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AT POINT BLANK RANGE: THE GENESIS AND IMPLEMENTATION OF LETHAL REMOVAL PROVISIONS UNDER THE MARINE MAMMAL PROTECTION ACT

Nina M. Young, Stephanie Mairs,**
and Suzanne Iudicello Martley****

I. INTRODUCTION

In 1994, Congress reauthorized the Marine Mammal Protection Act (MMPA).¹ As part of the reauthorization, a coalition of environmental organizations, animal welfare groups, commercial fishing industry representatives, and Alaska Natives,² assisted by a professional facilitator,

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1. Marine Mammal Protection Act of 1972 (MMPA), 16 U.S.C. §§ 1361-1421(h) (1994).

2. The following organizations endorsed the negotiated proposal that governed the

developed a negotiated proposal to govern the incidental take³ of marine mammals during commercial fishing operations.⁴ A subgroup of the negotiating parties also met to address the issue of pinniped predation on declining salmon stocks. This subgroup proposed to Congress a multi-phased process to evaluate whether all feasible methods of nonlethal deterrence had been tried, and whether the target marine mammals were responsible for the fish declines. This proposal also called for a task force to consult with the Secretary of Commerce about seals and sea lions considered "nuisance" animals because of their predation of steelhead and salmon, species prized by commercial and recreational fishermen, at the Ballard Locks in Seattle and in the Columbia River.⁵ Proponents of the legislation argued that the predation had contributed to declines in several species of fish.⁶ Based on the outcome of the consultation and the evaluation by the task force, the proposal created a process whereby the Secretary of Commerce may authorize a state to lethally remove pinnipeds that prey on endangered salmonid stocks,⁷ provided the nuisance pinniped(s) is identified

incidental take in commercial fisheries: The Alaska Groundfish Data Bank, Aleutians East Borough, American Factory Trawler Association, American High Seas Fisheries Association, American Seafood Harvesters Association, Animal Protection Institute, Arctic Alaska Fisheries Corporation/Tyson Seafood Group, Association of Village Council Presidents, Bering Sea Fishermen's Association, Blue Water Fishermen's Association, California Abalone Association, California Gillnetters Association, California Urchin Divers Association, California Urchin Producers Association, Center for Marine Conservation, Concerned Area M, Friends of the Sea Otter, Gulf of Alaska Coalition, Kodiak Island Borough, Maine Gillnetters Association, Maine Sardine Council, National Audubon Society, National Fisheries Institute, New England Fishery Management Council, Northwest Indian Fisheries Commission, Pacific Seafood Processors Association, Pacific States Marine Fisheries Commission, Peninsula Marketing Association, Point Judith Fisheries Cooperative Association, Sea Urchin Processors Association of California, Seafreeze LTD, The Associated Fisheries of Maine, The Marine Mammal Center, The National Fishmeal and Oil Association, Trout Unlimited, and the World Wildlife Fund. H.R. REP. NO. 103-439, at 5 (1994).

3. See 16 U.S.C. § 1371 (1994). "The term 'take' means harass, hunt, capture, or kill or attempt to harass, hunt, capture or kill any marine mammal." See *id.* § 1362(13).

4. See Nina M. Young and Suzanne Iudicello, *Blueprint for Whale Conservation: Implementing the Marine Mammal Protection Act*, 3 OCEAN & COASTAL L.J. 149, 175-182 (1997) (discussing the negotiation process and resulting proposal).

5. See *id.* at 183.

6. See U.S. General Accounting Office, Protected Species, Marine Mammals' Predation of Varieties of Fish, Report to Slade Gorton, U.S. Senate, GAO/RCED 93-204, September (1993).

7. See S. REP. NO. 103-220, at 5 (1994), reprinted in 1994 U.S.C.C.A.N. 518, 522-23.

as habitually exhibiting dangerous or damaging behavior that could not be deterred by other means.⁸

On November 8, 1993, Senators Kerry, Stevens, and Packwood introduced Senate Bill 1636 to reauthorize the MMPA. On November 9, the Commerce, Science, and Transportation Committee amended the bill to include this nuisance pinniped proposal.⁹ Ultimately this proposal, which provides a process whereby states and the National Marine Fisheries Service (NMFS) can address interactions between pinnipeds and declining salmonid stocks, was codified at section 120 of the MMPA.

On June 30, 1994, the Washington Department of Fish and Wildlife (WDFW) requested authority under section 120 to lethally remove problem California sea lions from the Ballard Locks in Seattle, Washington. Evidence indicated that the nonlethal methods used — underwater firecrackers, chaser boats, acoustic harassment devices, taste aversion conditioning, experimental barrier nets, trapping and relocating sea lions to the outer coast of Washington and to their breeding grounds off southern California, and use of acoustic deterrence devices — were not entirely successful in eliminating sea lion predation. On January 6, 1995 (less than six months later), NMFS provided WDFW with a three-year conditioned authority to lethally remove fifteen California sea lions in order to protect steelhead salmon from sea lion predation at the Ballard Locks.

The hearings to reauthorize the MMPA began in 1999, with a goal to amend the Act by the end of 2000.¹⁰ The 1998 stock assessments indicate that California sea lion populations on the west coast have increased at a rate of more than five percent annually since the mid-1970s; the present population is now estimated at 161,000 to 181,000.¹¹ These increases foreshadow the difficult issues for this upcoming reauthorization, including pressure to weaken both the lethal and the nonlethal take provisions of the Act.

II. LEGAL AUTHORITY TO TAKE NUISANCE PINNIPEDS

The process, codified in section 120 of the MMPA, to authorize a lethal take or removal of pinnipeds is triggered when a state applies to the Secretary of Commerce for authorization to intentionally and lethally take

8. See S. REP. NO. 103-220, at 5 (1994), *reprinted in* 1994 U.S.C.C.A.N. 518, 523.

9. See S. REP. NO. 103-220, at 5 (1994), *reprinted in* 1994 U.S.C.C.A.N. 518, 522-23.

10. See Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1384, 1407 (1994).

11. See Pinniped Populations, Eastern North Pacific: Status, Trends, and Issues 108 (1997).

individually identifiable pinnipeds that are causing a significant negative impact on the decline or recovery of salmonid fishery stocks which have: (1) been listed as threatened or endangered species under the Endangered Species Act (ESA); (2) are approaching a threatened or endangered species status; or (3) which migrate through the Ballard Locks at Seattle, Washington.¹² The state's application must include a means of identifying individual pinnipeds, a detailed description of the interaction problem, and the expected benefits of the taking.¹³

The Secretary has fifteen days to determine whether the application has produced sufficient evidence to warrant establishment of a Pinniped-Fishery Interaction Task Force to further investigate the situation. If the information is sufficient, the Secretary publishes a notice in the Federal Register requesting public comment on the application.¹⁴ In addition, the Secretary is directed to establish a Pinniped-Fishery Interaction Task Force consisting of: (1) employees of the Department of Commerce (including staff from the National Marine Fisheries Service and the National Oceanic and Atmospheric Administration); (2) scientists knowledgeable about the pinniped interaction outlined in the application; (3) representatives from both the conservation and fishing communities; (4) Indian Treaty Tribes; (5) representatives from the State; and (6) any other appropriate organizations.¹⁵

Within sixty days of its establishment, and after reviewing public comments in response to the Federal Register notice, the Task Force must recommend to the Secretary whether to approve or deny the proposed intentional lethal removal of the pinnipeds.¹⁶ The Task Force is also directed to identify the individuals to be removed, the proposed location, time, and method of removal, criteria for evaluating the success of the action, duration of the lethal removal authority, and suggest nonlethal alternatives and a plan for their potential use.¹⁷

In forming its recommendations, the Task Force is to consider population trends, feeding habits, the location of the pinniped interaction, how and when the interaction occurs, and how many individual pinnipeds are involved.¹⁸ In addition, the Task Force is to evaluate past efforts to nonlethally deter such pinnipeds, whether the applicant has demonstrated that no feasible and prudent alternatives exist, and whether the applicant has

12. 16 U.S.C. § 1389(b)(1) (1994).

13. *See id.* § 1389(b)(2).

14. *See id.* § 1389(c)(1).

15. *See id.* § 1389(c)(2).

16. *See id.* § 1389(c)(3).

17. *See id.*

18. *See id.* § 1389(d)(1).

taken all reasonable nonlethal steps without success.¹⁹ Finally, the Task Force must also determine the extent to which the pinnipeds are causing undue injury, impact to, or imbalance with other species in the ecosystem or are exhibiting behavior that presents an ongoing threat to public safety.²⁰

The Secretary of Commerce has thirty days from the receipt of the Task Force's recommendations to either approve or deny the application.²¹ If the Secretary approves the application, he/she will take the steps necessary to implement the intentional lethal removal that would be performed by either NMFS, the appropriate state agency, or a person under contract to either NMFS or the State.²²

Finally, after the federal or state agency completes either the lethal removal or an alternative action, the Task Force must evaluate the effectiveness of the action and recommend additional actions, if necessary, to the Secretary.²³

III. CASE STUDY OF THE BALLARD LOCKS LETHAL REMOVAL

A. History of California Sea Lion Predation at Ballard Locks

One of the most widely publicized pinniped-salmonid conflicts is the predation by California sea lions (*Zalophus californianus*) on Lake Washington winter steelhead (*Oncorhynchus mykiss*) that migrate through the Ballard Locks near Seattle, Washington.²⁴ As the winter steelhead population began to decline during the 1980s, concerns about sea lion predation increased. NMFS and WDFW documented that sea lions were removing significant numbers of adult steelhead returning to Lake Washington to spawn. NMFS and WDFW estimated that between 1986 and 1992, California sea lions consumed forty-two to sixty-five percent of the wild winter steelhead run.²⁵ By 1994, the winter steelhead population had dropped to an all time low of seventy spawners²⁶ (down from 2,500 spawners in

19. See *id.* § 1389(d)(2).

20. See *id.* § 1389(d)(3)–(4).

21. See *id.* § 1389(c)(4).

22. See *id.* § 1389(e)(4).

23. See *id.* § 1389(c)(5).

24. See S.J. JEFFRIES & J. SCORDINO, *Efforts to Protect a Winter Steelhead Run from California Sea Lion Predation at the Ballard Locks*, PINNIPED POPULATIONS, EASTERN NORTH PACIFIC: STATUS, TRENDS, AND ISSUES 107 (Gregory Stone, Jennifer Goebel, and Steven Webster, eds.) (1997).

25. See *id.*

26. See *id.* at 109 (WDFW estimated that the spawning and rearing habitat could support the return of 1,600 spawning steelhead).

the mid 1980s). Although other factors such as freshwater and ocean survival may have contributed to the declining status of the steelhead population, NMFS and WDFW determined that sea lion predation was a significant factor affecting the number of adult spawners that survived and returned to Lake Washington.²⁷

B. Implementation of the Process Under Section 120

On June 30, 1994, WDFW submitted an application to NMFS requesting authority to lethally remove predatory California sea lions at the Ballard Locks.²⁸ On July 6, 1994, the Secretary received the application, and under section 120 of the MMPA determined that it provided sufficient evidence to warrant initiation of the process.²⁹ On August 2, 1994, the Secretary issued a notice of the receipt and acceptance of WDFW's application, and published the application with a request for public comment on WDFW's lethal removal request.³⁰ In accordance with section 120, on September 30, 1994, NMFS established the 21-member, Ballard Locks Pinniped-Fishery Interaction Task Force (Task Force).³¹

The Task Force reviewed information on California sea lion populations and Lake Washington Winter Steelhead, the nature and extent of the interaction at the locks, and the design and operation of the locks and fishway facility. In addition, the Task Force reviewed and evaluated the past measures and considerations of WDFW, NMFS, the Army Corps of Engineers, and the Muckleshoot and Suquamish Tribes for reducing or eliminating the sea lion/steelhead interaction through a predation monitoring and sea lion harassment program.

1. History of the Use of Nonlethal Deterrence Measures

In 1985, the resource managers used underwater firecrackers that were relatively successful in removing sea lions from the Locks area.³² In 1986–1987, NMFS and WDFS intensified harassment efforts with long distance vessel chases, boat hazing, increased firecracker use, and use of a

27. See JEFFRIES & SCORDINO, *supra* note 24, at 107; see also Marine Mammals: Pinniped Removal Authority, 59 Fed. Reg. 39,325, 39,326 (1994).

28. JEFFRIES & SCORDINO, *supra* note 24, at 111; see also Marine Mammals: Pinniped Removal Authority, 59 Fed. Reg. at 39,326.

29. See Marine Mammals: Pinniped Removal Authority 59 Fed. Reg. at 39,325.

30. See *id.*

31. See Marine Mammals: Pinniped Removal Authority, 59 Fed. Reg. 49,234 (1994).

32. See JEFFRIES & SCORDINO, *supra* note 24, at 110.

“Sealchaser” acoustic deterrent device.³³ These techniques, however, were unsuccessful. The 1986–1987 efforts to capture the sea lions using an entangling net and subjecting them to taste aversion conditioning with tethered steelhead laced with lithium chloride were equally unsuccessful.³⁴ During 1987–1988, WDFW continued using firecrackers in combination with boat hazing. The Department also constructed a barrier net in the spillway near the fish ladder to prevent sea lion access to principal predation areas. The barrier was not successful, however, because several sea lions quickly learned to forage effectively at the face of the barrier in spite of harassment, thereby further impeding fish passage, and increasing predation downstream of the barrier.³⁵

In 1988–1989, NMFS and WDFW implemented a translocation program, in which thirty-nine sea lions were captured and transported to the outer coast of Washington. More than seventy-five percent returned to Puget Sound on average within fifteen days (ranged from four to forty-five days); consequently, this effort did not reduce predation.³⁶ During the 1989–1990 spawning season, six sea lions were captured and relocated back to their breeding area off southern California; however, this too was unsuccessful as three sea lions returned to Puget Sound (one in thirty days and the other two in approximately forty-five days).³⁷ Additionally, NMFS and WDFW found rubber tipped arrows shot from crossbows equally ineffective as a harassment device.

During the 1990–1991 and 1992–1993 spawning seasons, NMFS and WDFW reduced their efforts to control predation. An acoustic deterrence device, tested in 1992–1993, was used during the 1993–1994 run to create an acoustic barrier.³⁸ This acoustic barrier met with some success and appeared to disrupt the predation of sea lions on steelhead. Finally, in April 1994, three sea lions were translocated to southern California. Although none returned that year, one of the sea lions eventually returned and became a principal predator at the Locks.³⁹

In conclusion, since the 1985–1986 spawning season NMFS and WDFW have undertaken extensive efforts to nonlethally deter sea lions from preying on steelhead as they move through the locks. As demonstrated, no single deterrence device or method successfully eliminated sea lion predation on

33. *See id.*

34. *See id.*

35. *See id.*

36. *See id.*

37. *See* JEFFRIES & SCORDINO, *supra* note 24, at 110.

38. *See id.* at 111.

39. *See id.*

steelhead. Furthermore, the Task Force estimated that the total reported costs of these efforts exceed \$1,000,000, and actual costs were considerably greater.⁴⁰ Nevertheless, NMFS, scientists, resource managers, and conservationists all recognize that both NMFS and Congress must support dedicated research into the development of safe, effective nonlethal deterrents.⁴¹

C. Resulting Recommendations and Actions

1. Recommendation of the Task Force and Terms of the Letter of Authorization

The Task Force submitted its recommendations regarding Washington State's request for lethal removal to NMFS on November 23, 1994.⁴² For the 1994–1995 run, the Task Force recommended NMFS undertake all practicable attempts to temporarily remove all predatory sea lions to holding areas.⁴³ The Task Force contended that the temporary relocation and holding option provided WDFW and NMFS the opportunity to test the efficacy of removing — by nonlethal means — a larger number of animals than could occur by killing them.⁴⁴ By a majority vote of thirteen to eight, the Task Force recommended that the lethal removal of individually identifiable predatory sea lions be allowed only if adequate holding facilities were unavailable or if temporary holding was infeasible or impractical.⁴⁵ In addition, the Task Force recommended that, before any removal or lethal removal could take place, WDFW must meet certain conditions regarding temporary holding,⁴⁶ predation rate “trigger,”⁴⁷ formation of an animal care

40. See BALLARD LOCKS PINNIPED-FISHERIES INTERACTION TASK FORCE, REPORT AND RECOMMENDATIONS OF THE BALLARD LOCKS PINNIPED-FISHERIES INTERACTION TASK FORCE 3 (1994).

41. See Pacific Coast Pinniped Interaction Investigation and Report, 62 Fed. Reg. 14,889 (1997).

42. See Marine Mammals: Pinniped Removal Authority, 60 Fed. Reg. 3841, 3842 (1995).

43. See BALLARD LOCKS PINNIPED-FISHERIES INTERACTION TASK FORCE, *supra* note 40, at 4. A “predatory” sea lion is an individually identified sea lion (i.e. an animal with a brand mark, tags, or other distinguishable natural marks) that has been observed preying on steelhead at anytime (including past years) in the Lake Washington Ship Canal.

44. See *id.*

45. See *id.* at 5 & app. II. See also Letter From Roland A. Schmitten, Assistant Administrator for Fisheries, National Marine Fisheries Service, to Robert Turner, Washington Department of Fish and Wildlife (Jan. 4, 1995) (on file with the Center for Marine Conservation) [hereinafter Letter of Authorization to WDFW].

46. See BALLARD LOCKS, PINNIPED-FISHERIES INTERACTION TASK FORCE, *supra* note

committee,⁴⁸ continued use of nonlethal deterrence,⁴⁹ and a cap on removals.⁵⁰

The Task Force also made a series of recommendations for: (1) research into and modifications to the fish ladder and the locks; (2) development and implementation of a viable non-net sea lion barrier below the fish ladder; (3) assessment and implementation of a steelhead refuge area to further protect the fish from sea lion predation; and (4) further expansion and modification of the acoustical deterrence devices.⁵¹ Finally, the Task Force included recommendations for the development of a recovery plan for Lake Washington wild steelhead, habitat restoration and protection measures, and improved fisheries management actions.⁵²

2. Minority Report

The authorization process and its outcome were controversial. Ultimately, on December 5, 1994, seven members of the Task Force, all of whom voted against lethal removal, produced a minority report. The

40, at 4, 5 (the Letter of Authorization to WDFW required the State of Washington to contact zoos and aquariums in the Northwest to determine availability of suitable holding enclosures for temporary care and feeding of sea lions for up to 5 months, and that such facilities minimize public observation of, or interaction with, captive animals).

47. *See id.* (the Letter of Authorization to WDFW required sea lions be lethally removed only when their predation rate exceeds 10% of the available steelhead in any consecutive seven-day period after January 1, 1995. If, after the initiation of lethal removals, the predation rate equals or falls below 10% for 14 consecutive days when steelhead have been recorded passing through the fish ladder, removals of newly identified predatory sea lions will cease until the predation rate again exceeds 10% for any consecutive seven-day period. However, predatory sea lions identified prior to the end of a 14-day "reduced predation" period are to be removed).

48. *See id.* at 4 (the Letter of Authorization required the WDFW to convene an animal care committee to make recommendations on the adequacy of the temporary holding enclosures, capture protocols, the care, feeding, drug use, and if necessary, the protocols for euthanasia).

49. *See id.* at 5 (the Task Force recommended NMFS and WDFW investigate the potential benefits and feasibility of expanding or modifying frequency and the area of coverage of the acoustical devices employed near the locks).

50. *See id.* (the Task Force recommended that up to 40, individually identified predatory sea lions be removed (either nonlethally or lethally) with the caveat that if the number removed reaches 20, the Task Force be immediately reconvened. In addition, if as many as 15 sea lions are lethally removed, lethal removal should be stopped and the Task Force immediately convened to evaluate available results, options, and provide further recommendations to NMFS).

51. *See* BALLARD LOCKS, PINNIPED-FISHERIES INTERACTION TASK FORCE, *supra* note 40, at 6, 7.

52. *See id.* at 8-10.

minority report outlined the following concerns:

1. Data does not support the premise that removing sea lions will accomplish the stated goal of the WDFW proposal, which is to prevent the extirpation of the Lake Washington wild steelhead run. Instead, data indicates that other factors are affecting steelhead population status either before or after the fish pass through the locks;
2. Removal of up to forty sea lions is likely to be ineffective because of the high probability of continued replacement, drawing from the several hundred individuals between Shilshole Marina and Everett;
3. Lethal removal constitutes a significant precedent to the MMPA that has broad implications for the future management of the marine mammal-fishery interactions in the United States;
4. WDFW failed to demonstrate that no feasible and prudent alternatives exist and that all reasonable nonlethal steps were taken without success (for example, physical modifications to the locks that provide places for the fish to hide and areas to adjust to the change between salt water and freshwater);
5. The Task Force did not reach consensus but rather voted on the issue of lethal removal;
6. Criteria for the number of animals to be removed, the mechanisms that trigger the removal, and methods of evaluation are arbitrary and inconsistent with section 120 of the MMPA because they underestimate the amount of available fish, causing lethal removal to begin prematurely; and
7. The Army Corp of Engineers had been unresponsive to over five years of correspondence from NMFS regarding needed improvements to the fish passage at the locks to allow fish to move unencumbered through them.⁵³

In conclusion, the members who submitted the minority report believed that deliberations placed too much emphasis on sea lion predation and not enough on the other factors affecting steelhead throughout their life cycle, namely poor fisheries management, habitat degradation, and poor lock construction and operation.⁵⁴ Furthermore, the members asserted that sea lion predation was neither the principal nor the primary cause of the

53. See BALLARD LOCKS PINNIPED-FISHERIES INTERACTION TASK FORCE, *supra* note 40, app. V.

54. See *id.*

steelhead decline, and that lethal removal of predatory sea lions would be ineffective and in vain.⁵⁵ Despite these concerns and those voiced by others in the scientific, conservation, and animal welfare communities, NMFS moved forward with the authorization for lethal removal.

3. Actions Taken Under the Letter of Authorization

On January 6, 1995, NMFS issued to the State of Washington (through WDFW) a three-year Letter of Authorization for the conditioned lethal removal of up to fifteen California sea lions from the Ballard Locks.⁵⁶ NMFS concluded this lethal removal was a necessary, last resort for removing sea lions preying on steelhead based on: (1) the declining and depressed status of wild winter-run steelhead and the need to prevent mortality of returning adult spawners; (2) the vulnerability of returning adult spawners to sea lion predation at the Ballard Locks and the lack of feasible and effective nonlethal measures to eliminate the problem; (3) the insignificant impacts to the California sea lion population of lethal removal of relatively few, male sea lions; (4) the analysis of alternatives that indicated lethal removal, with conditions, was the most appropriate course of action.⁵⁷

During the first year of the authorization (1994–1995), NMFS required that WDFW increase the number of acoustic devices in the acoustic barrier, use underwater firecrackers, and then capture, remove, and place in temporary captive holding only those sea lions that penetrated the acoustic barrier and remained in the ensounded area to prey on steelhead.⁵⁸ Two identifiable sea lions accounted for most of the predation, and on January 25, 1995, one of the principal predators of the two was captured, held in captivity until June 8, 1995, and then released in the Strait of Juan de Fuca.⁵⁹ The result was a decrease in California sea lion predation, and no lethal removals.

The Letter of Authorization required the State of Washington to submit, no later than September 1 of each year, a report on efforts undertaken to reduce predation, compliance with the conditions of the authorization, and how the State would comply with the conditions in the following year.⁶⁰ In accordance with section 120,⁶¹ the Task Force met in September 1995, to

55. *See id.*

56. *See* Marine Mammals: Pinniped Removal Authority, 60 Fed. Reg. 3841, 3843 (1995).

57. *See id.*

58. *See id.* *See also* Letter of Authorization to WDFW, *supra* note 45.

59. JEFFRIES & SCORDINO, *supra* note 24, at 111.

60. *See* Marine Mammals: Pinniped Removal Authority, 60 Fed. Reg. at 3843.

61. *See* Marine Mammal Protection Act of 1972, 16 U.S.C. § 1389(c)(5) (1994).

evaluate the effectiveness of the measures taken by the State during the 1995 winter steelhead run.⁶² The Task Force, noting that only 126 steelhead returned to spawn (up from seventy steelhead in 1994), evaluated the sea lion predation control measures and recommended to NMFS that the conditions in the Letter of Authorization be modified to more effectively conserve the depressed Lake Washington winter steelhead population.⁶³ Consequently, NMFS revised the authorization to WDFW to remove the captive holding requirement. Instead, NMFS provided conditions for lethal removal based on foraging behavior in the presence of acoustic deterrence and other means of nonlethal deterrence, observed predation on steelhead, and presence at Ballard Locks during the steelhead run.⁶⁴ In the revised Letter of Authorization, NMFS specified three identifiable sea lions that met the predatory sea lion standard (branded with numbers 17, 41, 225) and that would qualify for lethal removal if they returned to Ballard Locks during the steelhead season and were observed foraging at the locks.⁶⁵ Furthermore, NMFS noted that there were two sea lions (branded with numbers 45 and 87) that would be candidates as soon as they were observed preying on steelhead.⁶⁶ Therefore, NMFS gave the State of Washington the authority to lethally remove these predatory sea lions using capture methods and euthanasia protocols developed by an animal care committee.⁶⁷ In addition, the State was to provide sea lions captured for lethal removal to an Indian tribe with treaty rights to harvest marine mammals in the Lake Washington Ship Canal that requested the animals for subsistence use.⁶⁸

During the 1995–1996 season, WDFW developed plans to lethally remove the sea lions listed in the Letter of Authorization. However, lethal removal became unnecessary as Sea World of Orlando offered to obtain the five sea lions for permanent captive holding. NMFS and WDFW accepted the offer, and in May 1996, agency personnel captured sea lions 225, 45, and 17 and transported them to Point Defiance Zoo and Aquarium for temporary holding until Sea World ultimately transported the animals to

62. See Marine Mammals: Pinniped Removal Authority, 61 Fed. Reg. 13,153 (1996).

63. See JEFFRIES & SCORDINO, *supra* note 24, at 112. See also Marine Mammals: Pinniped Removal Authority, 61 Fed. Reg. at 13,154.

64. See NATIONAL MARINE FISHERIES SERV., ENVIRONMENTAL ASSESSMENT ON CONDITIONS FOR LETHAL REMOVAL OF CALIFORNIA SEA LIONS AT THE BALLARD LOCKS TO PROTECT WINTER STEELHEAD 27–29 (1996). See also Marine Mammals: Pinniped Removal Authority, 61 Fed. Reg. at 13,154.

65. See Marine Mammals: Pinniped Removal Authority, 61 Fed. Reg. at 13,154.

66. See *id.*

67. See *id.*

68. See *id.*

Florida.⁶⁹

By 1997, the Lake Washington winter steelhead run had increased to 610 fish returning to spawn.⁷⁰ Resource managers will continue efforts to deter sea lion predation and recover this depressed run.

D. An Evaluation of the Process

1. NMFS and WDFW Evaluation of the Process

In February 1999, NMFS issued a Report to Congress (Report), under section 120(f) on the agency's investigations and consultations with the states of Washington, Oregon, and California concerning the impact of California sea lions and Pacific harbor seal impacts on salmonid stocks and coastal marine ecosystems. The Report states that "WDFW (Washington Department of Fish and Wildlife) has characterized the lethal authorization process as cumbersome and restrictive, and found that the provisions of section 120 of the MMPA have not provided an efficient or effective system for dealing with pinniped problems of this critical nature."⁷¹

As established, section 120 of the MMPA states that, in order for a lethal take to be authorized, the applicant (a state) must demonstrate that individually identifiable pinnipeds are having a significant negative impact on the decline or recovery of salmonid fishery stocks which have been listed as or are approaching the status of threatened or endangered species under the Endangered Species Act.⁷² NMFS asserts, however, that: (1) the costs of conducting the level of detailed investigation necessary to meet the requirements of section 120 are prohibitive; (2) current food habit collection and analysis techniques may be inadequate to quantify pinniped impacts; and (3) implementation of the necessary studies and the process itself will allow salmonid populations to decline due to pinniped predation.⁷³ Furthermore, the Pacific States Marine Fisheries Commission and the states of Washing-

69. See JEFFRIES & SCORDINO, *supra* note 24, at 112 (sea lion 41 was not seen foraging at the locks during that season, and sea lion 87 was thought to have been incidentally killing in the coho salmon fishery).

70. See *id.*

71. NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS ON RESULTS OF DISCUSSION BETWEEN NATIONAL MARINE FISHERIES SERVICE AND PACIFIC STATES MARINE FISHERIES COMMISSION ON BEHALF OF THE STATES OF WASHINGTON, OREGON, AND CALIFORNIA REGARDING RECOMMENDATIONS FOR ADDRESSING THE IMPACTS OF CALIFORNIA SEA LIONS AND PACIFIC HARBOR SEALS ON SALMONIDS AND WEST COAST ECOSYSTEMS 4 (1998) [hereinafter REPORT TO CONGRESS].

72. See Marine Mammal Protection Act of 1972, 16 U.S.C. § 1389(b) (1994).

73. See REPORT TO CONGRESS, *supra* note 71, at 5.

ton, Oregon, and California concede that the section 120 authorization process is cumbersome, and the amount of evidence needed to establish that specific pinnipeds are indeed having a significant negative impact on a given salmonid population is exceedingly "time-intensive, difficult, and expensive to obtain as evidenced by the California sea lion conflict with steelhead at the Ballard Locks."⁷⁴

Many of the Task Force's participants raised concerns over the lack of available data with which to address the questions related to the pinniped-fishery interaction,⁷⁵ and this lack of data contributed to the lack of consensus on whether to authorize a lethal take.

NMFS's and WDFW's opinions that the current process under section 120 is not an efficient or effective system for dealing with pinniped problems has prompted these agencies, specifically NMFS, to propose a new framework that would allow state and federal resource management agencies to immediately address pinniped-fisheries interactions. The NMFS proposal would create a streamlined approach whereby state or federal managers could lethally remove California sea lions or Pacific harbor seals that prey on ESA-listed salmon stocks, salmon populations identified by the states as being of special concern ("depressed," "critical," or "sensitive"), or where these pinniped species are in conflict with human activities.⁷⁶ This proposal would allow states to authorize lethal removals where resource agencies have determined that there is an urgent need to immediately remove pinnipeds lethally, without having to expend resources on nonlethal methods that are not likely to provide immediate resolution to the conflict.⁷⁷ NMFS further proposes that all lethal removals would have to be within the Potential Biological Removal levels⁷⁸ established by NMFS for all human causes of mortality in accordance with the MMPA.⁷⁹

74. *See id.* at 8.

75. *See* PINNIPED-FISHERIES INTERACTION TASK FORCE, *supra* note 40, app. V.

76. *See* NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS, *supra* note 71, at 13. *See also* Pacific Coast Pinniped Interaction Investigation Report 62 Fed. Reg. 14,889 (1997).

77. *See* NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS, *supra* note 71, at 13.

78. Potential Biological Removal (PBR) is defined as the maximum number of individuals that can be removed annually from a population, by other than natural causes, and allow that population to reach or maintain its optimum sustainable population (OSP).

79. *See* NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS, *supra* note 71, at 13. *See also* Pacific Coast Pinniped Interaction Investigation Report, 62 Fed. Reg. at 14,889.

2. A Different Evaluation: The Conservation Perspective

Environmental and fishing interests recognized during the reauthorization of the MMPA the need to address the role of pinnipeds in the conservation of endangered salmonid populations. The provisions of section 120 are the result of a compromise that allows NMFS to take action, yet preserves the protective nature of the MMPA. Even those in Congress acknowledge that the provisions of section 120 were a workable solution to pinniped predation of endangered or threatened salmonid populations.⁸⁰ The authors of this article support the provisions of section 120 and contend that these provisions provide the flexibility to conserve salmonid stocks, while at the same time requiring a showing that pinnipeds are indeed having a significant negative impact on the decline or recovery of salmonid fishery stocks and that resource managers have demonstrated that all reasonable and prudent nonlethal measures have failed. The first trial of the section 120 authorization process — the Ballard Locks situation — is an insufficient basis upon which to recommend that Congress significantly amend this process and create a blanket authorization to the states. A blanket authorization to states for the immediate use of lethal removal is unacceptable, is contrary to the precautionary protection goals and objectives of the MMPA,⁸¹ will not guarantee that these pinnipeds receive the protections afforded by the MMPA, and fails to recognize that lethal removal is a flawed management tool. Furthermore, a general authorization would grant too much authority and discretion to state agencies, while removing two key components of section 120—scientific review and assessment of existing data, and public oversight and participation in the process. Moreover, if, as the State of Washington has argued, pinniped populations have expanded to the point where they need to be managed, the MMPA anticipates circumstances in which states would want to resume management of marine mammals within their waters. The Act provides a process for transfer of management authority to the states and conservation standards which such management must achieve.⁸²

To date, an authorization under section 120 has only been used for the situation at the Ballard Locks. It is noteworthy that the use of section 120 procedures in this instance took less than six months from the request letter to the Secretary to the removal of animals at the Locks. NMFS and WDFW

80. See 140 CONG. REC. H1605 (daily ed. March 21, 1994) (statement of Congressman McDermott).

81. See Marine Mammal Protection Act of 1972, 16 U.S.C. § 1361 (1994).

82. See *id.* § 1379.

have termed the process “cumbersome and time-consuming,” yet with all the data, public comment, review process and administrative procedure required, section 120 enabled wildlife management officials to conduct nonlethal removals in time to prevent predation over several seasons.

There are, no doubt, refinements that could be made in the process that do not require amendments to the MMPA. Consequently, the authors recommend that NMFS and the states of Oregon, Washington, and California work with the conservation community to reevaluate the process and devise mechanisms — ones that do not include amending the MMPA — to make implementation of section 120 more responsive and effective.

IV. FATE AND FUTURE OF THE MMPA’S LETHAL REMOVAL PROVISIONS

Scientists estimate that there are between 167,000 to 188,000 California sea lions and that the population is increasing at an annual rate of between 5.4% and 8.3%.⁸³ Additionally, the Pacific Scientific Review Group⁸⁴ found that as predation on salmonids by California sea lions increases, the recovery of depressed salmonid populations may be affected and that increased predation by sea lions may be one of the causes of decline in some salmonid populations.⁸⁵ NMFS claims that:

[i]n the case of expanding pinniped populations that may be having an impact on depressed salmonid populations, particularly those that are listed or proposed for listing under the ESA, the loss of individuals from such salmonid populations would be a greater risk to biodiversity than removing relatively small numbers of individuals pinnipeds from robust populations.⁸⁶

Therefore, NMFS has suggested that states be given a blanket authorization to lethally remove pinnipeds that prey on threatened or endangered salmon stocks.

83. See National Marine Fisheries Serv., U.S. Dep’t of Commerce, U.S. Pacific Marine Mammal Stock Assessments: 1996 1 (1997).

84. Section 117(a) directs the Secretary to prepare such stock assessments and calculate PBR in consultation with scientific review groups who will provide advice. See 16 U.S.C. § 1386(d) (The Secretary is to appoint three review groups (Alaska, Pacific Coast, Atlantic Coast) with “a balanced representation of viewpoints” from among affected coastal States, regional fish and wildlife managers, Alaska Native organizations and Indian tribes, and environmental and fishery groups). *Id.*

85. NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS, *supra* note 71, at 4.

86. *Id.* at 8.

“Conservation of biodiversity” and “ecosystem management” are buzz words that may encompass anything from habitat protection to reducing populations of pinnipeds which are viewed as predators of and competitors with salmonid stocks. Not only are the meanings of these terms unclear, managers have not proposed how to achieve such goals, nor answered whether agencies or managers have the capacity to do so, even if it was known what goals “conservation biology” and “ecosystem management” encompassed. This lack of definition makes the ecosystem studies called for under section 120(g) of the MMPA especially vital to solving the problems related to pinniped-fisheries interactions. The current lack of information produces proposals and recommendations for removals of marine mammals that prey on fish, calling it “ecosystem management” or “conservation of biological diversity,” when in fact it is an effort by interest groups to benefit humans who want to prey on the same fish. It is premature to grant states a blanket authorization for lethal takes when the research authorized at section 120(g), allowing studies of anadromous fish migration corridors and fish-pinniped interactions, has not been done. If pursued, these studies could result in data leading to development of nonlethal deterrence methods. However, to circumvent the section 120 process without first using the tools provided in the 1994 MMPA reauthorizations may result in further negative impacts to the ecosystems at issue.

If NMFS expects to effectively conserve biodiversity and recover depressed salmonid populations, it should consider additional removal of barriers to fish passage, restoration of spawning habitat, and restrictions on fishers. The burden to conserve biodiversity and these fish stocks must be distributed proportionally among all human causes of salmonid declines before penalizing seals and sea lions for simply doing what comes naturally to them, eating fish. This approach is consistent with an important purpose of the Act, which is to “maintain the health and stability of the ecosystem.”⁸⁷

To justify its proposal to allow the lethal removal of pinnipeds that interact with salmon stocks, and to move toward more intensive management of marine mammal populations, in the Report NMFS stated that the 1994 Amendments to the MMPA, which established the regime to govern the incidental take of marine mammals in commercial fishing operations, could be used to allow “lethal removals of pinnipeds for management purposes if such takes have no adverse biological effect on the population.”⁸⁸ However, this proposal is not consistent with the terms of the Act.

87. 16 U.S.C. § 1361(6).

88. NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS, *supra* note 71, at 10.

First, the regime that substituted the Potential Biological Removal (PBR) level for Optimum Sustainable Population⁸⁹ (OSP) level authorized only the incidental take of marine mammals in the course of commercial fishing, not the direct lethal take of pinnipeds for management purposes. The goal of the MMPA is that marine mammal species “should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management.”⁹⁰ Furthermore, Congress mandated that, whenever consistent with these goals, marine mammals are to be protected and managed so that they do not “cease to be a significant functioning element of the ecosystem of which they are a part”⁹¹ or “diminish below their Optimum Sustainable Population (OSP).”⁹² OSP and PBR are two distinct tools within the MMPA. PBR allows a level of incidental takes that will allow marine mammal stocks to continue to grow or recover to OSP. Recovering or maintaining marine mammal stocks at OSP is the goal of the MMPA. Therefore, it is only when either NMFS or states can demonstrate that a particular marine mammal stock has reached OSP that “management” measures can be used. In the case of states, the Secretary may transfer authority for the conservation and management of a marine mammal species or stock to a state, provided that the species is at OSP, the maximum number of animals that may be taken will not reduce the species below OSP, and the state develops and implements a conservation and management program.⁹³

To date, NMFS has been unable to determine whether California sea lions and Pacific harbor seal populations are within OSP, and neither California, Oregon, nor Washington has requested transfer of management from NMFS to the state. Point is, the MMPA does anticipate that there would be a time when marine mammal populations would have recovered to the extent that the prohibition on all takes would no longer be necessary.

89. See 16 U.S.C. § 1362(9) (“‘optimum sustainable population’ means, with respect to any population stock, the number of animals that will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element”). See also 50 C.F.R. § 216.30 (1994) stating that optimum sustainable population is:

[A] population size which falls within a range from the population level of a given species or stock which is the largest supportable within the ecosystem to the population level that results in maximum net productivity. Maximum net productivity is the greatest net annual increment in population numbers or biomass resulting from additions to the population due to reproduction and/or growth less losses due to natural mortality.

90. 16 U.S.C. § 1361(6).

91. *Id.* § 1361(2).

92. *Id.* See also 16 U.S.C. § 1362(9); 50 C.F.R. § 216.30 (1994).

93. See 16 U.S.C. § 1379(b).

If, in the case of California sea lions, NMFS and the states of California, Oregon, and Washington believe we have reached this point, and can demonstrate this fact, then the states should request transfer of authority to “manage” pinnipeds to protect salmon — but still within conservation standards of MMPA. Consequently, it is clear that NMFS is seeking a way to circumvent the management and protection mandates of the MMPA (especially section 120 and section 109) and use a less conservative standard to allow the directed lethal removal or management of pinnipeds. A PBR standard may be acceptable for incidental take, but it is not an acceptable standard for lethal removal or as a substitute for OSP. The fishing industry and the environmental community knew this to be true; when developing these amendments to the Act, they recognized they could not reach agreement to use PBR as the standard for direct lethal takes of pinnipeds. NMFS must make every effort to acquire the necessary data to determine OSP and states must adhere to the requirements of section 109 the MMPA.

Second, the MMPA and section 118 (the section that governs the incidental take of marine mammals in commercial fishing operations) have as their goal to “reduce the incidental mortality and serious injury of marine mammals incidentally taken in the course of commercial fishing operations to insignificant levels approaching a zero mortality and serious injury rate. . . .”⁹⁴ Therefore, while the PBR standard may allow some level of take incidental to commercial fishing operations, the MMPA still requires that fishers reduce that take to levels approaching a zero rate. Consequently, NMFS cannot both achieve the Zero Mortality Rate Goal and recover populations to OSP if it permits the lethal removal of pinnipeds.

Finally, NMFS states that “[t]hese provisions [1994 Amendments to the MMPA establishing section 120] recognize that certain populations of marine mammals have recovered from past depletion and are causing conflict with human use of other resources in marine ecosystems. The conflicts are often exacerbated by human modification of coastal ecosystems.”⁹⁵ Although pinniped populations on the west coast are increasing, the conflict with human use derives primarily from the perception of the fishing industry, an industry directly competing with pinnipeds for a limited resource. In addition, this tension between the fishing industry and pinniped predation is exacerbated by other factors that have degraded anadromous fish

94. See *id.* §§ 1387, 1371(a)(2). See generally Mary M. Sauer, *Balancing Marine Mammal Protection Against Commercial Fishing: The Zero Mortality Goal, Quotas, and the Gulf of Maine Harbor Porpoise*, 45 ME. L. REV. 419 (1993) (presenting a more detailed review of the legislative history of the zero mortality rate goal).

95. NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS, *supra* note 71, at 11.

habitat and caused fish populations to plummet, including hydropower projects that bar fish passage and land uses which pollute spawning habitat. These conditions must be addressed and resolved before jumping to the conclusion that lethal takes of pinnipeds are necessary to manage the present conflict between human and pinniped uses of the resource.

Furthermore, it is important for NMFS to recognize that marine mammals continue to evoke emotional responses from the public. Some interest groups criticized the 1994 Amendments to the MMPA, claiming they were not protective enough and that amendments shifted the burden of proof away from the Act's policy of protection.⁹⁶ Consequently, because of these interest groups' position, any attempt to weaken the MMPA or integrate provisions that will facilitate lethal removal or management will engender strong opposition against such amendments and against the existing provisions to lethally manage pinniped populations.

In the Report, NMFS makes several statements that demonstrate that the agency does not fully comprehend the intent of the MMPA or the usefulness of section 120 to effectively conserve salmonid populations. Specifically, NMFS maintains that the following principles should guide management: (1) salmonids need to be given precedence when conflicts arise between protected species; (2) reasonable options must be made available to managers to implement actions that protect critical resources, without striving to obtain "perfect" and largely unobtainable information in every case; and (3) it should not be necessary to drive a salmonid population to ESA listing status before action is taken to remove individual pinnipeds that are affecting recovery.⁹⁷

First, the crafters of the 1994 Amendments to the MMPA recognized the importance of conserving salmonid populations and addressing predator-prey conflicts that may contribute to a decline or impede the recovery of a salmonid species. It is with this concept in mind that they negotiated the provisions of section 120 — Pinniped Removal Authority.

Second, these provisions provide both states and NMFS with "reasonable options . . . to implement action that protect critical resources."⁹⁸ The provisions do not require "'perfect' and largely unobtainable information."⁹⁹ The MMPA has functioned effectively for more than twenty-five years on

96. See Nina M. Young and Suzanne Iudicello, *Blueprint for Whale Conservation: Implementing the Marine Mammal Protection Act*, 3 OCEAN & COASTAL L.J. 149, at 193 (1997).

97. See NATIONAL MARINE FISHERIES SERV., REPORT TO CONGRESS, *supra* note 71, at 11.

98. See *id.*

99. See *id.*

less than perfect scientific data. Moreover, NMFS, based on the information provided in the Ballard Locks situations, was able to authorize, in less than six months, the lethal removal of selected California sea lions. This result indicates that, although controversial, there was sufficient information for the Secretary to make a determination and authorize the lethal take.

Third, section 120 does not require that salmonid populations be driven to or listed as threatened or endangered under the ESA before action can be taken to remove individual pinnipeds which are negatively affecting the recovery of a salmonid species. In fact, section 120 is precautionary, stating that the Secretary may authorize the intentional lethal taking of pinnipeds which cause a significant negative impact on the decline or recovery of salmonid fishery stocks which the Secretary finds are approaching threatened species or endangered species status.¹⁰⁰

Therefore, NMFS should recognize that pinnipeds have never been the primary cause of a salmonid decline, nor has it been scientifically demonstrated that they have been a primary factor in the delayed recovery of a depressed salmonid species. Nonetheless, the environmental community, the fishing industry, and Congress provided NMFS with the tools in the MMPA to effectively address the issue of pinniped predation on salmonid stocks. NMFS must now choose to use these tools wisely. NMFS, based on the information provided in the Ballard Locks situation, was able to authorize lethal removal of selected, known nuisance California sea lions. This example demonstrates that the provisions of section 120 are workable, and that sufficient information for the Secretary to make a determination and authorize a lethal take. As currently codified in law, section 109 and section 120 offer effective and precautionary approaches to protect pinnipeds, salmonid fishery stocks, and human health and welfare. The MMPA provides the mechanisms to conserve marine mammals, their habitat, and biodiversity within the ecosystem; therefore, there is no need to amend the MMPA to allow a blanket authorization for the intentional lethal removal of pinnipeds by state and federal resource agencies. Instead, NMFS should encourage fish and wildlife agencies to use nonlethal methods to resolve the problems of "nuisance" animals rather than relying the first instance on lethal removal. This will require that NMFS and Congress support, as a matter of priority, dedicated and aggressive research into the development of safe, effective nonlethal deterrents.

100. See Marine Mammal Protection Act of 1972, 16 U.S.C. § 1389(b)(1)(B) (1994).

