel fisheries do), the fishery may make it more difficult for [Stellers] to obtain food."[305] And "although the relationship between commercial fisheries and the ability of the [Stellers] to obtain adequate food is not clear, a change in food availability, especially for juvenile [Stellers], is a leading hypothesis for the continuing decline of the western population seg-

301. *Id.*

302. *Id.* referencing BiOp#2, *supra* note 226, at 114.

303. *See generally* BiOp2000, *supra* note 3, at 67-89.

304. *See generally id.* at 67-89; NAT'L MARINE FISHERIES SERVICE, ALASKA FISHERIES SCIENCE CENTER RESEARCH PROGRAMS, *available at* http://www.afsc.noaa.gov/programs.htm (last visited March 2, 2001).

305. *See* Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under Endangered Species Act, 60 Fed. Reg. 51,968, 51,976 (proposed Oct. 4, 1995) (to be codified at 50 C.F.R. pts. 222-27).

ment."[306] Moreover, the NMFS and the NP Council amended the FMP numerous times specifically to address competition concerns, indicating an understanding of their potential validity.[307] At the same time, the NMFS continually and repeatedly found that any competition relationship between the fishery and the Steller was uncertain and required more information.[308]

What information to gather and how to gather it, however, were not mysteries. For example, the BiOp#1 clearly stated the need for information on Steller movement patterns, winter pollock abundances and biomass distributions.[309] While tracking technologies advanced tremendously, the very small data set for Steller movement seemed to remain from only three papers, two from 1970 and one from 1997 using more recent technology in a limited study.[310] The critical habitat designation in 1993, for example, relied only on estimates of foraging area from rookery locations on beaches, incidental catches of Stellers, sightings of Stellers, and limited tracking information.[311] A study of winter pollock abundances and biomass distributions in the Steller critical habitat would have been valuable because winter was when alternate food sources were fewer and Steller metabolic costs were higher.[312] In fact such abundance and distribution estimates led the NMFS to find localized depletions of Atka mackerel in the BiOp#1, but the lack of such information for pollock obviated a similar direct finding for that fish.[313] Many abundance and distribution estimates came from plugging the results of experimental trawls into extrapolation models.[314] The infra-

306. *See* Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under the Endangered Species Act, 62 Fed. Reg. 24,345, 24,352 (May 5, 1997) (to be codified at 50 C.F.R. pts. 222, 227).

307. *Id.*

308. *See, e.g.*, Listing of Steller Sea Lions as Threatened Under the Endangered Species Act, 55 Fed. Reg. 49,204 (Nov. 26, 1990) (to be codified at 50 C.F.R. pt. 227); Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under the Endangered Species Act, 62 Fed. Reg. 24,345; *BiOp#1, supra* note 5.; *BiOp#2, supra* note 226.

309. *See* BiOp#1, *supra* note 5 at 125; *see also id.* at 44, 99, 117, 119, 120.

310. *See id.* at 44.

311. *See* Designated Critical Habitat; Steller Sea Lion, 58 Fed. Reg. 45,269 (Aug. 27, 1993) (to be codified at 50 C.F.R. pt. 226).

312. *See* Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under Endangered Species Act, 60 Fed. Reg. 51,968, 51,977 (proposed Oct. 4, 1995) (to be codified at 50 C.F.R. pts. 222, 227).

313. *See* BiOp#1, *supra* note 5, at 104, 108.

314. *See* NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL, A GUIDE TO STOCK ASSESSMENT OF BERING SEA AND ALEUTIAN ISLAND GROUNDFISH, (Sept. 1997) *available at* http://www.fakr.noaa.gov/npfmc/Reports/bsstock.htm.

structure for such trawls was well in place as they produced the data for periodic stock assessments under the MSA.[315] The Atka mackerel information mentioned above came from appropriate trawl studies.[316] Yet the NMFS seemed to not conduct the adequate studies for the pollock fishery.[317]

The BiOp#1 also noted that as far back as 1982 researchers had proposed a detailed experimental approach for evaluating the causal link of the competition theory.[318] The proposed study would have examined dietary, growth, and reproductive effects in normal and pollock-depleted areas.[319] The NMFS, however, never adopted such an experimental approach to determine causality. Even after the Final RPAs were to establish trawl exclusion zones within Steller critical habitat, thereby facilitating such comparative studies, the NMFS produced no such experimental design.[320]

In the Greenpeace2 oral argument, the industry intervenors, while disputing the finding of jeopardy and adverse modification in the BiOp#1 based on uncertain science, acknowledged the need for causal information gathering. Responding to Judge Zilly's question about whether the NMFS's needed conclusive evidence before acting, counsel for industry commented that the most prudent course of action would be to institute an experimental design of the trawl exclusion zones to see if measures helped or hurt.[321]

Besides inconsistencies between analysis and conclusions, more evidence suggesting the use of unmentioned information comes from the NMFS flip-flopping its conclusions with little or no significant new public information. The new conclusions must have either come from the weighing of additional information not on the record or the reanalysis of the existing information. The former seems far more likely given the potential political

315. *See id.*

316. *See, e.g.*, Fritz, L.W. & Lowe, S.A., *Seasonal Distributions of Atka Mackerel (Pleurogrammus monopterygius) in Commercially-fished Areas of the Aleutian Islands and Gulf of Alaska. U.S. Dep. Commer.*, NOAA TECH. MEMO. NMFS-AFSC-92 (1998).

317. *See, e.g.*, BiOp#1, *supra* note 5, at 99, 125.

318. *See id.* at 75; BiOp#2, *supra* note 226, *referencing* L.F. Lowry et al., *Feeding Habits, Food Requirements, and Status of Bering Sea Marine Mammals*, FINAL REPORT TO THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL, CONTRACT NO. 81-4 (1982).

319. *See id.*

320. *See generally* BiOp2000, *supra* note 3 at 67-89.

321. *See Oral Argument, supra* note 290.

and legal ramifications of several times interpreting the same information to suggest different administrative decisions.

One flip-flop already mentioned came with the conclusions in the NMFS BiOp#1 and BiOp#2. The BiOp#1 found jeopardy and adverse modification of critical habitat for the pollock fishery based on new analysis but apparently no significant new information.[322] Several other BiOps had reached the opposite conclusion, including the GOA BiOp produced eight months earlier.[323] The BiOp#2, published three weeks later, then found no jeopardy or adverse modification again based on a narrower analysis but the same information.[324]

Another flip-flop already mentioned came with the NMFS's production of an SEIS in 1997-1998. In twenty previous years seeing tremendous changes in the ecosystem and dozens of FMP amendments, the NMFS only produced EA/FONSI.[325] Some of the management changes during that time involved splitting seasons, substantial adjustments in TAC, gear restrictions, and various protective measures for the Steller such as area closures.[326] Nor, at any point, did the NMFS interpret its NEPA responsibility to entail an assessment of cumulative changes to its on-going action.[327] Then in March 1997, the NMFS suddenly decided to conduct an SEIS for the FMP based on some changes in the TAC determination process.[328] While that FMP amendment represented a significant management change, it was by no means clearly more substantial a change than numerous previous amendments for which the NMFS only produced EA/FONSI. Nor had NMFS backed away from its stance against considering cumulative changes, which it maintained throughout the Greenpeace2 case until the Court found NEPA to require such analysis.[329] At the same time, no especially significant new information regarding the Alaskan Fisheries seemed to have emerged since the previous EA/FONSI.[330] It appears that the NMFS might have privately shifted its stance of considering cu-

322. *See* BiOp#1, *supra* note 5, at 75-84, 104-11.
323. *See id.* at 4-5.
324. *See generally* BiOp#2, *supra* note 226.
325. *See Order#1, supra* note 2, at 1270-71.
326. *See id.* at 1272-73.
327. *See, e.g., id.* at 1273-74.
328. *See* Ground Fisheries of the Bering Sea/Aleutian Islands Area and the Gulf of Alaska, 62 Fed. Reg. 15,151 (Mar. 31, 1997) (to be codified at 50 C.F.R. pt. 679).
329. *See Order#1, supra* note 2, at 1270-76.
330. *See generally* BiOp#1, *supra* note 5, at 21-98.

mulative changes or weighed in other information than that on the record.

Still more support for the weighing of unmentioned information comes from instances when the NMFS seemed to stall or misrepresent its intentions possibly to protect a certain decision or conclusion. Defensiveness by agency officials of their administrative decisions seems natural. Deference to agency discretion, however, affords substantial explanatory leeway and often allows for substantial obfuscation or non-disclosure of internal agency decision-making without stalling or misrepresentation. Of course, apparent delays and misrepresentations might have represented good-faith failures associated with limited resources. The NMFS, however, could always have chosen transparency and simply confessed that certain tasks required more funding for successful completion, especially within a given time period. Resort to stalling or misrepresentation to protect agency decisions might therefore suggest either a gross inability to explain the NMFS's decisions based on information in the record or a strategy decision to avoid certain statutory responsibilities. In either case, the behavior strongly indicates the weighing of information outside the record and thereby suggests the gestalt effect.

One such instance occurred with the NMFSs requests in Greenpeace2 for stays of litigation. When Greenpeace moved for summary judgment in August 1998 on its original NEPA and ESA claims, the NMFS motioned for a stay of litigation, arguing that it was currently consulting on a comprehensive BiOp that would "examine all Federally-managed fisheries in the Bering Sea Aleutian Island and Gulf Of Alaska."[331] The promised documents delivered that December, however, were not comprehensive as claimed and did not include numerous specific analyses that the Regional Director of the NMFS had explicitly testified they would contain.[332]

Moreover, in response to Greenpeace's challenge of the BiOp#2, the NMFS's Regional Director once again declared that it was currently preparing a comprehensive BiOp2000 and re-

331. *See Order#2, supra* note 2, at 1142, *quoting* Nat'l Marine Fisheries Service's Mem. in Support of Stay, Greenpeace v. Nat'l Marine Fisheries Serv., 55 F. Supp. 2d 1248 (W.D. Wash. 1999) (No. C98-0492Z) (filing date unavailable).

332. *See id.* at 1147; Decl. for Nat'l Marine Fisheries Service by Steven Pennoyer, Greenpeace v. Nat'l Marine Fisheries Serv., 55 F. Supp. 2d 1248 (W.D. Wash. 1999) (No. C98-0492Z) (filing date unavailable).

quested another stay. In granting summary judgment for Greenpeace the Court delivered scathing commentary:

> More than one year ago NMFS declared it was preparing a comprehensive biological opinion addressing the full scope of the North Pacific groundfish FMPs, as required under the ESA. Having failed to live up to its obligations under the law, NMFS once again invites the Court to withhold judicial review while it undertakes to do what should have been done long ago. The Court declines the invitation.[333]

Another instance of apparent stalling or misrepresentation came with document production in the Greenpeace2 case. Following efforts to comply with the court order of July 1999, the NMFS produced a formal Administrative Record that November.[334] The NMFS, however, withheld 33 known documents from that record.[335] Greenpeace issued a motion to compel discovery of 23 of those documents and the NMFS responded with various claims of privilege, but mostly deliberative process.[336] In February 2000, the Court found that only two of those 23 documents fell within any privilege.[337] The Court agreed to stay the release of the documents for a full hearing on the issue in March 2000,[338] from which it affirmed its original order.[339]

As another example, the NMFS might have misrepresented the breadth of the SEIS. The scoping notice for the SEIS described a broad and comprehensive analysis of the on-going FMP action.[340] The SEIS, however, was specific to the TAC decisions and not programmatic.[341] In oral argument, counsel for the NMFS waffled between indications that the NMFS intended a narrow and a programmatic SEIS.[342] Judge Zilly responded with appropriate confusion stating, "I'm having trouble understanding whether the SEIS is narrow or programmatic."[343] Later he

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333. *Id.* at 1152.

334. *See* Greenpeace v. Nat'l Marine Fisheries Serv., 2000 WL 151915, 1 (W.D. Wash. Feb. 2, 2000).

335. *See id.*

336. *See id.* at 1, 2.

337. *See id.* at 3.

338. *See* Greenpeace v. Nat'l Marine Fisheries Serv., 2000 WL 343906 (W.D. Wash. Feb. 24, 2000).

339. *See* Greenpeace v. Nat'l Marine Fisheries Serv., 198 F.R.D. 540 (W.D. Wash. Apr. 11, 2000).

340. *See Order#1, supra* note 2, at 1272-73.

341. *See id.* at 1271.

342. *See Oral Argument, supra* note 290.

343. *See id.*

asked, "Was your scoping notice ambiguous as to the intended scope of analysis?"[344] Counsel for the NMFS replied that the notice was not ambiguous suggesting that the NMFS intended a programmatic analysis.[345]

Other evidence suggesting the gestalt effect are instances when the NMFS appeared to apply one statute using procedures or standards from other statutes. These procedural imports indicate the simultaneous administrative consideration of multiple statutes with their different and sometimes incongruous responsibilities and analyses. Almost by definition, therefore, such crossover represents the gestalt effect.

One such instance involved the preparation of the Final RPAs in response to the finding of jeopardy and adverse modification in the BiOp#1. As mentioned above, the BiOp#1 presented guidelines for the RPA and some suggested alternatives which formed the Draft RPA.[346] Within ten days of the BiOp#1, the NP Council proposed Final RPA which the NMFS approved.[347] The Final RPA contained significant changes from the Draft RPA.[348] Neither the NP Council proposal nor the NMFS approval, however, offered any explanation of the Final RPA.[349] Also, as mentioned above and expressed by the Court in Greenpeace2, many of the changes seemed to have been made for economic reasons.[350] These economic reasons seemed to include reducing the potential costs of the alternatives to commercial fishing.

Both the lack of explanation of the RPA and the apparent weighing of industry economic considerations by the NP Council suggest procedural import from the MSA. The MSA, unlike the ESA, involves consideration of economic factors in management decisions.[351] Also, under the MSA, the NMFS shows substantial deference in approving Council proposals.[352] The NMFS, of course, must reject proposals that are inconsistent with the

344. *See id.*

345. *See id.*

346. *See* BiOp#1, *supra* note 5 at 115-23.

347. *See Order#1, supra* note 2, at 1257.

348. *See id.*; Fisheries of the Exclusive Economic Zone Off Alaska, 64 Fed. Reg. 3,437 (Jan. 22, 1999) (to be codified at 50 C.F.R. pt. 679).

349. *See Order#1, supra* note 2, at 1265.

350. *See Oral Argument, supra* note 290; *Order#1, supra* note 2, at 1268.

351. *See* 16 U.S.C. § 1801(b)(5)(B) (2000).

352. *See* 16 U.S.C § 1854 (2000).

law.[353] Under the MSA, however, such a standard is fairly extreme since the Councils have enormous discretion to weigh science and socioeconomic factors in making management recommendations.[354] The production of RPA, however, must meet a strict set of specific requirements under the ESA, its implementing regulations, and the NMFS's internal administrative requirements such as the ESA consultation Handbook.[355] Despite the facial inadequacy of the proposed Final RPA, however, the NMFS appeared to operate under its habitual MSA deference to the Council and approve the recommended alternatives without question or explanation.

The NMFS also seemed to import procedure and standards from the MSA in determining the scope of its BiOp#2 consultation. The MSA clearly distinguishes between long-term and seasonal management decisions.[356] For example, the FMPs contained long-term procedures, objectives, and findings that the NP Council applied in determining annual TACs and apportionments.[357] In producing the single season BiOp#2, the NMFS tried to assert that the MSA distinction between long-term and seasonal management applied to ESA consultations.[358] The Greenpeace2 Court, however, found such assertion contrary to the law, holding that the NMFS may not "unilaterally relieve itself of its full legal obligations under the ESA by narrowly describing the agency action at issue in a biological opinion."[359] While the NMFS assertion might only represent a misinterpretation of the ESA, it possibly also represents import from the MSA.

Another similar observation involves the suggested pollock TAC in the 1991 BiOp. In December 1990, the NP Council recommended a 1991 pollock TAC of 130,000 mt, an increase of 41% over the 1990 TAC.[360] Environmental groups objected, threatened litigation, and offered the results of their own environmental consultation suggesting a TAC of 71,010 mt.[361] The

353. *See id.*

354. *See* 16 U.S.C. §§ 1851-53, 1862 (2000).

355. *See Order#1, supra* note 2 at 1264-69.

356. *See Order#2, supra* note 2, at 1145.

357. *See* Groundfisheries of the Bering Sea/Aleutian Islands Area and the Gulf of Alaska, 62 Fed. Reg. 15,151 (Mar. 31, 1997) (to be codified at 50 C.F.R. pt. 679).

358. *See generally Order#2, supra* note 2.

359. *Id.* at 1146.

360. *See* Greenpeace Action v. Franklin, 14 F.3d 1324, 1327 (9th Cir. 1992).

361. *See id.*

NMFS implemented neither proposal, instead establishing an interim catch allowance until it could complete an ESA consultation for the fishery.[362] The June 1991 BiOp recommended a TAC of 103,400 mt, which the NMFS ultimately implemented as an emergency measure.[363] Curiously, 103,400 mt was almost exactly half-way between the NP Council's figure and the NGO's figure. While the NMFS followed legal procedure under the ESA and emergency provisions of the MSA, its actions appeared like an ad hoc mix of various statutory powers to formally produce a simple compromise solution. The historical record indicates that the NMFS rarely, if ever, used emergency MSA provisions in the Alaskan Fisheries.[364] That compromise, however, probably took place in the face of considerable pressure, especially with Steller's ESA listing one year earlier. The NMFS's actions, once again, suggest a mixing of procedures hinting at the gestalt effect.

Congruity in activity levels and in shifts of discretionary activity under different statutes might also suggest gestalt analysis. Such temporal patterns suggest integrated top-down decision-making. For largely discretionary decisions, feedback loops between statutes may not be enough to explain such congruities. Of course, such general increases or decreases in activity may arise from broad top-down decisions not indicative of the gestalt effect, such as increased spending. Congruous changes in activity levels combined with congruous substantive shifts in discretionary decision-making, however, suggest integrated administrative policies indicative of the gestalt effect.

Two such congruities were the low statutory activity following the original FMPs and the shifts in statutory application in late 1998. The GOA and BSAI FMPs of 1978 and 1981, respectively, formalized Federal management of the Alaskan Fisheries under the MSA.[365] The associated full NEPA analyses found no significant adverse impacts.[366] Though the Alaskan Fisheries and the ecology of the GOA and BSAI changed substantially over the

362. *See id.*

363. *See id.* at 1327-28.

364. Search of Federal Register on Westlaw; *see also Draft PSEIS, supra* note 28, at 2.7.2.

365. *See* Fishery Conservation and Management, 43 Fed. Reg. 52,709 (Nov. 14, 1978) (to be codified at 50 C.F.R. pts. 611, 672); Foreign Fishing; Groundfish of the Bering Sea and Aleutian Islands Area, 46 Fed. Reg. 63,295 (Dec. 31, 1981) (to be codified at 50 C.F.R. pts. 611, 675); Foreign Fishing; Groundfish of the Bering Sea and Aleutian Islands Area, 47 Fed. Reg. 4,083 (Jan. 28, 1982) (to be codified at 50 C.F.R. pt. 611).

366. *See Order#1, supra* note 2, at 1258.

next decade, including the continued precipitous decline of the Steller, no major activity took place under the NEPA, ESA, or MMPA. An NGO petition finally initiated ESA action in 1990.[367] Major NEPA action did not take place until 1998.[368] The lack of activity in the face of mounting environmental concerns might suggest that the first comprehensive and programmatic management plan for the Alaskan Fisheries represented a gestalt decision that NMFS sought to preserve.

The sudden shifts in statutory application in late 1998, on the other hand, perhaps indicate a shift in the outcome of a new gestalt analysis manifested in multiple statutes. Within a few months, the NMFS produced the first SEIS in almost two decades and the first BiOp finding jeopardy and adverse modification in several consultations.[369] Around the same time Congress passed the AFA. Perhaps the activity represented a response to increased political focus on the Alaskan Fisheries and Steller, as discussed later. Even so, the multi-statutory substantive shift suggests gestalt analysis.

Some final evidence indicating the gestalt effect are a couple examples of the gestalt language occasionally used by NMFS decision-makers outside of the official record. Indications of even slightly questionable cross-statutory considerations seem absent from publicly accessible administrative documents. In a recent article on the Steller for the American Fisheries Society news bulletin, however, a NMFS official referenced the fisheries objectives of the MSA and the conservation and recovery objectives of the ESA and MMPA and stated, "these responsibilities can conflict with each other, and therefore pose a significant challenge to NMFS's management and science."[370] The second example is a quote taken by the Greenpeace2 Court from one NMFS scientist's correspondence entered into evidence:

> "[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 RPAs with industry concerns

367. *See* Listing of Steller Sea Lions as Threatened Under the Endangered Species Act, 55 Fed. Reg. 49,204 (Nov. 26, 1990) (to be codified at 50 C.F.R. pt. 227).

368. *See Order#1, supra* note 2, at 1258.

369. *See Order#1, supra* note 2 at 1256, 1258.

370. Tim Ragen, *Effects of Groundfish Fisheries on Steller Sea Lions*, 18 MARINE FISHERIES SECTION BULLETIN 4-5, 7 (Spring 2000).

in mind. Have I misunderstood the process, or does it appear that several steps are going on at the same time here?"[371]

Hypothesis #2

The second hypothesis is that the diversity of statutes surrounding the management of the Steller limited the role of science to setting discretionary limits within which the NMFS reacted to legal and political pressures. Scientific uncertainty therefore helped define the breadth of agency discretion far more than the specific outcome. This paper will refer to this aspect of the second hypothesis as the bookends effect. Meanwhile, within its discretionary limits NMFS decision-making seemed infrequently proactive. Instead, the NMFS most often seemed to act in response to legal and political pressures. This paper will refer to this aspect of the second hypothesis as the reactivity effect. The bookend and reactivity effects to some extent seem likely in single statute management as well. Multiple statute administration, however, amplifies these effects as explained throughout the analysis in this section.

Just like before, the analysis will first suggest why these effects seem likely in this multi-statute administrative case-study and then offer observations to support that they actually occurred. The bookends effect seems likely considering the informational requirements of the statutes surrounding the Steller and the Alaskan Fisheries, the uncertainty of the science, and the political sensitivity of the issues. Observations that appear to suggest the bookends effect actually occurred include changes of decision without significant new scientific information and the emphasis on scientific uncertainty by the NMFS throughout the case-study. The reactivity effect seems likely considering the NMFS's limited resources, the uncertainty of its statutory mandates, and the risks associated with action. Observations that appear to suggest the reactivity effect actually occurred include the proximity of major NMFS action to increases in outside pressure and a multiple flip-flop for some decisions. Much of the evidence for hypothesis #2 has already been discussed for hypothesis #1 and receives a more cursory examination here.

The first reason why the bookends effect seems likely is that science undoubtedly helped set limits of agency discretion, whether or not it contributed to specific decisions within those

371. *Order#1, supra* note 2, at 1268 n.31.

limits. The NMFS would have had great difficulty altogether ignoring science given the fundamental role of science under the multiple statutes surrounding the Steller and the Alaskan Fisheries. Some of the statutes, like the NEPA and the MSA involved weighing scientific evidence against economic and social factors,[372] while others such as the ESA and the MMPA limited many decisions to the use of biological information.[373] All those statutes, however, required or encouraged use of the best available scientific information.[374] At the least, therefore, science helped set limits of agency discretion by determining which information must be weighed as the best available science.

Meanwhile, the bookends effect also seems likely because of the uncertainty of the science in the case-study. The greater the scientific uncertainty, the less science might help the agency determine a specific decision as opposed to helping determine a good range of possible decisions. Basing a specific decision on uncertain science would require the difficult task of arguing away other equally likely scientific conclusions. It seems far easier to check off whether a decision falls within the realm of scientific acceptability and then base the specifics on other factors. With multiple statutes requiring different and sometime inter-related information, the scientific questions may become more numerous and more complex, introducing greater combined uncertainty.

As previously mentioned, much of the science concerning the Alaskan Fisheries and the Steller remained highly uncertain.[375] Most stock assessments, catch statistics, and basic biological information had substantial margins of error.[376] Moreover,

372. *See generally* 42 U.S.C. § 4332 (2000); *see also* 16 U.S.C. § 1801(b)(5)(B) (2000).

373. *See generally* 16 U.S.C. §§ 1361-62 (2000); 16 U.S.C. § 1531-44 (2000).

374. *See generally* 42 U.S.C. § 4332 (2000); *see also* 40 C.F.R. § 1500.1(a) (2001); 16 U.S.C. § 1801(c)(3) (2000); 16 U.S.C. § 1533(b)(1)(a) (2000); 16 U.S.C. § 1373(a) (2000).

375. *See, e.g.*, BiOp2000, *supra* note 3, at 74-79; BiOp#1, *supra* note 5, at 75-84; Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under the Endangered Species Act, 62 Fed. Reg. 24,345, 24,353-4 (May 5, 1997) (to be codified at 50 C.F.R. pts. 222, 227).

376. *See, e.g.*, NAT'L MARINE FISHERIES SERVICE, DRAFT EA/REGULATORY IMPACT REVIEW FOR THE EMERGENCY RULE TO IMPLEMENT REASONABLE AND PRUDENT STELLER SEA LION PROTECTION MEASURES IN THE POLLOCK FISHERIES OF THE BERING SEA AND ALEUTIAN ISLANDS AREA AND THE GULF OF ALASKA at 121, 145, *available at* http://www.fakr.noaa.gov/protectedresources/stellers.htm#consultations (Jan. 2000); NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL, A GUIDE TO STOCK ASSESSMENT OF BERING SEA AND ALEUTIAN ISLAND GROUNDFISH, (Sept. 1997) *available at* http://www.fakr.noaa.gov/npfmc/Reports/bsstock.htm.

throughout the entire case-study the complex and essential question of the interactions between the Alaskan Fisheries and the Steller remained largely unanswered.[377]

The bookends effect also seems likely because of the watch-dogging associated with controversial decisions such as those surrounding the Alaskan Fisheries and the Steller. Multi-statute administration probably attracts and facilitates watch-dogging because of the bureaucratic localization of so much important information and so many important decisions. Moreover, the sometimes conflicting responsibilities rested by multiple statutes on a single agency possibly create a higher likelihood of controversial decisions which attract increased scrutiny. Watch-dogging encourages the use of science in setting bookends and discourages its use in making specific decisions. Specifically, opposing interest groups force interpretation of scientific information as ranges or probability functions by challenging both over-statements and under-statements of what that information can say. If an agency makes a decision within the range defined by scientific uncertainty, displeased groups might argue that the science does not suggest that specific decision since another decision within the range of uncertainty is just as valid. Alternatively, displeased groups might argue that the science is too uncertain to make any definite decision at all. If, on the other hand, an agency tries to take a position outside the range of interpretations suggested by the scientific information, displeased groups might argue that the agency cannot ignore the science even if it is very uncertain. Politically sensitive issues and the associated watch-dogging hence suggest a likelihood of the bookends effect.

The NMFS decision-making throughout most of the case-study occurred under close scrutiny from various interest groups. The importance of the Alaskan Fisheries fostered substantial activity by fishing interests. The decline of the charismatic Steller and the condition of the Alaskan oceanic ecosystems, in turn, fostered substantial activity by environmental groups. Both sets of interest groups undoubtedly engaged in political and administrative lobbying and participated in many public administrative meetings.[378] They also both took legal steps to influence NMFS management. Environmental interests petitioned to list the Stel-

377. *See, e.g.*, BiOp2000, *supra* note 3, at 68-89.

378. *See, e.g.*, The Center of Responsible Politics, *Lobbyist Spending: Fisheries and Wildlife (Alaska)*, *available at* http://www.opensecrets.org/lobbyists/97catorders/E11.htm (last visited March 4, 2001); North Pacific Fisheries Management Council,

ler as endangered and twice sued the NMFS.[379] Fishing interests also sued the NMFS.[380] Most likely, members from these various interest groups closely watch-dogged the NMFS and provided instant feedback on numerous small and large administrative decisions.

Evidence suggesting that the bookends effect occurred includes several instances when the NMFS used the same scientific evidence to reach different conclusions. Different decisions using the same scientific information suggests the flexible interpretation of that information for administrative mobility. Consequently, such evidence suggests that science played less of a role in directly reaching exact decisions than in helping define the range of NMFS discretion. The analysis for the gestalt effect already provided examples of three such instances: the finding of jeopardy or adverse modification in the BiOp#1, the finding of no jeopardy or adverse modification in the BiOp#2, and the finding of substantial potential environmental impact warranting a SEIS for a FMPs amendment in 1997. In each instance the conclusion reversed an earlier conclusion based on essentially the same scientific information.

More evidence suggesting the bookends effect occurred is the extent to which the NMFS emphasized scientific uncertainty throughout the administrative record. Clearly much of the science was very uncertain. That said, the NMFS's focus on the lack of knowledge and the extent of scientific error seemed like a message to potential challengers and critics that the agency did not understate or overstate in its decision-making what the science said. In other words, science helped set the bookends for NMFS discretion, but the specifics of the decisions relied largely on other factors.

The BiOp, BiOp#1, BiOp#2, both ESA listing determinations, the SEIS, and several NMFS filings in Greenpeace2 emphatically described the substantial uncertainty surrounding the relationship between the Steller and the Alaskan Fisheries. In a typical example coming from the proposed rule to list the Western Steller stock as endangered, the NMFS concluded its response to

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Archive of Council Minutes, (June-Dec. 2000) *available at* http://www.fakr.noaa.gov/npfmc/minutes/minutes.htm.

379. *See* Listing of Steller Sea Lions as Threatened Under the Endangered Species Act, 55 Fed. Reg. 49,204 (Nov. 26, 1990) (to be codified at 50 C.F.R. pt. 227); Greenpeace Action v. Franklin, 14 F.3d 1324 (9th Cir. 1992); *Order#1, supra* note 2.

380. *See Order#1, supra* note 2.

comments regarding the adequacy of protective measures with the caveat that "[it] will continue to be difficult to demonstrate a definitive causal link between Steller sea lion decline and fishery-related activities due to the complex nature of the interactions between fisheries and marine mammals on a large scale."[381]

The first reason why the reactivity effect seems likely in this case-study is that the NMFS probably lacked adequate resources to perform all its statutory responsibilities in the way it saw fit. The diversity of statutes concerning the Steller would have aggravated this scarcity, particularly in regards to how many resources the NMFS should have allocated to Steller issues versus practical resource availability. Budgetary concerns heavily influence most administrative agency decision-making and force prioritization of statutory obligations. To the extent legal and political pressure influence such prioritization, agencies might end up acting reactively to such pressure. And if an agency could expend all its resources just acting reactively, it has little incentive to act proactively.

Congress charged the NMFS with the management of dozens of major fisheries involving hundreds, if not thousands, of very significant animal species including fish, mammals, birds, mollusks, and crustaceans.[382] The NMFS had to meet numerous costly procedural and substantive requirements under the NEPA, the ESA, the MMPA, and the MSA among other statutes.[383] Furthermore, the NMFS had to handle litigation and public relations for action or inaction under many of these statutes.[384] All in all, the NMFS probably received a fraction of the appropriation it required to fulfill all its legal obligations and a much smaller fraction of what it required to perform each task thoroughly.[385]

Uncertainty regarding the NMFS's statutory mandates also makes the reactivity effect seem likely. As already described,

381. *See* Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under the Endangered Species Act, 62 Fed. Reg. 24,345, 24,348 (May 5, 1997) (to be codified at pts. 222, 227).

382. *See* NAT'L OCEANIC AND ATMOSPHERIC ADMINISTRATION, NOAA FISHERIES STRATEGIC MANAGEMENT PLAN, (May 1997) *available at* http://www.nmfs.noaa.gov/om2/nmfsplan.pdf .

383. *See, e.g.*, NAT'L MARINE FISHERIES SERVICE, FY 2000 BUDGET REQUEST, *available at* http://www.nmfs.noaa.gov/BudgetRequest2000.htm (last visited March 2, 2001).

384. *See, e.g., id.*

385. *See, e.g., id.*

conflicting mandates from different statutes or within the same statute most likely stifle administrative ingenuity and leave only specific guidance for black-letter responsibilities. Much of the NMFS's authority and responsibility for pro-activity came individually from these conflicting mandates. To the extent the diversity of statutes negated these mandates, it might also have negated NMFS initiative and pro-activity.

Finally, the reactivity effect seems likely since the legal and political risks associated with action, especially in the context of multiple statutes, discourage proactive administration. In many instances, doing little and saying little in the official record may advantage an agency in terms of fewer challenges and reduced criticism. First, the status quo might often prove the best political option. An old adage says that people are naturally conservative. Aside from its psychological disadvantages, change also involves new action which might bring more political attention and watch-dogging. Second, action requires expansion of the administrative record and thus provides more potential ammunition to would-be challengers and critics. The multiple-statutes with their interconnected duties in this case-study would have particularly aggravated these potentially undesirable consequences of administrative action. An action under the MSA, for example, might have triggered NEPA, ESA, and MMPA duties.[386] The potential cascade of duties and the consequent legal and political exposure would likely have encouraged a minimization of administrative action, a focus on those actions for which someone has pressured performance, and thus a more reactive mode of operation.

A set of evidence suggesting that the reactivity effect actually occurred is the proximity of many major NMFS actions to increased outside political or legal pressure. These temporal correlations imply that the NMFS decision-making responded to the outside pressure. Some examples are times when sudden unprecedented NMFS activities followed periods of heightened political momentum concerning the Steller and the Alaskan Fisheries. Consider, for instance, the NMFS's listing of the Steller as threatened in 1990. Although the NMFS observed a phenomenal decline in Stellers in the 1970's and 1980's, as indicated in the

386. *See, e.g.*, 42 U.S.C. § 4332 (2000); 16 U.S.C. § 1536 (2000); 16 U.S.C. §§ 1386, 1387 (2000).

Marine Mammals Assessments required under the MMPA,[387] and possessed the authority and mandate to list species on its own,[388] it took no action. But then, within the few months following an ESA listing petition with substantial backing from environmental organizations, the NMFS emergency-listed the Steller, developed and implemented protective measures, assigned a Recovery Team, and initiated a regular listing process completed six months later.[389]

Another example involves the broader political momentum of the MSA reauthorization of 1996. The reauthorization process coincided with a major increase in concern for conservation in fisheries management.[390] Environmental groups undoubtedly saw the reauthorization as a major opportunity to push their agenda. One product of their campaigning seemed to be the injection of current conservation language and ideas into the MSA.[391] Another product seemed to be a general swell at the time in concern over the negative environmental impacts of fisheries management, such as potential contributions to the decline of the Steller. Within a year of the MSA reauthorization the NMFS both reclassified the Steller as two stocks under the ESA with one endangered and one threatened and decided to produce the first SEIS for the Alaskan Fisheries in almost two decades.[392]

As a final example, consider another political swell over the Alaskan Fisheries and the Steller which came in 1998 with the highly public passage of the AFA. As mentioned earlier, lobbying for the AFA fostered an unlikely alliance between conservatives seeking to expel foreign fishing effort and environmental groups interested in removing large catcher/processors generally.[393] One of the major campaign cries became protection of

387. *See, e.g.*, NAT'L MARINE FISHERIES SERVICE, RECOVERY PLAN FOR THE STELLER SEA LION (EUMETOPIAS JUBATUS), (Dec. 1992) *available at* http://www.fakr.noaa.gov/protectedresources/stellers/research.htm.

388. *See* 16 U.S.C. § 1533 (2000).

389. *See* Listing of Steller Sea Lions as Threatened Under the Endangered Species Act, 55 Fed. Reg. 49,204, 49,204 (Nov. 26, 1990) (to be codified at 50 C.F.R. pt. 227).

390. *See* Shi-Ling Hsu & James E. Wilen, *Ecosytem Management and the 1996 Sustainable Fisheries Act*, 24 ECOLOGY L.Q. 799 (1997).

391. *See id.* at 805.

392. *See* Threatened Fish and Wildlife; Change in Listing Status of Steller Sea Lions Under the Endangered Species Act, 62 Fed. Reg. 24,345 (May 5, 1997) (to be codified at 50 C.F.R. pts. 222, 227); *Order#1, supra* note 2, at 1258.

393. *See* Greenpeace, *Earl Comstock, A Guide To S. 1221, The American Fisheries Act, A Greenpeace Briefing Paper, available at* http://www.greenpeaceusa.org/media/publications/afatext.htm (March 25, 1998); *see also* John Carlisle, The National

the Steller, despite the little the AFA did to reduce the fishing effort hypothesized to harm the Steller.[394] All the same, the decline of the Steller received national attention and concern. Less than two months after the president signed the AFA into law, the NMFS published the very "Steller-friendly" BiOp#1.[395]

Other evidence suggesting that the reactivity effect actually occurred are instances when the NMFS successively flip-flopped between decisions. The movement from an original position to a new one and then back again implies decision-making by feedback and response. Like an imaginary spring, a shift in position prompts increased outside political and legal pressure to reverse the change. Response to the increased pressure results in a return the original position, but prompts increased political and legal pressure to reverse yet again. The oscillations therefore imply the reactivity effect. Since some of the observed oscillation in administrative position occurred across different statutes, this evidence of the reactivity effect is strongest assuming the gestalt effect.

The best example of such successive flip-flops followed the finding of jeopardy and adverse modification in the BiOp#1. The commercial fishing industry undoubtedly responded strongly to the finding which clearly threatened its livelihood. The next NMFS action came 10 days later under ESA in conjunction with the MSA and represented an effective backing off from the management direction indicated in the BiOp#1. The NMFS approved Final RPA measures which did little to address the concerns that produced a finding of jeopardy and adverse modification in the BiOp#1.[396] Within the same week the NMFS continued that same apparent reversal, also under the ESA, with the finding of no jeopardy or adverse modification in the BiOp#2.[397] Within the next two months, following outcry by environmental groups over the RPA and the BiOp#2 and following the amendment of the Greenpeace2 complaint to challenge those two documents, the NMFS seemed to rebound to its original protectionist direction. A couple of times in February 1999 the NMFS strengthened the emergency protective rules implemented with

Center for Public Policy Research, *The American Fisheries Act: Special Interest Politics at Its Worst, available at* http://www.nationalcenter.org/NPA209.html# (last visited February 27, 2001).

394. *See id*; *see generally* Pub.L. No. 105-277 §§ 202-04, 112 Stat. 2681 (1998).

395. *See* BiOp#1, *supra* note 5.

396. *See Order#I, supra* note 2, at 1264-69.

397. *See* BiOp#2, *supra* note 226.

the Final RPA.[398] The NMFS somewhat continued in that direction following the July 1999 Court decision remanding the RPA.[399] Yet the NMFS seemed to reverse once again in its efforts in 2000 to defend the validity of the finding of no jeopardy and adverse modification in the BiOp#2 and its failure to achieve timely administrative compliance.[400]

IV.
POLICY DISCUSSION

If these hypotheses represent real effects of multi-statutory administration on the role of science in environmental management, is such a multi-statutory framework desirable? The gestalt effect and the bookends-reactivity effects show subservience, in one form or another, of technical information to other considerations in administrative thinking. Perhaps most significantly, therefore, these effects seem to transform the NMFS from an objective expert agency into more of a political decision-maker. This section briefly examines some of the policy implications and concerns associated with the hypotheses and this transformation.

One major concern is possible conflict between this role of a political decision-maker and the NMFS's scientific research responsibilities as an expert agency. The potential reduction in the role of science that comes with the gestalt effect and the bookends-reactivity effects is not necessarily troublesome. On its face, science is just like any other information and does not necessarily dictate the best policy. That is up to politics which weighs all the information and interests. Yet the NMFS's dual role as the primary gatherer of that information for the Steller and the Alaskan Fisheries and as the injector of that information into a broad cost-benefit analysis seems potentially problematic. The uneasiness stems from a concern that the subjectivity of politics might infiltrate the science. What information the NMFS gathers, what questions it asks, and even what results it presents

398. *See* Fisheries of the Exclusive Economic Zone Off Alaska, 64 Fed. Reg. 3,437 (Jan. 22, 1999) (to be codified at 50 C.F.R. pt. 679; Fisheries of the Exclusive Economic Zone Off Alaska, 64 Fed. Reg. 7,814 (Feb. 17, 1999); Fisheries of the Exclusive Economic Zone Off Alaska, 64 Fed. Reg. 9,375 (Feb. 25, 1999) (to be codified at 50 C.F.R. pt. 679).

399. *See, e.g.*, Fisheries of the Exclusive Economic Zone Off Alaska, 64 Fed. Reg. 39,087 (July 21, 1999) (to be codified at 50 C.F.R. pt. 679); Fisheries of the Bering Sea and Aleutian Islands Area, 64 Fed. Reg. 43,297 (Jan. 28, 1999) (to be codified at 50 C.F.R. pt. 611).

400. *See Order#2*; *Order#3*.

as a research agency might simply become additional points of negotiation when it wears its political decision-maker hat.

Something seems fundamentally improper about playing games with information. The optimal outcome from cost-benefit analysis requires perfect knowledge. Any restrictions on information gathering, therefore, may benefit one party but result in a net loss for all parties combined. Perhaps for these reasons, academic science prides itself on independence from outside influences such as politics and economics, though clearly such complete detachment is only an ideal. To the extent the two hypotheses are valid, the NMFS role as an administrator in a multi-statutory framework and it role as an information gatherer might not mix well.

Another potential concern is that multi-statutory administration might facilitate the public misconception manifested when the real effects of statutes differ considerably from their facial language. While lawyers and politicians might approach plain statutory language with caution and cynicism, especially in the context of multiple inter-related statutes, most of the public probably expects and believes that laws say what they mean. This disconnect between legal and popular conceptions regarding statutory language allows Congress to legislate under substantial political shelter. It can easily pass laws that seem to do one thing yet do something else or nothing at all. Of course, Congress commonly passes laws that are principally declarations or findings and command no action. Similarly, Congress commonly passes laws that seem to command action but have no teeth for enforcement or carry inadequate appropriations. These practices are old hat and probably commonly considered fair politics.

The passage of multiple overlapping and sometimes conflicting statutes for the same agency, however, might achieve a higher and unacceptable level of potentially misleading legislation. In such a framework, an examination of individual statutes reveals little. Even a thorough legal analysis of the statutes together might belie their true effect as the agency resorts to gestalt analysis and reactive administration. Successful analysis, therefore, requires examination of all the statutes together plus an often unobtainable understanding of context within and outside the agency. The result is that even in a day and age when heightened information access allows increased awareness of the non-plain language effects of individual legislation, multiple legislation of

the sort witnessed in this case-study may remain widely misleading.

The use and meaning of science may epitomize the resultant misconceptions. Most of the public probably sees "science" as synonymous with technical objectivity. The gestalt effect and the bookends-reactivity effects are, therefore, unexpected in the execution by an expert technical agency of statutes specifically requiring use of the best available science. Along with the overperceived use of science, the agency decisions resulting from political calculus may still, in the public's eye, carry the designation and authority of scientific conclusions.

To the extent that government intentionally or unintentionally misleads the public, democracy might suffer. If people think that the government is doing something that it really is not or vice-versa, they might not properly express their interests through political avenues. Furthermore, the less that voters can surmise about the true effects of various laws, the less they can watch-dog politicians via voting records. The less politicians have to answer for their actions, the worse for democratic representation.

Another concern is to what extent Congress should be able to punt politically difficult decisions behind the shelter of multiple statutes. In the worst case scenario, Congress could pass separate laws to give everyone what they want and then let agencies and courts deal with the mess. Some of that seems to have gone on with the Steller and the Alaskan Fisheries. Some of Congress's political reasoning might have been as follows. If the commercial fisheries want a law establishing economically optimal long-term management so be it. If the environmentalists want laws protecting imperiled species and marine mammals with little economic consideration so be it. The same agency is in charge of all these mandates and at the same time is most familiar with those fisheries and those imperiled species so they'll figure it out. To the extent that they cannot, the courts will step in. This way everyone gets what they want from Congress and can blame the agencies or the judiciary if they come up short-changed.

But perhaps important political decisions belong in the hands of the legislature and not an executive agency or the judiciary. Administrative law has historically expanded as Congress has delegated more and more pseudo-legislative responsibility to expert agencies to reduce its task load and allow for expert decision-making under larger and ever more technically demanding

regulatory regimes.[401] As mentioned before, Congress has also enjoyed the political shelter from such delegation. Presumably, however, Congress should still make major political decisions by legislating specific agency guidance. The discretion of the agencies should involve deciding how the specific details of various matters apply to the framework established by Congress. The more political the agency's decisions, the more its decisions may approach unconstitutional legislation by the executive.[402] And as discussed before, the greater the separation between political decisions and elected officials, the greater the potential injury to representative democracy. Finally, thinking once again of the desire to minimize public misconception, if Congress wants to punt difficult decisions perhaps it should be forced to do so transparently.

On a more individual level, politics may also work best in the hands of professional politicians. To the extent that politics involves skillful bartering and balancing, agency decision-makers without the same experience or political framework as members of the legislature might not make as competent political decisions. That is, they might produce a less efficient outcome in terms of the interests and needs of the various parties at the table. Moreover, if agency administrators haphazardly practice politics through gestalt analysis and bookends-reactive management, that manner of operation may carry over to ministerial decisions such as instances when they should apply the best scientific information with a blind eye to all else. Of course, many high-ranking officials in environmental agencies seem to have been political appointees with substantial political experience and competence. Perhaps they can separate political decision-making and objective administration and excel at both. Also, environmental agencies have successfully employed some overtly political decision-making processes such as regulatory negotiation. All the same, agency officials for the most part are not politicians by job-description or training and government efficiency may suffer from placing them in such a role.

401. *See generally* Robert L. Rabin, *Federal Regulation in Historical Perspective*, 38 STAN. L. REV. 1189 (1986).

402. *See* U.S. CONST. arts. I, II; *see generally*, PETER STRAUSS ET AL., ADMINISTRATIVE LAW 67-102 (9th ed. 1995).

V.
CONCLUSION

The Steller and Alaskan Fisheries case-study provides an excellent opportunity to observe the complexity of multi-statute administration in order to hypothesize how it might effect the role of science in environmental management. Examination of the statutes, administrative history, environmental history, and political context suggests that the NMFS might have (1) used gestalt analysis and (2) primarily used science to help establish bookends within which it acted reactively to outside political and legal pressure. Both these hypotheses suggest that the complicated framework of interconnected and sometimes conflicting statutory obligations established by Congress may have compromised the NMFS's role as a technical expert agency and invested it with substantial and non-transparent political responsibility for managing the North Pacific marine ecosystem.