

2010

## Saving Salmo: Federalism And The Conservation Of Maine's Atlantic Salmon

Alison Rieser

Follow this and additional works at: <http://digitalcommons.maine.edu/oclj>

---

### Recommended Citation

Alison Rieser, *Saving Salmo: Federalism And The Conservation Of Maine's Atlantic Salmon*, 16 *Ocean & Coastal L.J.* (2010).  
Available at: <http://digitalcommons.maine.edu/oclj/vol16/iss1/5>

This Article is brought to you for free and open access by the Journals at University of Maine School of Law Digital Commons. It has been accepted for inclusion in *Ocean and Coastal Law Journal* by an authorized administrator of University of Maine School of Law Digital Commons. For more information, please contact [mdecrow@maine.edu](mailto:mdecrow@maine.edu).

## SAVING *SALMO*: FEDERALISM AND THE CONSERVATION OF MAINE'S ATLANTIC SALMON

*Alison Rieser*\*

The State of Maine continues to object to the listing of salmon on the seven Downeast rivers in the strongest possible terms. It should be clearly understood that this Administration has worked with the Services in good faith to develop the (Conservation) Plan as an alternative to listing. Should listing occur, however, all cooperation with the Services will cease, implementation of the Plan will be suspended, and we will pursue all available avenues, including litigation and legislative solutions to prevent this misapplication of the Act.

— Angus S. King, Governor of Maine<sup>1</sup>

### I. INTRODUCTION

In the last decade of the twentieth century, state and federal officials reluctantly acknowledged that restoring wild salmon would take more than making more fish. The anadromous Atlantic salmon (*Salmo salar*) once flourished in river systems throughout New England, but the economies of the nineteenth century unwittingly reduced the salmon's range to a few river systems in Maine. In 2000, the remnant populations that returned to eight of the minor coastal river systems of eastern Maine

---

\* Alison Rieser is Dai Ho Chun Professor of Geography at the University of Hawaii, Honolulu, HI, where she directs the UH@SEA and Graduate Ocean Policy Programs. She is also Professor Emerita at the University of Maine School of Law in Portland, ME, where she established and directed the Marine Law Institute and taught ocean and coastal law for over twenty years.

1. ED BAUM, MAINE ATLANTIC SALMON: A NATIONAL TREASURE 121 (1997) (quoting a 1996 letter by then Governor Angus King to U.S. Fish and Wildlife and National Marine Fisheries).

were listed as endangered under the U.S. Endangered Species Act of 1973 (ESA).<sup>2</sup>

The bitter fight that broke out between State of Maine officials and federal officials over the listing represented a new low in environmental federalism. Combatants pitted the tenuous prospects of a much-revered biological relic facing a changing climate regime against the bright promise of economic revival of the boarded-up fishing and farming towns of Downeast Maine. Adding to the debate, far from the traditional, low-tech industries of that region that wax and wane seasonally, foreign investors in the new salmon-farming venture were determined to use technology, economies of scale, and intensive production methods to overcome ecological constraints and thereby ensure global competitiveness. Moreover, a newly elected governor, Angus King, who was independent of political party affiliation, was determined that “common sense” and higher economic aspirations would prevail over environmental fear-mongering and nimbyism.

In an attempt at compromise, federal officials mustered whatever dexterity they could under the ESA. They used newly-minted ESA policies to avoid dealing with the hydropower dams on the salmon’s largest remaining riverine habitat and to maintain the state’s primacy in devising a conservation strategy. In the end, this flexibility was insufficient to bridge the differences between state goals and federal responsibilities. A century-old partnership turned into a brawl over the interpretation of genetic data and a rhetorical spat over the difference between a salmon in Maine and a Maine salmon. A political atmosphere that encouraged anti-federal grandstanding found a convenient whipping boy in the proposed listing, despite the flexibility shown by federal administrators. Accommodation turned to anger in the space of less than two years.

The salmon farming industry’s resistance to changing their increasingly intensive and risk-prone husbandry practice undermined the federally endorsed state conservation plan (the Maine Plan).<sup>3</sup> After one year of implementation, it was clear to federal officials that the Maine Plan was underfunded, not tough enough on the growing risks that

---

2. Final Endangered Status for a Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in the Gulf of Maine, 65 Fed. Reg. 69,459 (Nov. 17, 2000) (to be codified at 50 C.F.R. pt. 224); *see generally* 16 U.S.C. §§ 1531-1544 (2006).

3. *See, e.g.* Dieter Bradbury, *U.S. Initiates Salmon Plan*, PORTLAND PRESS HERALD, Nov. 18, 1999, *available at* [http://www.tu.org/press\\_releases/1999/portland-press-herald-article-us-initiates-salmon-plan](http://www.tu.org/press_releases/1999/portland-press-herald-article-us-initiates-salmon-plan) (discussing resistance of aquaculture industry and state officials and concerns of federal officials); *see* MAINE ATLANTIC SALMON COMMISSION, ATLANTIC SALMON CONSERVATION PLAN FOR SEVEN MAINE RIVERS (1997).

aquaculture posed to the meager numbers of returning salmon, and unlikely to be strengthened.<sup>4</sup> When two conservation groups, the Atlantic Salmon Federation and Trout Unlimited, sued federal ESA administrators, the listing proposal was reinstated.<sup>5</sup> This time, the proposed status was “endangered,” with no plan to rely on state, local, and voluntary measures in lieu of federal restrictions.<sup>6</sup> When the listing became final, the State of Maine challenged it in court, faulting its underlying science and its unwarranted intrusion on sovereign state interests.<sup>7</sup> The federal court upheld the listing in 2003.<sup>8</sup>

The election of a new governor, John Baldacci, eventually laid the legal battle to rest.<sup>9</sup> A victory for the federal regulatory decision in the U. S. District Court of Maine helped the state come to terms with the ESA listing.<sup>10</sup> This victory was assisted by an independent scientific report by the National Academy of Sciences, which vindicated the view that the Maine salmon was a genetically distinct and significant population segment (DPS) entitled to recognition and protection as a “species” under the ESA.<sup>11</sup>

In the final analysis, however, it took a citizen-suit ruling under the federal Clean Water Act (CWA) to demonstrate to the state and to the aquaculture industry that, without a doubt, federal environmental law controlled.<sup>12</sup> United States District Judge Carter demonstrated his willingness to deal with industry intransigence. If the regulators would

---

4. See Bradbury, *supra* note 3.

5. Trout Unlimited v. Babbitt, No. 02143 (D.D.C. filed Aug. 12, 1999); Proposed Endangered Status of Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in the Gulf of Maine, 64 Fed. Reg. 62,627 (Nov. 17 1999) (to be codified at 50 CFR pt. 224).

6. See Proposed Endangered Status of Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in the Gulf of Maine, 64 Fed. Reg. at 62,627.

7. Maine v. Norton, 257 F.Supp. 2d 357, 361, 374 (D. Me. 2003).

8. *Id.* at 407.

9. Governor John Baldacci was elected in 2002, and re-elected in 2006.

10. See Norton, 257 F.Supp. 2d 357; see also Paul Carrier, *State Ends Atlantic Salmon Fight:*

*Maine and Federal Officials Agree to Listing the Wild Fish as Endangered in Eight Rivers and to Ease the Impact on Business*, PORTLAND PRESS HERALD, July 25, 2003, at 1A (describing Governor Baldacci’s announcement that the state would not pursue an appeal in of Judge Carter’s decision and that the state would henceforth implement its salmon recovery plan in cooperation with federal officials and federal policy).

11. NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, GENETIC STATUS OF ATLANTIC SALMON IN MAINE: INTERIM REPORT FROM THE COMMITTEE ON ATLANTIC SALMON IN MAINE 3 (National Academies Press 2002).

12. U.S. Pub. Interest Research Grp. v. Atl. Salmon of Me., LLC, 257 F.Supp. 2d 407 (D. Me. 2003).

not, he would order the salmon farms to cease stocking non-native strains of Atlantic salmon immediately or hold them in contempt of court, even if this imposed costs that the industry had hoped to avoid under a state conservation regime.<sup>13</sup>

Recovery planning for the Maine Atlantic salmon began, with both the state and the aquaculture industry promising to take a cooperative approach.<sup>14</sup> Meanwhile, a final report from the National Academy of Sciences' scientific panel that supported the DPS determination dropped the proverbial second shoe, making it clear that recovery activities that focused too narrowly on the eight rivers of the DPS would not be adequate.<sup>15</sup> Notwithstanding the federal listing agencies' victory on the definition of what a "Maine Salmon" is, the National Academy of Sciences' panel concluded that rehabilitating the species in Maine must include helping the populations whose habitat is diminished by dams.<sup>16</sup>

Independent of the ESA listing and recovery efforts, private and nongovernmental groups began to tackle the fish passage and habitat degradation issues caused by dams, brokering the Lower Penobscot Multi-Party Settlement Agreement to restore the mighty Penobscot, the river to which most Atlantic salmon in Maine return.<sup>17</sup> For the sake of the salmon, three of the worst offending dams would be bought from their power-company owner and pulled down, while other dams, less damaging to habitat, would increase their power output.<sup>18</sup> As her predecessor Bruce Babbitt had done at the historic breaching of the Edwards Dam on the Kennebec in 1999,<sup>19</sup> Interior Secretary Gale Norton took advantage of a photo opportunity on the banks of the Penobscot River in the summer of 2004 to extol the virtue of cooperation in regaining our common natural heritage.<sup>20</sup> Despite her surprise appearance to sign the Lower Penobscot Multi-Party Settlement Agreement personally, Secretary Norton did not bring news of any

---

13. *Id.* at 435-36.

14. *See, e.g.* Carrier, *supra* note 10.

15. *See* NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, ATLANTIC SALMON IN MAINE 7 (National Academies Press 2004) [hereinafter NAS REPORT].

16. *Id.* at 8, 12.

17. Penobscot River Restoration Trust, *Fact Sheet 1* (2010), [http://www.penobscotriver.org/assets/Fact\\_Sheet\\_-\\_Dec\\_2010\\_Final.pdf](http://www.penobscotriver.org/assets/Fact_Sheet_-_Dec_2010_Final.pdf) (late updated Dec. 2010).

18. *Id.*

19. John McPhee, *Farewell to the Nineteenth Century: The Breaching of Edwards Dam*, THE NEW YORKER, Sept. 27, 1999, at 50; *see also* David Jenkins, *Atlantic Salmon, Endangered Species, and the Failure of Environmental Policies*, 45(4) COMP. STUD. IN SOC'Y & HIST. 843, 862 (2003).

20. Editorial, *Saving Salmon*, BANGOR DAILY NEWS, June 22, 2004, at A8.

federal funds to help meet the multimillion-dollar purchase price for the dams. That news was to take another four years and the intervention of many more players in the saga of the Atlantic salmon listing. Finally, the listing process came full circle when salmon in Maine's four largest industrialized rivers were added to the endangered listing of Gulf of Maine salmon, along with an extensive determination of its critical habitat, which included virtually the entire watersheds of all significant salmon rivers in Maine.<sup>21</sup>

This case study recounts the state-federal conflict over the endangered species listing decision for the Maine populations of Atlantic salmon. After a brief introduction to the species' natural history, it describes the cooperative conservation efforts that preceded the citizens' petition to list under the ESA. Second, it describes federal efforts to use state authority and institutions to minimize the threats to salmon survival and avoid a listing. Third, it discusses how the breakdown of these efforts and an independent scientific review led to the federal listing decision. Fourth, it suggests the overriding impact of cooperative federalism policies under the CWA. The final section describes the recovery planning efforts that followed the listing, the listing of additional river systems and critical habitat, and a partnership for river restoration, all of which presents new opportunities for cooperation.

## II. THE NATURAL HISTORY OF THE ATLANTIC SALMON

Edward Baum, the chief salmon biologist for the Maine Atlantic Salmon Commission for over thirty years, published a book at the time of the proposed listing, entitled *Maine's Atlantic Salmon: A National Treasure*.<sup>22</sup> In it, Baum described the basic natural historic features of the Atlantic salmon that makes its conservation such a challenge to biologists and politicians alike. Atlantic salmon were native to most major river systems north of the Hudson River, but by 1865, salmon had vanished from all southern New England rivers due to overfishing, pollution, and dams.<sup>23</sup> By 1870, only seven or eight rivers in Maine contained populations, down from between twenty-eight to thirty-four

---

21. Designated Critical Habitat, 50 C.F.R. § 226.217 (2009).

22. BAUM, *supra* note 1. This case study, especially in the following several paragraphs, draws heavily from Baum's authoritative account.

23. Jenkins, *supra* note 19, at 845.

ivers.<sup>24</sup> By 1900, no wild salmon spawned in the Connecticut, Merrimack, or Androscoggin Rivers.<sup>25</sup>(Figure 11-1).

**Figure 11-1. Historic Atlantic Salmon Rivers in U.S. (The eight DPS rivers listed in 2000 are in bold, the fish icon marks the three rivers added to the DPS in 2009.) Modified from NAS (2004).<sup>26</sup>**



24. *Id.* at 847.

25. *Id.* at 845-7.

26. NAS REPORT, *supra* note 15, at 17.

In 1973, despite the severe reduction in habitat, approximately 1.5 million Atlantic salmon returned to the rivers of North America.<sup>27</sup> By 2001, however, this number drastically declined to fewer than 500,000 with the majority returning to the salmon rivers of eastern Canada.<sup>28</sup> This level of return was less than half the number needed to meet conservation targets for the rivers of North America.<sup>29</sup> Fewer than 862 adult salmon returned to Maine rivers to spawn in 2002, down from an estimated 940 in 2001.<sup>30</sup> Most of those fish returned to the Penobscot (782 in 2002 and 786 in 2001).<sup>31</sup> In the eight rivers in Maine where salmon were initially listed as endangered, only thirty-three salmon returned in 2002.<sup>32</sup>

Each life stage of the Atlantic salmon has a distinctive name, and each has specific habitat requirements. Salmon are anadromous—meaning that as adults, after spending one or more winters in the open ocean, they return in the spring to the rivers in which they were born.<sup>33</sup> They spend up to five months in their natal waters, making their way to stretches of the river with just the right combination of temperature, water flow, and bottom type. As autumn daylight begins to fade and water temperatures cool, spawning females deposit their eggs into one or two groups of gravel pits that are collectively called a “redd.”<sup>34</sup> The eggs hatch five to six months later in March or April.<sup>35</sup> The eyed eggs hatch into alevins and remain buried in the gravel for another six weeks.<sup>36</sup> After they absorb their yolk sacs, the fry are free-swimming, leaving the gravel beds to begin to feed, first on plankton and then on insect larvae and insects.<sup>37</sup> As they grow larger, the youngest juvenile salmon become parr,

---

27. ATLANTIC SALMON FEDERATION, STATUS OF NORTH AMERICAN WILD ATLANTIC SALMON IN 2006: ATLANTIC SALMON AT THE BALANCING POINT 1 (2006).

28. *Id.* See CLEM FAY ET AL., STATUS REVIEW FOR ANADROMOUS ATLANTIC SALMON (*Salmo salar*) IN THE UNITED STATES: REPORT TO THE NATIONAL MARINE FISHERIES SERVICE AND U.S. FISH AND WILDLIFE SERVICE 175 (2006) (describing primacy of Canadian rivers for recent salmon returns).

29. See generally GARETH PORTER, PROTECTING WILD ATLANTIC SALMON FROM IMPACTS OF SALMON AQUACULTURE: A COUNTRY-BY-COUNTRY PROGRESS REPORT (Atlantic Salmon Fed’n & World Wildlife Fund 2003).

30. NAS REPORT, *supra* note 15, at 16.

31. *Id.*

32. *Id.* at 1.

33. BAUM, *supra* note 1, at 10.

34. *Id.* at 11.

35. *Id.* at 12.

36. *Id.*

37. *Id.*

named for the bar-like markings on their sides that serve as camouflage.<sup>38</sup> Most salmon spend two years at this stage (about 20 percent are parr for another year) and the rivers must provide nursery habitat for three year classes of the young fish.<sup>39</sup> In their third spring since hatching, salmon become smolts, undergoing major physiological changes that prepare them for the journey down river and into the North Atlantic Ocean, which takes place from mid-April to mid-June.<sup>40</sup>

**Figure 11-2. Marine Migration Routes of US-Origin Atlantic Salmon.**<sup>41</sup>



After the seven-inch salmon smolts leave the rivers, they spend from one to three winters in the North Atlantic Ocean feeding in the rich waters off the coasts of Labrador, Newfoundland, and Greenland.<sup>42</sup> Maine salmon have been found in waters as far away as the Faroe Islands

---

38. BAUM, *supra* note 1, at 15.

39. *Id.*

40. *Id.*

41. CLEM FAY ET AL., *supra* note 28, at 13.

42. BAUM, *supra* note 1, at 19.

and above the Arctic Circle off Greenland.<sup>43</sup> After retracing their migration routes, some salmon return to their natal rivers to spawn after only one sea winter; others, after two or three years at sea. Salmon that return after only one winter are called grisle.<sup>44</sup> After they find their natal streambeds, female adult salmon create redds; then, male parr and adult salmon fertilize the eggs.<sup>45</sup> Some adults will return to the ocean after spawning and will return in another year to spawn again.<sup>46</sup> This spectacular life cycle makes them vulnerable to changes in their river habitat, as well as to numerous predators, variable ocean conditions, and ocean fisheries.

Adult salmon do not feed while they are in fresh water.<sup>47</sup> This could explain why catching an Atlantic salmon is a major challenge to the recreational angler, earning it the moniker, “the king of fish.” By tradition, for many years the first salmon caught in the spring would be sent to the President of the United States to serve at the White House.<sup>48</sup>

When salmon are in rivers, they require gravel beds, deep cool pools, and eddies of moving water. These conditions were once abundant in the rivers of Maine, but the timber economy of the nineteenth century took a huge toll on the salmon’s habitat.<sup>49</sup> Salmon were once present in twenty-eight to thirty-four rivers in the state, but the mountains of sawdust and other lumbering debris discarded by sawmills wreaked havoc on the salmon’s migration routes.<sup>50</sup> Although Maine lawmakers outlawed this practice in 1834 in the Kennebec and later in other rivers, the damage had been done.<sup>51</sup> Extensive timber cutting also altered riparian habitat and affected the rivers through the practice of driving logs down rivers to the sawmills. A successful drive required loggers to widen the rivers, clear away rock obstructions, and then create huge plumes of water released from behind the drive dams.<sup>52</sup>

These re-engineered rivers became scoured-out transportation corridors for timber, the exact opposite of what a salmon needs for migration and spawning. At the same time, thousands of mill dams were constructed that powered tanneries, paper mills, textile mills, and other

---

43. *Id.*

44. *Id.* at 17.

45. *Id.* at 11.

46. *Id.* at 12.

47. BAUM, *supra* note 1, at 12.

48. *Id.* at 65-8.

49. See NAS REPORT, *supra* note 15, at 62-3.

50. Jenkins, *supra* note 19, at 847.

51. *Id.*

52. *Id.* at 848.

factories. By 1872, only eight rivers in Maine were known to have salmon populations.<sup>53</sup> Then, the twentieth century brought hydropower dams to the salmon's remaining rivers.

### III. CONSERVATION EFFORTS PRIOR TO THE 1993 LISTING PETITION

By the late 1880s, it was apparent to many that the loss of river habitat was largely responsible for Atlantic salmon disappearing from New England's rivers. Instead of placing regulatory controls on the lumber industry, mills, and dams, New England states with federal assistance chose to restock the depleted rivers with fish made in hatcheries.<sup>54</sup> Salmon were by this time highly prized as recreational fishing quarry. It was an easy call for these governments to put to work new knowledge of salmon biology and fish culture methods; then, however, hatchery-based restocking took on a life of its own. For over a century, fish-making through hatcheries was the basis of a cooperative relationship between federal and state fish and wildlife agencies. Salmon returns continued to fluctuate in response to other factors, but the state-federal relationship based upon a mutual faith in restocking never faltered. This state of affairs changed drastically when an endangered species listing loomed on the horizon. The extensive restocking that had gone on for so many years became a point of division between federal and state officials.

#### *A. The Era of Making Salmon*

Science and technology have been at the heart of the federal-state salmon relationship since the late nineteenth century. In an 1874 report to the U.S. Fish Commission, Charles G. Atkins, Maine's fisheries commissioner, expressed optimism that knowledge of how to make salmon in hatcheries, together with improvements in passages for migration and federal-state cooperation, could restore salmon to self-sustaining levels.<sup>55</sup> The states began restocking on their own, creating the first fish hatcheries in the 1860s—first in New Hampshire, then in Maine, Vermont, and Massachusetts.<sup>56</sup> Federal help in fish stocking came after Congress created the U.S. Fish Commission in 1871.<sup>57</sup> Its first

---

53. *Id.*

54. BAUM, *supra* note 1, at 94-5.

55. Jenkins, *supra* note 19, at 849-50.

56. BAUM, *supra* note 1, at 94; Jenkins, *supra* note 19, at 849.

57. BAUM, *supra* note 1, at 95.

director, Spencer Baird, believed strongly that hatcheries were the answer to dwindling stocks of food fish, and the states received federal monies to build them.<sup>58</sup> In the late 1880s, a hefty trade was underway as fish eggs and fingerlings from species in the eastern U.S. were introduced into western waters and vice versa.<sup>59</sup>

The belief in and reliance upon fish culture and stocking continued throughout most of the twentieth century. In Maine, this occurred pursuant to cooperative agreements between the State of Maine and the U.S. Fish and Wildlife Service (U.S. FWS) and its predecessors, the Fish Commission and the Bureau of Sport Fisheries.<sup>60</sup> By the end of the twentieth century, almost 100 million young salmon had been stocked in Maine rivers.<sup>61</sup> The problem was that fish eggs, juveniles, and adult fish were being brought in from distant ecosystems, even as biologists began to recognize fidelity to the natal stream (the stream of birth) as a key adaptation of the salmon species. It was not until 1991 that stocking programs in Maine began using river-specific strains, rather than hatchery stock derived from Canadian or Penobscot River-returning adults or from hybrids of the two.<sup>62</sup> This long history later played a major role in the State of Maine's challenge to the scientific validity of the listing decision.

### *B. Salmon River Runs*

#### 1. Restoration of Salmon River Runs

Maine has long known that salmon in its rivers are at risk. In 1945, the Maine legislature created the Atlantic Sea Run Commission, whose job it was to identify ways to strengthen salmon runs in Maine.<sup>63</sup> In 1949, the Commission reported that approximately 10 percent of the original habitat was accessible to returning adult salmon due to dams and other obstructions in Maine's rivers.<sup>64</sup> Natural runs of salmon were all but extinct, except for the small remaining run in the Penobscot and in the restocked rivers of eastern Maine.<sup>65</sup> But the Atlantic Sea Run

---

58. *See id.* at 95, 97.

59. Jenkins, *supra* note 19, at 850.

60. BAUM, *supra* note 1, at 108.

61. Jenkins, *supra* note 19, at 854.

62. *See id.* at 855.

63. BAUM, *supra* note 1, at 107-8.

64. GEORGE ROUSENFELL & LYNDON BOND, ATLANTIC SEA-RUN COMMISSION, SALMON RESTORATION IN MAINE 26 (1949).

65. *Id.* at 5, 21 (1949); *see also* Jenkins, *supra* note 19, at 852.

Commission also had some good news to report: wild salmon still spawned in Maine rivers and conditions in the rivers had improved.<sup>66</sup> If pollution could be abated, fishways constructed, and water diversions screened, it might be possible to restore the salmon.<sup>67</sup> In the late 1960s, Maine's salmon commission developed a cooperative plan with U.S. FWS and the Maine inland fish and game department to restore salmon runs, largely for the benefit of the recreational angler.<sup>68</sup>

The cooperation of the two Maine agencies with U.S. FWS proved insufficient, however, to deal with all the private land management activities that were eating away at the remaining salmon habitat.<sup>69</sup> Neither agency had sufficient legal authority or political clout to coordinate land and river management in the manner needed for salmon restoration.<sup>70</sup> This was especially true in the watersheds where timber and pulpwood harvesting practices included clear-cutting, a practice that causes erosion and sedimentation and destabilizes water flows, which creates water shortages and inappropriate temperatures.

## 2. The Effect of Blueberry Cultivation on Salmon River Runs

Another land use emerged that Maine agencies were also loath to burden with regulation. Blueberry production began in some of the watersheds of the remaining salmon rivers in eastern Maine in the 1980s.<sup>71</sup> Blueberry cultivation entails water withdrawal for irrigation during the growing season and for protection from frost and the application of pesticides and herbicides to the barrens, all of which created further problems for salmon. The Maine agencies adopted a series of river-specific plans to address these issues and increase the likelihood that naturally spawning and stocked fish would survive and return to the rivers.<sup>72</sup>

---

66. ROUSENFELL & BOND, *supra* note 64, at 5, 21; *see also* Jenkins, *supra* note 19, at 852-3.

67. ROUSENFELL & BOND, *supra* note 64, at 5, 21; *see also* Jenkins, *supra* note 19, at 853.

68. Jenkins, *supra* note 19, at 853.

69. *See id.* at 853.

70. *See, e.g.* Roger Fleming, *Does the Clean Water Act Protect Endangered Species? The Case of Maine's Wild Atlantic Salmon*, 7 OCEAN & COASTAL L.J. 259, 262 n.11 (2002) ("The Services have joint jurisdiction over the Atlantic salmon because it is an anadromous fish, that is, they begin their lives in fresh water, where the young grow to several inches in length, and then migrate to the sea, where they grow more rapidly and become sexually mature after one, two or three years.").

71. Jenkins, *supra* note 19, at 854.

72. *Id.*

### 3. River Runs in the 1980s

The 1980s were apparently a period of good winter survival at sea. By the mid-1980s, salmon populations were relatively high; the number of fish returning from the sea to spawn numbered in the thousands statewide (six thousand to ten thousand).<sup>73</sup> The recreational fishery thrived, landing annually between one thousand and two thousand fish.<sup>74</sup> The early to mid-1980s was also a period of intensive and expanded restoration efforts, enthusiastically supported by busy anglers, who were happy with the good salmon runs and wanted the chance to experience them statewide.<sup>75</sup> The Commission developed a new strategic plan for Atlantic salmon in 1984 and sent its biologists to Canada and Greenland to learn more about the winter lives of salmon.<sup>76</sup>

#### *C. Salmon Farming Enters the Picture*

Farming of hatchery-bred Atlantic salmon began in Maine's coastal waters in the 1980s.<sup>77</sup> The state-federal restocking program for the recreational angler, in fact, helped launch the salmon aquaculture industry in Maine by diverting smolts from the federal salmon hatchery to the private growers.<sup>78</sup> After this "jumpstart," the industry began relying on its own broodstock, derived in part from the European cousins of the Maine Atlantic salmon.<sup>79</sup> Placing pens in Maine's coastal waters to grow salmon smolts to market size was authorized by the Department of Marine Resources under Maine's aquaculture leasing law—a law written largely to encourage shellfish aquaculture, especially the small-scale blue mussel farms that had cropped up in the coastal rivers of midcoast Maine.<sup>80</sup> As the Maine salmon farming industry began to expand, it also grew in Canada, Norway, Scotland, and other countries that had wild salmon rivers. Later in the 1980s, Maine's aquaculture companies repaid the jumpstart loan by giving U.S. FWS and the Maine salmon commission fry and parr they had reared in their then booming private hatchery facilities.<sup>81</sup>

---

73. BAUM, *supra* note 1, at 119; *see* Jenkins, *supra* note 19, at 854.

74. BAUM, *supra* note 1, at 119; Jenkins, *supra* note 19, at 854.

75. *See* BAUM, *supra* note 1, at 119.

76. *See id.* at 119-20.

77. Jenkins, *supra* note 19, at 856.

78. *See* BAUM, *supra* note 1, at 119-20.

79. *See id.* at 120 n.59.

80. ME. REV. STAT. ANN. tit. 12, § 6072 (2005).

81. BAUM, *supra* note 1, at 120 n.59.

The transfer of salmon smolts from the publicly funded hatchery to the new farming industry angered the angling community.<sup>82</sup> Sports fishing lobbyists convinced the Maine legislature to increase public representation on the state salmon commission, presumably to prevent the commission from forgetting that its mission was to restore salmon runs for the benefit of recreational fisheries.<sup>83</sup> But the expansion of the salmon commission in 1987 eroded the effectiveness of its statewide program.<sup>84</sup> By increasing the number of public members from one to three, factions were allowed to emerge, representing different regions and groups of anglers.<sup>85</sup> The warring factions competed for the limited program funds and blamed each other when the runs dropped. The commission tried to maintain its focus and prevent politically driven priorities by adopting a strategic plan.<sup>86</sup>

However, the political infighting continued. When salmon runs and angler landings dropped precipitously in the mid-1980s, due largely to poor marine survival of wild and hatchery smolts, statewide returns dropped from 6,000-10,000 to 1,500-3,000, even with increased stocking.<sup>87</sup> By the end of the 1980s, the populations again declined as marine survival fell by an estimated 80 percent.<sup>88</sup>

A severe state budget crisis in the late 1980s, and the accompanying reduction in staff at all government agencies, curtailed the restocking program, dooming the salmon commission's statewide restoration and management plan.<sup>89</sup> State funding was withdrawn for the biologists at the salmon commission.<sup>90</sup> The shortfall in revenues from salmon fishing licenses required the Commission to appeal to U.S. FWS and the National Marine Fisheries Service (NMFS) to support a scaled-back restoration program, focusing on the seven rivers that still had wild salmon.<sup>91</sup>

---

82. *Id.* at 120.

83. *Id.*

84. *Id.*

85. BAUM, *supra* note 1, at 120.

86. *Id.*

87. *Id.*

88. Jenkins, *supra* note 19, at 855.

89. BAUM, *supra* note 1, at 120.

90. *Id.*

91. *Id.*

*D. The 1992 Prelisting Recovery Plan*

In response to the precipitous drop in numbers of returning adults in November 1991, U.S. FWS listed five of the seven Maine rivers with wild runs (Dennys, East Machias, Machias, Pleasant, and Narraguagus) as Category 2 under the Endangered Species Act.<sup>92</sup> This listing category no longer exists, but at the time it signified there was sufficient concern that a listing as threatened or endangered might become necessary in the future.<sup>93</sup> In the meantime, biological information would be collected and the species would be monitored even more closely than under the cooperative agreements with the states.<sup>94</sup> In 1994, two other rivers with wild runs, the Ducktrap and Sheepscot, inadvertently omitted in 1991, were added to the Category 2 list.<sup>95</sup>

The 1991 listing prompted a much more focused restoration effort by the state salmon commission in cooperation with U.S. FWS. Instead of trying to satisfy everyone and restore sixteen rivers, the agencies focused on the rivers that still had wild runs.<sup>96</sup> This focus involved limiting the restocking to only river-specific strains of salmon.<sup>97</sup> Monitoring returning tagged salmon had shown that wild salmon survive at higher rates than hatchery salmon.<sup>98</sup> The decision was made to increase the rivers' own production of wild smolts by saturating any vacant or underused habitat with fry, so that when conditions allowed greater winter survival, there would be many fish to take full advantage of the improved conditions at sea.<sup>99</sup> The Commission and the U.S. FWS created a "prelisting recovery plan" for wild Maine salmon populations in 1992.<sup>100</sup> It was based on the assumption that listing as endangered or threatened could be avoided by concerted conservation efforts to boost

---

92. *Id.* at 121.

93. *Id.*

94. Endangered and Threatened Wildlife and Plants, Animal Candidate Review for Listing as Endangered or Threatened Species, 56 Fed. Reg. 58,804, 58,805 (Nov. 21, 1991) (to be codified at 50 C.F.R. pt. 17).

95. See BAUM, *supra* note 1, at 121 n.61; see also Endangered and Threatened Wildlife and Plants; 90-Day Finding for a Petition To List the Anadromous Atlantic Salmon (*Salmo salar*) Populations in the United States as Endangered or Threatened, 59 Fed. Reg. 3,067, 3,068 (Jan. 20, 1994) (to be codified at 50 C.F.R. pt. 17) (noting the substantial information supporting an ESA listing and the addition of the Ducktrap and Sheepscot Rivers to the proposed critical habitat).

96. See BAUM, *supra* note 1, at 121.

97. *Id.*

98. See *id.*

99. *Id.*

100. *Id.*

the populations' status.<sup>101</sup> On the other hand, if listing eventually happened, the plan would serve as the basis for a full recovery plan.<sup>102</sup>

The prelisting recovery plan had six elements, the first of which focused on development of river-specific brood stocks to support fry stocking, which would in turn maximize each river's production of wild smolts.<sup>103</sup> Research on the genetic characteristics of all salmon stocks in Maine rivers would help focus future recovery efforts. By installing weirs to trap fish on existing runs, fish could be trapped and used for brood stock and to collect data on the strength of the runs.<sup>104</sup> A complete inventory of all salmon habitat and the identification of threats to the salmon and their elimination were also in the plan.<sup>105</sup> The U.S. FWS constructed a new state-of-the-art hatchery in Maine to accommodate the river-specific strains.<sup>106</sup> It was a big operation; each river had its own room in the hatchery.

The river-specific stocking program released more than 1.2 million fry into five of the seven rivers in the years between 1992 and 1996; the use of Penobscot River-origin salmon was stopped completely in 1991.<sup>107</sup> Senator George Mitchell helped to secure most of the funding to carry out the prelisting plan from congressional appropriations.<sup>108</sup> Along with Senator William Cohen, Mitchell restored the federal funding through an amendment to the Interior Department's 1993 appropriations bill, sending \$550,000 to provide funds for restoration and research on the Downeast rivers.<sup>109</sup> Adult salmon returned in low numbers, however, reaching new lows in the early 1990s.<sup>110</sup>

In 1995, the Maine salmon commission adopted a statewide salmon restoration and management plan to guide the preparation and implementation of river-specific plans for the next five years.<sup>111</sup> It also adopted a statewide regulation limiting salmon angling to a catch-and-release fishery.<sup>112</sup> Although during the previous decade recreational fishermen, especially those from Downeast, had vehemently opposed

---

101. BAUM, *supra* note 1, at 121.

102. *Id.*

103. *Id.* at 122.

104. *Id.*

105. *Id.*

106. BAUM, *supra* note 1, at 122.

107. *Id.*

108. *Id.*

109. *Id.* at 118.

110. *Id.* at 122.

111. BAUM, *supra* note 1, at 125-6.

112. *Id.* at 126.

proposed reductions in the season catch limit, the catch and release rule drew very little opposition.<sup>113</sup>

*E. Actions Regarding the Ocean Fisheries for Atlantic Salmon*

An ocean fishery for Atlantic salmon had been carried out off the coast of Greenland since the early 1950s, after a big concentration of fish was discovered in the Davis Straits.<sup>114</sup> Tagging returns revealed that this fishery caught mixed stocks, including salmon from Maine as well as from European rivers.<sup>115</sup>

A U.S. nongovernmental organization (NGO) called Trout Unlimited, through a campaign led by retired businessman Richard A. Buck, brought pressure to bear on the U.S. government. Buck sought an end to the rapidly escalating intercept fishery, which caught Atlantic salmon in their winter feeding grounds off the coast of West Greenland.<sup>116</sup> Buck created the Committee on the Atlantic Salmon Emergency (CASE) in 1968 and enlisted a number of American celebrities who were fans of Atlantic salmon, including Bing Crosby, Ted Williams, and Curt Gowdy, to help publicize the salmon's plight and the need to end the high-seas fishery.<sup>117</sup> Buck sought and received an audience with the Danish foreign minister in 1971.<sup>118</sup> CASE lobbied Congress to pass the Pelly Amendment to the Fishermen's Protection Act,<sup>119</sup> giving the Executive Branch the power to bar Danish goods from the U.S. market if Denmark did not curtail overharvesting off western Greenland.

After passage of the Pelly Amendment and the threat of an embargo, the Danish government met with U.S. officials.<sup>120</sup> The result was the U.S.-Danish Fisheries Agreement, signed on February 22, 1972, to phase out, by 1976, the catching of salmon in waters beyond the territorial sea of Greenland.<sup>121</sup> The West Greenland fishery was managed by catch

---

113. *Id.* at 126.

114. MICHAEL BERRILL, *THE PLUNDERED SEAS: CAN THE WORLD'S FISH BE SAVED?* 161 (1997).

115. BAUM, *supra* note 1, at 116.

116. RICHARD BUCK, *SILVER SWIMMER: THE STRUGGLE FOR SURVIVAL OF THE ATLANTIC SALMON* 65 (1993).

117. *Id.* at 66.

118. *Id.* at 88-94.

119. *Id.* at 95-103; 22 U.S.C. § 1978 (2006).

120. RICHARD BUCK, *supra* note 116, at 122.

121. *Id.* at 124-5.

quotas from 1972 onward.<sup>122</sup> Richard Buck then organized a new entity, Restoration of Atlantic Salmon in America, Inc., to press the U.S. State Department to negotiate an international agreement to protect salmon from all fishing during its ocean migration.<sup>123</sup> His participation in the negotiations resulted in a treaty forming the North Atlantic Salmon Conservation Organization (NASCO) in 1983; Buck then served as one of the three U.S. commissioners appointed by the President, from 1983 until 1991.

The International Council for Exploration of the Seas (ICES) provides NASCO with scientific advice in the form of abundance estimates and escapement requirements for the 600 stocks of Atlantic salmon in North America and the 1,500 stocks in the Northeast Atlantic.<sup>124</sup> Its job includes research and providing catch advice, via the Advisory Committee on Fishery Management, for the two high-seas mixed stock fisheries off western Greenland, fisheries that take mainly North American and southern European stocks.<sup>125</sup> In the early 1990s, ICES recommended a zero quota.<sup>126</sup> Eventually, U.S. (and Canadian) NGOs, with some government support, bought the fishing rights that Greenland fishers had under the NASCO quotas.<sup>127</sup>

In the late 1980s, the New England Fishery Management Council was asked to develop a fishery management plan to prohibit fishing for and possession of Atlantic salmon in the U.S. 200-mile Exclusive Economic Zone (EEZ), presumably to meet the U.S.'s international obligations under NASCO.<sup>128</sup> However, the U.S. government apparently balked at closing down high seas fishing for salmon by U.S. vessels.<sup>129</sup> The Government of Canada closed the Newfoundland salmon fishery for five years beginning in 1992.<sup>130</sup> This was followed by the two-year

---

122. BAUM, *supra* note 1, at 86.

123. BUCK, *supra* note 116, at 147-8.

124. International Council for Exploration of the Seas, *What's Happening to Atlantic Salmon?*, ICES NEWSLETTER June 2002, at 8.

125. *Id.*

126. See Fred Whoriskey, *Management Angels and Demons in the Conservation of the Atlantic Salmon in North America*, 70 *American Fisheries Society Symposium* 1083, 1092 (2009).

127. *See id.*

128. NEW ENGLAND FISHERY MANAGEMENT COUNCIL, FISHERY MANAGEMENT PLAN FOR ATLANTIC SALMON: INCORPORATING AN ENVIRONMENTAL ASSESSMENT AND REGULATORY IMPACT REVIEW/INITIAL REGULATORY FLEXIBILITY ANALYSIS 64 (1987).

129. Jenkins, *supra* note 19, at 872.

130. *Conservation Library: Overutilization for Commercial, Recreational, Scientific, or Educational Purposes*, U.S. FISH & WILDLIFE SERVICE (Jan. 23, 2011, 8:53 PM), <http://library.fws.gov/salmon/asalmon72.html>.

buyout of the Greenland fishers' quota.<sup>131</sup> Curtailing these fisheries was essential for providing escapement of adult salmon, allowing them to return to spawn in Maine's rivers. The West Greenland fishery was stopped in 2004.<sup>132</sup>

*F. International Attention to Aquaculture Impacts on Wild Salmon*

In 1994, responding to concerns about the growing salmon farming industry's impact on wild salmon, nation members of NASCO, which include the seven largest producers of farmed salmon, adopted the so-called Oslo Resolution.<sup>133</sup> The parties agreed to adopt national controls including criteria for siting pens away from wild salmon rivers, measures to prevent escapes of farmed salmon from the pens, and controls on disease and parasites, with an annual reporting commitment.<sup>134</sup> The U.S., Canada, Norway, Scotland, Iceland, and the Faroe Islands are all signatories of the Oslo Resolution.<sup>135</sup>

By 2002, many observers were disappointed by the slow progress under the Oslo Resolution. An NGO report on national compliance with the agreement gave the United States the second worst score, 0.5 out of a possible 10.0 points.<sup>136</sup> The low score was due not only to the failure of government authorities to issue CWA discharge permits to the salmon farms that would limit genetic, disease and other risks to wild salmon, but also the failure to apply siting criteria that would locate pens safely away from the wild salmon rivers and the failure to require farms to report major fish escapes.<sup>137</sup>

In a similar vein, ICES developed a Code of Practice on the Introduction and Transfers of Marine Organisms in 1984 and 1988.<sup>138</sup> In 1994, the code was updated and sent to the U.N. Food and Agriculture Organization for inclusion as part of its guidelines under the Code of

---

131. *Id.*

132. REPORT OF THE TWENTY-FIRST ANNUAL MEETING OF THE COUNCIL 388 (NORTH ATLANTIC SALMON CONSERVATION ORG. 2004.), available at [http://www.nasco.int/pdf/reports\\_annual/2004%20Council%20Report.pdf](http://www.nasco.int/pdf/reports_annual/2004%20Council%20Report.pdf).

133. PORTER, *supra* note 29, at 4.

134. *See id.* at 8.

135. *Id.* at 4.

136. *Id.* at 59.

137. Andrew Goode, Editorial, *Task Force to Help Plan for Aquaculture's Future*, BANGOR DAILY NEWS, June 10, 2003, at A9, available at <http://www.bangordailynews.com/archive.html>.

138. International Council for Exploration of the Sea, *ICES Code of Practice on the Introduction and Transfers of Marine Organisms* (2004), <http://www.ices.dk/reports/general/2004/icescop2004.pdf>.

Conduct for Responsible Fisheries.<sup>139</sup> In 1997, NASCO and ICES convened an international symposium to examine the science underlying the concerns regarding the interaction of salmon aquaculture and wild salmon.<sup>140</sup>

#### IV. THE PROPOSED LISTING AS THREATENED AND THE SPECIAL SECTION 4(D) RULE DEAL

The relationship between Maine and the federal fish and wildlife agencies changed dramatically after U.S. FWS and NMFS received petitions in 1993 to list the Atlantic salmon as endangered. The petitions came at a time when the ESA was under political siege, triggered in large part by the Services'<sup>141</sup> interpretation that harm caused by significant habitat degradation was a taking prohibited by the Act.<sup>142</sup> Advisors to Secretary of Interior Babbitt were active in seeking ways to reduce opposition to the Act, while preserving its protective essence.

Out of this search came new concepts and interpretations, including the listing of a DPS and a cooperative policy on the role of state agencies.<sup>143</sup> Some of these tools were used in the Atlantic salmon listing in an effort to keep the State of Maine in the lead in defining which private actions constituted a "taking." However, one commentator suggested that the Services used the DPS concept to limit the potential application of the "taking" prohibition to those constituencies that were less politically powerful than the dam-operating power companies and

---

139. U.N. FOOD & AGRIC. ORG., FAO TECHNICAL GUIDELINES FOR RESPONSIBLE FISHERIES: PRECAUTIONARY APPROACH TO CAPTURE FISHERIES AND SPECIES INTRODUCTIONS 37-41 (1996).

140. International Council for Exploration of the Seas, *Interactions Between Salmon Culture and Wild Stocks of Atlantic Salmon: The Scientific and Management Issues*, ICES NEWSLETTER, Sept. 1997, available at <http://www.ices.dk/products/newsletters/30/salmon.htm>.

141. U.S. FWS and NMFS referred to themselves as "the Services." BAUM, *supra* note 1, at 124.

142. See *Babbitt v. Sweet Home Chapter Cmty. for Or.*, 515 U.S. 687 (1995) (upholding the U.S. Fish & Wildlife Service's definition of "harm" in 50 C.F.R. § 17.3 (1994)).

143. Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4,722, 4,722-25 (Feb. 7, 1996); Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities, 59 Fed. Reg. 34,275 (July 1, 1994).

their customers.<sup>144</sup> Or at least that was the hope. By the time the Services were able to make a deal with the State about the listing, a new industry had developed in Maine that posed new threats to wild salmon. Although much smaller than the timber companies and hydropower consumers of the Pacific Northwest that NMFS had previously had to contend with, the salmon farming companies would prove to be formidable opponents of federal regulation. A new governor was also on the scene, one who was willing to take on federal authority in order to protect both old and new jobs in Maine.

#### A. *The 1993 Petitions*

U.S. FWS received a petition to list the Atlantic salmon under the ESA on October 1, 1993, from an organization called RESTORE: The North Woods, which is based in Concord, Massachusetts.<sup>145</sup> Organized to help promote the creation of a new national park in the remaining forestlands of northern New England, RESTORE asked U.S. FWS to list the salmon throughout its historic range in the U.S.<sup>146</sup>

U.S. FWS's first response was to panic;<sup>147</sup> all the controversial Pacific salmon listing petitions had been submitted to NMFS, with their difficult implications for hydropower dams and forest practices. Aware of the century-long restocking effort, U.S. FWS created a genetics working group at its lab in West Virginia with the purpose of collecting new samples and analyzing archived samples to determine whether any of Maine's wild salmon populations even qualified for listing as a species.<sup>148</sup>

An identical petition was sent one month later to NMFS, triggering a "turf battle" with U.S. FWS over which agency had jurisdiction.<sup>149</sup> The agencies finally resolved the issue with a cooperative agreement between their Northeast regional directors.<sup>150</sup> They agreed to review the petition

---

144. Kirk G. Siegel, Comment, *Challenging the "Distinct Population Segment" Definition of Atlantic Salmon Under the Endangered Species Act*, 2 OCEAN & COASTAL L. J. 341, 362 (1997).

145. BAUM, *supra* note 1, at 122-3.

146. *Id.* at 123. Co-petitioners were the Biodiversity Legal Foundation and Jeffrey Elliott, a New Hampshire resident. *Id.*

147. *Id.*

148. *Id.* at 123.

149. *Id.* at 124.

150. *Id.*

jointly, in view of the fact that Atlantic salmon spend half their lives in fresh water and the other half in marine waters.<sup>151</sup>

The Services published a notice in the *Federal Register* that the petitions had been received and invited public comment until April 1994.<sup>152</sup> After the close of the comment period, the Services created a biological review team composed of six members, three from each of the two agencies, who then spent the remainder of the year gathering information and reviewing materials that had been submitted.<sup>153</sup>

Business interests in Maine, as well as several departments of the State's government, sent dozens of letters, arguing that listing would be an unwarranted economic disaster.<sup>154</sup> The Maine forest industry promptly formed a committee to fight the petition.<sup>155</sup> Later in the year, a coalition of private industry, state and federal agencies, and private individuals created a nonprofit organization called SHARE—for Salmon Habitat and River Enhancement—with the purpose of conserving and enhancing salmon habitat in the five most eastern salmon rivers, through voluntary action and cooperation.<sup>156</sup>

The newly inaugurated Governor of Maine, Angus F. King, Jr., immediately spoke out against the potential listing. On March 10, 1995, the Services announced that the biological status review was finished.<sup>157</sup> They concluded that the best available biological evidence showed that listing salmon as endangered throughout the its historic range was not warranted, largely because indigenous salmon in rivers south of the Kennebec had been extirpated in the nineteenth century.<sup>158</sup> The Services did, however, "determin[e] that sufficient information was available to support appropriate listing actions for the [DPS] that consists of populations in the Sheepscot, Ducktrap, Narraguagus, Pleasant, Machias, East Machias, and Dennys rivers."<sup>159</sup> However, the status of the populations in the lower Kennebec River, the Penobscot River, Tunk

---

151. BAUM, *supra* note 1, at 124.

152. Endangered and Threatened Wildlife and Plants; 12 Month Finding for a Petition to List the Anadromous Atlantic Salmon (*Salmo Salar*) Populations in the United States as Endangered or Threatened, 60 Fed. Reg. 14,410, 14,410-12 (Mar. 17, 1996) (to be codified at 50 C.F.R. pt. 17); see BAUM *supra* note 1, at 124.

153. BAUM, *supra* note 1, at 124.

154. *Id.*

155. *Id.* "The forestry committee's acronym was 'FIASCO,' which stood for the Forest Industry Atlantic Salmon Committee." *Id.*

156. *Id.*

157. BAUM, *supra* note 1, at 125.

158. Endangered and Threatened Wildlife and Plants, 60 Fed. Reg. 14,410 (Mar. 17, 1995).

159. *Id.* at 14,410; BAUM, *supra* note 1, at 125.

Stream, and the lower St. Croix River was uncertain and required further study.<sup>160</sup> Additionally, the Services requested comments on whether any native, naturally reproducing populations still existed in these rivers and tributaries. Meanwhile, work would begin immediately on a proposed rule to list the DPS.<sup>161</sup>

*B. The 1995 Proposed Listing as Threatened*

The Services were as good as their word, for on September 29, 1995, they published a proposed listing of seven Maine rivers as threatened DPSs.<sup>162</sup> However, the proposed rule contained an usual feature for a federal regulation. The rule invited the State of Maine to submit a conservation plan that, under a special section 4(d) rule, would provide regulations in lieu of federal controls, perhaps obviating the need for a listing altogether.<sup>163</sup> A section 4(d) rule is a mechanism developed by the Services in the early 1990s to reduce the risk that private parties will be subject to citizen suits for allowing an indirect taking of a species listed as threatened.<sup>164</sup> Under the rule, an approved state conservation plan defines the range of actions that would constitute acceptable indirect takings, as long as efforts are made to conserve and to restore the species.<sup>165</sup>

In the proposed listing, the Services identified three major threats to salmon: poaching, low natural survival at sea, and the potential impacts from salmon aquaculture and hatcheries through disease transmission and/or loss of genetic integrity through escaped salmon.<sup>166</sup> The State conservation plan that the Services were inviting would presumably minimize those threats.<sup>167</sup>

---

160. *Id.*

161. Endangered and Threatened Wildlife and Plants, 60 Fed. Reg. 14,410; *see also* BAUM, *supra* note 1, at 125.

162. Proposed Threatened Status for a Distinct Population Segment of Anadromous Atlantic Salmon in Seven Maine Rivers, 60 Fed. Reg. 50,530 (Sept. 29, 1995) (to be codified at 50 C.F.R. pt. 17, 227, 425); BAUM, *supra* note 1, at 125.

163. Proposed Threatened Status for a Distinct Population Segment of Anadromous Atlantic Salmon in Seven Maine Rivers, 60 Fed. Reg. at 50,530, 50,535; BAUM, *supra* note 1, at 125.

164. Robert L. Fischman, *Cooperative Federalism in Natural Resources Law*, 14 N.Y.U. ENVTL. L.J. 179, 213-14 (2005).

165. *Id.*; *see also* MICHAEL J. BEAN & MELANIE J. ROWLAND, *THE EVOLUTION OF NATIONAL WILDLIFE LAW* 267-70 (3rd ed. 1997).

166. Proposed Threatened Status for a Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in Seven Maine Rivers, 60 Fed. Reg. at 50,533.

167. *Id.* at 50,532-35.

The Services' discussion of listing factor D, whether existing regulatory mechanisms were inadequate, made this expectation clear. The Services reported that more stringent implementation and enforcement of existing regulations would strengthen their effectiveness.<sup>168</sup> They specifically mentioned the need for strengthening regulations of salmon farming—first, in relation to the genetic threat posed by escapees from pens located within twenty kilometers of five of the seven rivers in the proposed DPS, and, second, in regard to the growing risk that penned salmon could transmit disease to wild salmon migrating nearby.<sup>169</sup> The Services also suggested that possible new measures could require changes in broodstock selection and prohibit the use of European strains for broodstock in the aquaculture companies' hatcheries.<sup>170</sup>

The date of the proposed rule's publication, September 29, 1995, turned out to be the last day before a Congressional moratorium took effect on ESA listing actions.<sup>171</sup> When the moratorium expired in April 1996, the Services reopened the comment period.<sup>172</sup> The State of Maine's comments were accompanied by a letter from Governor Angus King, stating that he opposed the listing "in the strongest possible terms," and, proposing instead that the Services enter into a cooperative agreement with the State.<sup>173</sup> While the proposed listing was pending, Maine Senator William Cohen sent a letter to Secretary Babbitt containing a thinly veiled threat that the senator would support an amendment to the ESA requiring the Services to consider social and economic factors in listing decisions.<sup>174</sup>

### *C. State of Maine's Response to the 1995 Proposed Listing*

After the proposed listing was published, the governor's office took control of making salmon policy for the State.<sup>175</sup> Earlier in 1995, the Maine legislature enacted a bill replacing the Atlantic Sea Run Salmon Commission with a new entity, the Atlantic Salmon Authority.<sup>176</sup> The bill was a compromise between those who wanted to abolish the commission

---

168. *Id.* at 50,532.

169. *Id.* at 50,532-35.

170. *Id.* at 50,532-33.

171. Siegel, *supra* note 143, at 342.

172. *Id.* at 342 n.11.

173. *Id.* at 342.

174. *Id.* at 377.

175. BAUM, *supra* note 1, at 127.

176. *Id.*

and those seeking a more diverse membership and a more independent body that would be free of political interference from the governor's office and executive departments.<sup>177</sup> The Atlantic Salmon Authority was to have "sole authority" over salmon in all waters of the state and the administrators of the two government departments would be outnumbered by public and tribal members of the governing board.<sup>178</sup>

On the date the new Authority was to come into being, the Services proposed the listing.<sup>179</sup> The governor did not appoint the public members of the Authority's Board until late in the next legislative session, in 1996, by introducing emergency legislation that quickly passed without public debate.<sup>180</sup> The bill delayed giving the Authority the "sole authority" over salmon in Maine until July 1, 1997.<sup>181</sup>

One month later, on October 20, 1995, Governor King issued an executive order creating a Maine Atlantic Salmon Task Force, whose job included: advising the governor on how to respond to the proposed listing of salmon in the seven rivers, developing a conservation plan for the recovery of salmon and its habitat on the seven rivers, and weighing in on whether the populations in the other Maine rivers were native and naturally reproducing.<sup>182</sup> The Task Force was chaired by the governor's appointed Commissioner of Inland Fisheries and Wildlife, who in turn created six technical working groups to tackle the job. Members of the Task Force included representatives of the timber companies, salmon farmers, blueberry growers, environmental advocacy groups, and state agencies.<sup>183</sup>

Using materials from the working groups, the governor sent a response to the Services on December 27, 1995, stating:

[T]he State of Maine is strongly opposed to the proposed threatened species listing on the seven rivers on the grounds that the stocks in the seven rivers do not meet the criteria for listing under the Act and that listing would be counter-productive to the superior protection afforded the species under the existing Maine regulatory mechanism, as enhanced by voluntary public/private partnership[s] to conserve and restore salmon runs.<sup>184</sup>

---

177. *Id.* at 126.

178. *Id.* at 127.

179. *Id.*

180. BAUM, *supra* note 1, at 127.

181. *Id.*

182. *Id.*

183. *Id.*

184. *Id.*

The governor's letter asked the Services instead to enter into a cooperative agreement for the implementation of the conservation plan under development by the Task Force.<sup>185</sup> The State of Maine presumably thought that a cooperative agreement would be superior to the proposed section 4(d) rule because there would be no federal listing.

*D. The Maine Conservation Plan of 1997*

The Atlantic Salmon Task Force submitted the first draft of the conservation plan in November 1996 and it was sent to the Services for an informal review. After receiving their comments two months later, the Task Force revised the draft and the governor's office released it for public comment in early March 1997.<sup>186</sup> The Services then published a notice in the *Federal Register* inviting public comment on the plan for thirty days.<sup>187</sup>

It was not until the Task Force had nearly completed the first draft of the plan that the governor appointed the citizen members of the board for the new Atlantic Salmon Authority. The board's first task was to submit a report to the legislature on its plan for the management of the state's salmon fishery. However, because the governor had given the Task Force the job of devising a plan for salmon in the seven Downeast rivers and because the Services were still funding most of the conservation activities in the state, few believed that sufficient budget and staff would be given to implement any plan the board could devise for the remaining nine rivers with salmon populations.

Meanwhile, the Services were revisiting the definition of a DPS. On February 7, 1996, the U.S. FWS published a new interpretation. Three criteria would apply: whether the population 1) was discrete in relation to the remainder of the species to which it was a part, 2) was significant to the species to which it belonged, and 3) met the standards for listing as either threatened or endangered.<sup>188</sup> Underlying the revised definition was a belief that new techniques of genetic analysis would allow these criteria to be applied objectively.

The Task Force took sixteen months to write the Maine Plan that could withstand review; it was heavily assisted by the Services. NMFS

---

185. *Id.*

186. Endangered and Threatened Species; Reopening of Comment Period on Proposed Threatened Status for a Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in Seven Rivers, 62 Fed. Reg. 28,413 28,413 (May 23, 1997).

187. *Id.*

188. Policy Regarding the Recognition of Distinct Vertebrate Population Segments under the Endangered Species Act, 61 Fed. Reg. 4,722, 4,725 (Feb. 7, 1996).

contributed \$60,000 so Maine could hire a plan coordinator.<sup>189</sup> In the Maine Plan, the Task Force noted its consensus view that forces beyond Maine's jurisdiction are responsible for the status of the Atlantic salmon in Maine.<sup>190</sup> These forces include "cyclical stock fluctuation, strongly influenced by low marine survival beyond Maine's state waters, and overfishing on the high seas."<sup>191</sup> Because these factors will ultimately determine the fate of salmon runs, "[t]he Conservation Plan is designed to assure that Maine has taken all reasonable steps to assure successful restoration if and when the international commercial fishing and ocean temperature conditions improve."<sup>192</sup>

When it was completed, the Maine Plan evidently contained enough to satisfy the Services, who were probably anxious at this point to allow the state to retain primary control over salmon restoration efforts. The Maine Plan contained a voluntary agreement among the various industries whose practices affected salmon habitat to improve fish management techniques, restore degraded habitat and protect habitat integrity, provide more comprehensive protection of salmon, develop new public education programs, and effectively enforce existing regulations.<sup>193</sup> The Atlantic Salmon Federation criticized the Maine Plan for failing to address adequately threats posed by aquaculture through interbreeding by escaped farmed fish, the industry's use of non-native strains, and disease.<sup>194</sup> The Maine Plan's effectiveness regarding these threats depended upon the industry's strategy to prevent escapes through stronger containment nets, vaccination against disease, and harvesting penned fish before they were reproductively mature.<sup>195</sup>

The Services then reopened the public comment period on the proposed listing to solicit public comment on the Maine Plan as well as on new information on the salmon, including the latest adult returns, redd

---

189. BAUM, *supra* note 1, at 134.

190. MAINE ATLANTIC SALMON TASK FORCE, *supra* note 3, at 1.

191. *Id.*

192. *Id.*

193. Jenkins, *supra* note 19, at 863.

194. See generally MATTHEW MORRIS ET AL., ATLANTIC SALMON FEDERATION, PREVALENCE AND RECURRENCE OF ESCAPED FARMED ATLANTIC SALMON (*SALMO SALAR*) IN EASTERN NORTH AMERICAN RIVERS (2008), available at <http://www.asf.ca/docs/issues/morrisetal2008.pdf>.

195. MAINE ATLANTIC SALMON TASK FORCE, *supra* note 3, at 13-5.

counts, fry stocking, habitat assessments, and new commercial fishing agreements and management measures.<sup>196</sup>

*E. Withdrawal of the Proposed Listing*

Although the exact timing is unclear, negotiations between the Services and Maine officials resulted in a deal. As a result of the terms of the deal, the wild salmon in eastern rivers of Maine would be recognized as a “distinct population segment” that qualified as a species under the ESA, but the listing would be withdrawn because Maine would develop a state conservation plan. They agreed also that the Services would fund an analysis of the available genetics data to see if the salmon runs were, in fact, distinct from the hundreds of thousands of Atlantic salmon that lived in the aquaculture pens in the salmon farms now dotting the Downeast coast.<sup>197</sup>

In December 1997, Interior Secretary Bruce Babbitt and Commerce Under Secretary for Oceans, Terry Garcia, attended a meeting at the Maine State Capitol in Augusta to discuss the proposed listing. At a public ceremony later that day, Secretary Babbitt praised the Maine Plan and the cooperation that had led to its approval.<sup>198</sup> He called it “a new chapter in conservation history” that would “stand as a model for the nation,” and he praised Governor Angus King for “show[ing] great leadership in forging this collaboration, which will continue to enhance the ecology and economy of the state for years to come.”<sup>199</sup> He had come not only to praise the state, but to announce that federal agencies were withdrawing the proposed listing under the ESA.<sup>200</sup> He gave some hint at the orchestration that had led to the moment when he noted:

The announcement today is short and sweet by joint agreement of the National Marine Fisheries Service, in the Department of Commerce, and the Fish and Wildlife Service, in the Department of Interior. We are here gratefully and happily to say to the people of the great State of Maine the petition that lists the Atlantic Salmon is hereby withdrawn. Yeah, I kinda thought that

---

196. Reopening of Comment Period on Proposed Threatened Status for a Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in the Seven Rivers, 62 Fed. Reg. 28,413, 28,413 (May 23, 1997).

197. David Malakoff, *Atlantic Salmon Spawn Fight over Species Protection*, 279 (5352) SCIENCE 800, 800 (1998).

198. Jenkins, *supra* note 19, at 862.

199. *Id.*

200. Jenkins, *supra* note 19, at 862.

would be a crowd pleaser! But it didn't just happen. This happy event today is the combination of a lot of work by some very determined people led by your good Governor, who several years ago sat down with Molly Beattie, the Director of the Fish and Wildlife Service, and the people from the National Marine Fisheries and made a simple point, and that was that the protection of the Atlantic salmon ought to be worked out on the ground under the Governor's leadership by the affected people in the state agencies and the conservation organizations of the State of Maine. The Governor's pitch to us then and now was very simple. He says, 'Rather than setting up the inevitably antagonistic form of federal regulation we can, working together, buy all of the stakeholders into a plan to protect this fish because the people of Maine have a deep and abiding love for their land and their resources and this salmon,' and that of course is what leads us to the work product today, which is the Conservation Agreement, which has been put together under the Governor's direction, which is the substitute for the regulatory action of listing and which substitutes precisely because by its terms it removes the threat that could've caused the listing. And I would say in conclusion that this is a big win for the people of Maine.<sup>201</sup>

To explain why the proposed listing was being withdrawn, the Services emphasized that the ESA required them to consider whether the state and local efforts to conserve were sufficient to prevent a species' further decline or to recover a species that was in peril.<sup>202</sup> They had considered the species' current status and had taken into account efforts such as the development of the Maine Plan and its implementation to date, as well as private and federal actions and international efforts to control ocean harvest through NASCO.<sup>203</sup> Based on this review, the DPS was not likely to become extinct in the foreseeable future and therefore

---

201. *Id.* at 862-63.

202. *See* Withdrawal of Proposed Rule to List a Distinct Population Segment of Atlantic Salmon (*Salmo salar*) as Threatened, 62 Fed. Reg. 66,325, 66,325 (December 18, 1997); Jenkins, *supra* note 19, at 863.

203. Withdrawal of Proposed Rule to List a Distinct Population Segment of Atlantic Salmon (*Salmo salar*) as Threatened, 62 Fed. Reg. at 66,328; *see* MARY A. COLLIGAN ET AL., 1999 BIOLOGICAL REPORT ON THE STATUS OF ATLANTIC SALMON: A REPORT TO THE NATIONAL MARINE FISHERIES SERVICE 1 (1999), *available at* <http://www.nmfs.noaa.gov/pr/pdfs/statusreviews/atlanticsalmon1999.pdf>.

the listing was not warranted.<sup>204</sup> The DPS would be renamed the “Gulf of Maine DPS,” in recognition that additional populations may be added in the future if they are found to be naturally reproducing with historic, river-specific characteristics.<sup>205</sup>

The Services stated that they believed the most significant threats posed by escaped farmed salmon through interbreeding with wild fish would be alleviated by full implementation of a code of containment and the construction of weirs at which farmed fish could be removed.<sup>206</sup> They seemed to signal that the state was not being given *carte blanche* to make only desultory efforts at recovery. The Services promised the public that they would report annually on what progress was being made under the Maine Plan and to make the report available for public comment.<sup>207</sup> They suggested that the listing could be reinstated if certain circumstances arose, including a significant deterioration of the DPS’s biological status.<sup>208</sup>

#### V. BREAKDOWN OF THE DEAL AND THE FINAL LISTING AS ENDANGERED

Governor King directed the state agencies to use their authorities to carry out the Maine Plan and gave the executive branch’s Land and Water Resources Council (LWRC) oversight responsibility for the plan’s implementation.<sup>209</sup> The LWRC is chaired by the State Planning Office director and includes commissioners of all the state departments with any responsibility for the environment, natural resources, economic development, and infrastructure.<sup>210</sup> The LWRC created an Atlantic Salmon Committee that included the department heads, as well as the chair of the new Atlantic Salmon Authority and a representative of each of the local watershed councils.<sup>211</sup>

---

204. Withdrawal of Proposed Rule to List a Distinct Population Segment of Atlantic Salmon (*Salmo salar*) as Threatened, 62 Fed. Reg. at 66,327-8; COLLIGAN, *supra* note 203, at 1.

205. COLLIGAN ET AL., *supra* note 203, at 5.

206. Withdrawal of Proposed Rule to List a Distinct Population Segment of Atlantic Salmon (*Salmo salar*) as Threatened, 62 Fed. Reg. at 66,332.

207. *Id.* at 66,338; *see* COLLIGAN ET AL., *supra* note 203, at 5.

208. Withdrawal of Proposed Rule to List a Distinct Population Segment of Atlantic Salmon (*Salmo salar*) as Threatened, 62 Fed. Reg. at 66,338.

209. *Id.*

210. *Id.*

211. Jenkins, *supra* note 19, at 864.

By 1999, Maine had spent roughly one million dollars to carry out the Maine Plan, and another million had been designated for continuing efforts.<sup>212</sup> The legislature appropriated money to hire a coordinator for the Maine Plan and a biologist for the Atlantic Salmon Authority.<sup>213</sup> Challenge grants were issued for local habitat restoration efforts in the seven rivers.<sup>214</sup> By all accounts, quite a lot of work was completed: fish weirs were built to trap and count returning adult fish and to collect any escaped farmed salmon; a multiyear, river-specific fry stocking plan was developed; habitat assessments were done for the most important spawning and juvenile nursery areas; over 100 beaver dams and other obstructions were removed; and water withdrawal management plans were completed for the Narraguagus, Machias, and Pleasant rivers, with money from the federal government and the blueberry growers.<sup>215</sup> All recreational fishing, including catch-and-release, was banned.<sup>216</sup>

Despite some skepticism regarding the commitments for voluntary actions made by members of the Task Force in drafting the Maine Plan, the signs were strong that a good faith effort had begun.<sup>217</sup> The Maine Aquaculture Association, salmon farmers, and shellfish growers' trade association developed a voluntary code of conduct to reduce the risk that salmon would escape from the pens, as well as a disease-prevention protocol.<sup>218</sup> For each of the seven rivers, a local watershed council was established.<sup>219</sup> A training program for code enforcement officers emphasizing the Maine Plan was developed.<sup>220</sup> The private and public hatchery operators began to follow new protocols to prevent the introduction of diseases to the wild salmon populations.<sup>221</sup>

---

212. *Id.* at 863.

213. *Id.*; *see also* An Act to Enhance the Conservation of Atlantic Salmon, P. & S.L. 2000, ch. 61.

214. *Id.*

215. Jenkins, *supra* note 19, at 863.

216. *Id.*

217. *Id.* at 864.

218. *Id.*; *see also* MAINE AQUACULTURE ASSOCIATION, RECOMMENDED CODE OF PRACTICE FOR AQUACULTURE IN MAINE, *available at* [www.maineaquaculture.com/Code\\_of\\_Practice\\_v1.pdf](http://www.maineaquaculture.com/Code_of_Practice_v1.pdf).

219. Jenkins, *supra* note 19, at 863.

220. *Id.* at 863-4.

221. *See* MAINE AQUACULTURE ASSOCIATION, *supra* note 218.

*A. The 1999 Annual Report on the Maine Plan*

As promised, the Services announced the availability of the first annual report on progress under the Maine Plan and invited public comment, asking specifically whether the existing measures remained adequate in light of current knowledge.<sup>222</sup> The Services prepared their own review of the report and sent these comments to the state.<sup>223</sup> After receiving the comments, the state made a series of amendments to the plan.<sup>224</sup>

One week after availability of the annual report on the Maine Plan was announced, the conservation groups that had submitted the original listing petitions in 1993 expressed their dissatisfaction with the whole state plan arrangement. The Defenders of Wildlife sued the Services in January 1999 in federal court in Washington, D.C., challenging the Services' decision to withdraw the proposed listing.<sup>225</sup> The Defenders of Wildlife argued it had been improper to consider the Maine Plan so heavily in the decision to withdraw the proposed listing.<sup>226</sup> A couple of months later, Trout Unlimited, an organization of recreational fishers long active in Atlantic salmon politics, also filed suit with the Atlantic Salmon Federation, claiming the proposed listing was improperly withdrawn.<sup>227</sup> The State of Maine sought to intervene as a defendant in these suits, but failed, and then threatened to sue the Services if they acquiesced to the demands of Defenders of the Wildlife by reinstating the listing.<sup>228</sup>

Six months earlier, a federal district court in Oregon ruled that NMFS had improperly relied on a State of Oregon conservation plan composed largely of voluntary actions and commitments that could not be enforced by law.<sup>229</sup> NMFS had used the state plan to explain why the

---

222. Availability on an Annual Report on Implementation of the Conservation Plan for Atlantic Salmon in Seven Maine Rivers, 64 Fed. Reg. 3,067, 3,067 (January 20, 1999).

223. COLLIGAN ET AL., *supra* note 203, at 5.

224. *Id.*

225. Defenders of Wildlife v. Bruce Babbitt, No. 99-CV-00206-CKK (D.D.C. filed Jan. 27, 1999); *see also* Me. v. United States Dept. of Interior, 298 F.3d 60, 64 (1st Cir. 2002); Maine v. Norton, 257 F.Supp. 2d. 357, 399 (D. Me. 2003).

226. Defenders of Wildlife v. Bruce Babbitt, No. 99-CV-00206-CKK (D.D.C. filed Jan. 27, 1999) (as cited in Me. v. United States Dept. of Interior, 298 F.3d 60, 64 (1st Cir. 2002)).

227. Trout Unlimited v. Babbitt, No. 02143 (D.D.C. filed Aug. 12, 1999).

228. Defenders of Wildlife v. Bruce Babbitt, No. 99-CV-00206-CKK (D.D.C. filed Jan. 27, 1999); *see also* Me. v. United States Dept. of Interior, 298 F.3d 60, 64 (1st Cir. 2002); Norton, 257 F.Supp. 2d. at 399.

229. Ore. Natural Res. Council v. Daley, 6 F. Supp. 2d 1139, 1160-61 (D. Or. 1998).

Oregon coho salmon did not warrant listing,<sup>230</sup> not long after publishing a proposed rule indicating that the evolutionarily significant unit of coho should be listed.<sup>231</sup> The Oregon plan was adopted under a memorandum of agreement between NMFS and the governor of Oregon just days before a court-ordered deadline to complete a pending listing decision on the Oregon coho salmon.<sup>232</sup> The court interpreted the ESA listing factor D, on the adequacy of existing regulatory mechanisms, as allowing NMFS to consider only currently operational conservation measures,<sup>233</sup> not those planned for the future and based on voluntary actions.<sup>234</sup>

The State of Maine later claimed that it was the Services' fear of the Atlantic salmon lawsuit and this legal precedent, rather than any legitimate consideration under the ESA that led them to reinitiate the listing. At least one observer concluded, however, that by January 1999, the Services had been quietly preparing to reinitiate the listing for some time.<sup>235</sup>

#### *B. The 1999 Status Review and Re-initiation of the Proposed Listing*

When they received the first annual report on the Maine Plan, the Services decided to prepare a new biological status review and reconvened the biological review team.<sup>236</sup> The new status review they released in July 1999 was highly critical of current conservation efforts; it must have seemed like a bombshell to those who thought the state plan was working. The status review levied most of its criticism at the under-regulation of the rapidly expanding salmon aquaculture industry by both the Army Corps of Engineers and the state.<sup>237</sup>

The 1999 status review concluded that, notwithstanding all the efforts of the past two years, the Gulf of Maine DPS was in danger of extinction due to continued low levels of spawning stocks, low juvenile survival, and increased threats of disease and loss of genetic integrity caused by the escape of farmed salmon.<sup>238</sup> It noted some progress on

---

230. *Id.* at 1142.

231. *Id.* at 1143.

232. *Id.* at 1148.

233. *Id.* at 1154.

234. *Ore. Natural Res. Council v. Daley*, 6 F. Supp. 2d 1139, 1154-55 (D. Or. 1998).

235. *Jenkins*, *supra* note 19, at 861 n.37

236. *See* Availability of an Annual Report on Implementation of the Conservation Plan for Atlantic Salmon in Seven Maine Rivers, 64 Fed. Reg. 3,067 (Jan. 20, 1999); COLLIGAN ET AL., *supra* note 203, at 1.

237. COLLIGAN ET AL., *supra* note 203, at 117.

238. *Id.* at 2.

reducing threats; habitat enhancement and protection actions by the watershed councils were evident and water withdrawal from aquifers near spawning streams was being dealt with through management plans and regulations.<sup>239</sup> Also, ocean harvesting was now restricted and recreational fishing in Maine had been closed with no significant poaching problem during 1997-1999.<sup>240</sup> However, the greatly expanded salmon farming industry in the vicinity of the DPS rivers posed a major threat to recovery, with the most serious threat being to the genetic integrity of wild salmon from escapees.<sup>241</sup> In particular, the Services noted that they were unsuccessful in convincing the Army Corps of Engineers to ensure that salmon farmers complied with their Rivers and Harbors Act section 10 permit conditions, which required that they stock the pens only with native strains of Atlantic salmon.<sup>242</sup> Similarly, state regulations on fish and egg imports failed to restrict aquaculture operators from expanding their use of hybrids using European strains.<sup>243</sup> Federal and state agencies were cited as failing to take the genetic risk

---

239. *Id.*

240. *Id.*

241. *Id.*

242. *Id.* at 117 (1999).

243. *Id.* The Review stated:

The . . . Team believes that current aquaculture practices have the potential to disrupt, displace and genetically contaminate the DPS through redd superimposition, hybridization, disease transfer, and competition. Although discussions with environmental regulators in Maine are ongoing, to date the Services' efforts to obtain state and industry agreement to address aquaculture use of European stocks, crosses between European and North American stocks, and the importation of European milt have so far been unsuccessful. In fact, the use of hybrids by the industry appears to be increasing. In 1998, six million Atlantic salmon were raised in sea cages near the mouths of many DPS rivers and other Atlantic salmon rivers, and escapees have been documented in several of these rivers. Additionally, the escape of juvenile salmon from aquaculture hatcheries within DPS watersheds creates further concern because they compete with indigenous stock in fresh water, and identification is more difficult. The level of these threats is being elevated due to low spawner abundance and industry expansion. . . . [While discussions are ongoing,] comprehensive protective measures to address the threats are not in place, and aquaculture practices continue to pose a serious threat to the genetic integrity of the Gulf of Maine DPS. Action to address the use of pure European strains and hybrids is necessary. Additionally, weirs on several of the rivers scheduled for construction since 1996 must be completed to help protect stocks from this threat. . . . This status review acknowledges the considerable efforts being put forth by the State of Maine and public and private sector partners to protect Atlantic salmon. The fact remains, however, that under current circumstances, it is the opinion of the [Team] that the Gulf of Maine DPS of Atlantic salmon is in danger of extinction.

*Id.* at 2-3.

seriously.<sup>244</sup> Most significantly, the Services announced that they had begun to prepare a new proposed listing; this time, however, the listing would be as “endangered.”<sup>245</sup>

### C. The 2000 Listing as “Endangered”

After publishing the 1999 status review, the Services, as promised, then published a proposed listing of the salmon in eight rivers of the DPS as “endangered.”<sup>246</sup> After the breakdown of the compromise with Maine, there was no reason to re-propose a special section 4(d) rule and threatened listing. Without a listing, there would also be no way of compelling the Army Corps of Engineers to enforce permit conditions on salmon strains. A tributary of the Penobscot River, Cove Brook, was added to the previously proposed seven rivers.<sup>247</sup> The notice of the proposed listing began the one-year timetable for final action. Almost immediately, the State of Maine filed a Freedom of Information Act (FOIA) request for all documents pertaining to the 1999 decision to list, followed by a second request for all data and documents regarding the listing.<sup>248</sup>

---

244. The Review also stated that:

The risks inherent in wild stock interacting with escapees has increased significantly from what it was believed to have been three years ago [in 1996] when certain restrictions on the importation and use of foreign salmon stocks were believed . . . to be in place and enforced. Regulations governing import and placement of aquaculture fish fall short on two counts: 1) the Maine state law . . . regulating import fails to restrict European milt from entering the state as it does fish or eggs, thus enabling expansion of the use of hybrids . . . and 2) the Corps of Engineers continues not to enforce permit conditions under §10 of the Rivers and Harbors Act, which prohibits placing European strain or hybrids in sea cages. Failure to adequately enforce certain existing regulations or correct deficiencies identified in others significantly increases risks to the survival of severely depressed existing wild salmon populations. The [team] concludes that the Gulf of Maine DPS is in danger of extinction.

*Id.* at 117.

245. Endangered and Threatened Species: Proposed Endangered Status for a Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in the Gulf of Maine, 64 Fed. Reg. 62,627 (Nov. 17, 1999).

246. Endangered and Threatened Species: Proposed Endangered Status for a Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in the Gulf of Maine, 64 Fed. Reg. 62,627, 62,629 (Nov. 17, 1999).

247. *Id.*

248. See *Me. v. U.S. Dept. of the Interior*, 298 F.3d 60, 66 (1st Cir. 2002) (tracing the various FOIA filings and appeals by the State of Maine vis-à-vis the Department of the Interior). In December 2000, one month after the Services published the final listing, the court rejected the government’s claim that the documents were exempt from disclosure as

The State of Maine also stopped its agencies' efforts to make aquaculture safer for wild salmon. In the second annual report on the Maine Plan, the Land and Water Resources Council reported that the proposed listing stopped the move toward regulation dead in its tracks:

The Aquaculture Industry operated its facilities under the second year of the industry's voluntary code of containment practices. In response to concerns about the effectiveness of voluntary management practices, the Department of Marine Resources is developing draft rules codifying the industry's containment code of practices. The Land & Water Resource Council approved this measure as an amendment to the ASCP on March 18<sup>th</sup> [1999]. DMR suspended the proposed rulemaking on containment standards and procedures in light of the federal government's listing proposal under the Endangered Species Act, and is currently considering an appropriate regulatory mechanism.

When the Services published the final decision to list in November 2000, they cited several factors related to aquaculture as the major reason for their change of heart, including the emergence of new disease and genetic threats, as well as continued concern over the intensive stocking practices using hybrids by the salmon farms.<sup>249</sup> The State of Maine made good on its promise and filed suit one month later, challenging the scientific basis for the determination that the Maine salmon was a DPS.<sup>250</sup> The conservation NGOs sought to intervene on behalf of the Services; business groups (the blueberry growers and salmon farming companies), on behalf of the State.<sup>251</sup> The conservation groups' motion to intervene was denied and the business plaintiffs' motions were dismissed for lack of standing.<sup>252</sup> The court took judicial notice of the State's sovereign interests as a basis for its standing.<sup>253</sup>

Then, as if to demonstrate the need for federal oversight, a massive escape of penned salmon occurred, adjacent to two of the listed salmon

---

attorney work products, but allowed the U.S. FWS to withhold some documents while ordering that it disclose all others. *Id.*

249. Endangered and Threatened Species; Final Endangered Status for a Distinct Population Segment of Anadromous Atlantic Salmon (*Salmo salar*) in the Gulf of Maine, 65 Fed. Reg. 69,459, 69,477 (Nov. 17, 2000).

250. Hanna Sanders, Case Note, *State of Maine v. Norton: Assessing the Role of Judicial Notice*, 9 OCEAN & COASTAL L. J. 125, 125 (2003).

251. *Id.*

252. *Id.*

253. *Id.*

rivers, during an ocean storm in Maine in February 2001. State officials failed to report it to the Services for three weeks.<sup>254</sup>

While Maine's legal challenge was pending, further developments lessened the chance that Maine would be able to make the case that the listing was unwarranted and unnecessary. At the urging of Maine's Senators Olympia Snowe and Susan Collins, Congress asked the National Academy of Sciences to convene a study committee to look into the scientific basis of the listing, including the contested genetics study.<sup>255</sup> It asked the academy to report on these findings in an interim report and to then submit a final report on the most effective means of restoring Atlantic salmon.<sup>256</sup>

In January 2002, the study committee's interim report found that wild salmon in the eight listed Maine rivers had remained genetically distinct from other wild populations despite over one hundred years of stocking.<sup>257</sup> It also found that adult returns in 2000, numbering between seventy-five and one hundred fish, were the lowest in ten years and were 50 percent below the average returns of the last decade.<sup>258</sup> On December 20, 2001, the U.S. Department of Agriculture ordered all salmon to be removed from the pens in Maine's Cobscook Bay, which is adjacent to Canadian waters where an outbreak of infectious salmon anemia led to the destruction of all salmon in the Canadian pens.<sup>259</sup>

Ultimately, in *Maine v. Norton*, the federal court rejected Maine's challenge to the listing, finding that the DPS determination was supported by the record, was based upon the best scientific evidence, and was not an abuse of discretion.<sup>260</sup> Three months after Judge Carter's ruling, the new governor of Maine, John E. Baldacci—a former state representative and member of Congress—announced that the State would not appeal the decision and would drop its opposition to the listing.<sup>261</sup> He noted that the State had signed a settlement agreement with the Services

---

254. Mary Clancey, *100,000 Salmon Escape from pens Aquaculture moratorium sought*, BANGOR DAILY NEWS, Feb. 23, 2001, at A1.

255. See 146 CONG. REC. 13,895-13,896 (2000) (Sen. Collins offering, and Sen. Snowe endorsing, Amendment Number 3807 for an emergency appropriation of \$5 million to NMFS to fund competitive grants and a study in conjunction with the Maine Atlantic Salmon Commission).

256. *Id.*

257. NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, *supra* note 11, at 4.

258. See *id.* at 15-16.

259. Declaration of Emergency Because of Infectious Salmon Anemia, 66 Fed. Reg. 65,679, 65,679 (Dec. 20, 2001).

260. *Maine v. Norton*, 257 F. Supp. 2d 357, 390-97 (D. Me. 2003).

261. Jeff Tuttle, *State Drops Challenge to Listing Salmon as Endangered Species*, PORTLAND PRESS HERALD, July 25, 2003, at A1.

that “ensures that [the] state and federal governments will work cooperatively to protect and restore this important part of Maine’s heritage.”<sup>262</sup> The agreement committed the federal agencies to work with Maine in developing and implementing a recovery plan.<sup>263</sup> The federal agencies also promised to complete a new and comprehensive status review and a full listing process before any additional Maine rivers or runs were added to the DPS.<sup>264</sup>

#### VI. THE IMPACT OF THE CLEAN WATER ACT’S COOPERATIVE FEDERALISM

By the time *Norton* was decided, Judge Carter was very familiar with the issues surrounding salmon farming and the risks that it posed to wild salmon. In a citizen suit filed in late 2000, Judge Carter ruled that two Maine salmon farms were considered point sources under the CWA and were in violation of the Act for discharging fish, feed, and other materials into U.S. waters without NPDES permits.<sup>265</sup> The citizen suit had been filed one year after Maine submitted an application to the Environmental Protection Agency (EPA) for delegation of the authority to issue NPDES permits.<sup>266</sup> Although Judge Carter found that EPA’s inaction amounted to regulatory negligence by failing to issue NPDES permits to salmon farming companies that had applied for them in 1990, he nevertheless found that the farms were in violation of the CWA.<sup>267</sup> Consequently, Judge Carter ordered a ban on the use of non-native strains, in view of the threat that escaped salmon of non-native origin posed to wild salmon.<sup>268</sup>

Judge Carter’s order has been described as accomplishing in one paragraph what the Services had been trying to do for fifteen years through negotiations with the Army Corps, EPA, and the state, but had been unable to achieve due to heavy industry lobbying.<sup>269</sup> Industry pressure had thwarted recommendations that were made repeatedly at the staff level on this and other issues.<sup>270</sup> In September 2002, EPA at last

---

262. Carrier, *supra* note 10, at A1.

263. *Id.*

264. *Id.*

265. U.S. Pub. Interest Research Grp. v. Atl. Salmon of Me., L.L.C., 257 F. Supp. 2d 407, 410-14, 427 (D. Me. 2003).

266. *Id.* at 415.

267. *Id.* at 425-26.

268. *Id.* at 434.

269. Goode, *supra* note 137.

270. *Id.*

proposed effluent limitation guidelines for wastewater discharges from fish farming operations in U.S. waters, establishing minimum standards for state water quality regulation.<sup>271</sup>

Did the salmon farming companies take this particular federal official—a judge -- more seriously than it did the agencies? In February 2003, Judge Carter ordered the salmon farming companies not to stock fish in their pens in the spring.<sup>272</sup> Two months later, Fjord Seafood, the Norwegian parent company of Atlantic Salmon of Maine, petitioned the Services to release the genetics data relied upon for the ESA-based permit restrictions on use of European strains in their broodstock. They sought to take advantage of the new procedures of the Data Quality Act of 2001, which was aimed at ensuring the integrity of data and information used in federal regulatory policies.<sup>273</sup> Conservation groups immediately petitioned in opposition to the request.<sup>274</sup> Fjord's aim was to once again reevaluate the USGS genetics study regarding the genetic isolation of the Gulf of Maine DPS from all other Atlantic salmon of North American origin—the same data that the State of Maine had previously questioned vehemently.<sup>275</sup>

When Atlantic Salmon of Maine went ahead with the spring stocking, Judge Carter held them in contempt for discharging a new year-class of fish into their pens without a permit.<sup>276</sup> In June 2003, after Judge Carter's contempt order, Fjord Seafood announced it was adopting a new cooperative attitude toward government involvement in its business decisions. Not long afterward, it announced that Atlantic Salmon of Maine was for sale.<sup>277</sup>

For many years, the EPA and Maine negotiated over whether the state was eligible for delegation of the NPDES program from the EPA

---

271. Brian R. Price II, Note, *Maine Aquaculture, Atlantic Salmon, and Inertia: What is the Future for Maine's Net Pen Salmon Industry?*, 31 B.C. ENVTL. AFF. L. REV. 683, 683 (2004).

272. U.S. Pub. Interest Research Grp. v. Atl. Salmon of Me., L.L.C., 257 F. Supp. 2d 407, 435-436 (D. Me. 2003).

273. Aaron Porter, Fjord Challenges Federal Salmon Genetics Data, Center for Regulatory Effectiveness Newsletter (Apr. 28, 2003), available at [http://www.thecre.com/abstracts-reviews/20030428\\_fws.html](http://www.thecre.com/abstracts-reviews/20030428_fws.html).

274. *Id.*

275. *Id.*

276. U.S. Pub. Interest Research Grp. v. Atl. Salmon of Me., L.L.C., 261 F. Supp. 2d 17 (2003); see also Marian Burros, *Issues of Purity and Pollution Leave Farmed Salmon Looking Less Rosy*, N.Y. TIMES, May 28, 2003 (quoting May 9th contempt holding by Judge Carter).

277. Katherine Cassidy, *Atlantic Salmon has new owner; Canadian firm buys fish plant*, BANGOR DAILY NEWS, Apr. 2, 2004.

and disagreed over the manner in which the state would regulate the discharges of the salmon farming industry.<sup>278</sup> After the Gulf of Maine DPS was listed, the logjam was broken on several pending actions. Formal interagency consultation took place, under section 7 of the ESA, concerning the NPDES delegation and the Army Corps of Engineers' permit conditions for salmon pens under the Rivers and Harbors Act.<sup>279</sup> Also, in 2001, EPA and the Services released a final memorandum of agreement regarding coordinated implementation of the CWA and the ESA.<sup>280</sup> At the same time, the Services released a final biological opinion on the Maine NPDES delegation.<sup>281</sup> The opinion concluded that conditions must be included in NPDES permits for salmon farms to prevent escapes or accidental releases.<sup>282</sup> The EPA approved the Maine NPDES program in February, 2001 and adopted the Services' recommendation that to avoid jeopardy, the EPA should object to any Maine-issued permits for salmon farms that failed to protect endangered wild salmon.<sup>283</sup>

#### VII. RECOVERY PLANNING FOR THE MAINE SALMON: STATE-FEDERAL COOPERATION AT LAST?

In January 2004, the National Academy of Sciences released its final report, *Atlantic Salmon in Maine*, making a number of recommendations for the conservation and recovery of Atlantic salmon.<sup>284</sup> After all the focus on the risks posed by salmon farming, the report ranked dams and development as the highest risk factors for salmon.<sup>285</sup> It concluded that

---

278. Roger Fleming, *supra* note 70, at 263 n.23.

279. NATIONAL MARINE FISHERIES SERVICE AND U.S. FISH & WILDLIFE SERVICE, BIOLOGICAL OPINION ON EXISTING ARMY CORPS OF ENGINEERS SECTION 10 PERMITS FOR SALMON AQUACULTURE IN MAINE WATERS (2003) (on file with author).

280. Memorandum of Agreement Between EPA, FWS and NMFS Regarding Enhanced Coordination Under the CWA and ESA; Notice, 66 Fed. Reg. 11,202 (Feb. 22, 2001).

281. U.S. DEPARTMENT OF INTERIOR FISH AND WILDLIFE SERVICE & UNITED STATES DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL MARINE FISHERIES SERVICE, LETTER TO STEPHEN SILVA, MANAGER, MAINE STATE PROGRAM, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (2001), available at <http://stopgefish.files.wordpress.com/2010/10/epa-bo.pdf>.

282. *Id.*

283. State Program Requirements; Approval of Application by Maine to Administer the National Pollutant Discharge Elimination System (NPDES) Program; Maine, 66 Fed. Reg. 12,791, 12,791, 12,793-94 (Feb. 28, 2001).

284. NAS REPORT, *supra* note 15.

285. *Id.* at 121, 189.

much more attention should focus on the salmon returning to the Penobscot River and suggested that decision-analytic tools be used to craft an effective recovery plan.<sup>286</sup>

The Services released their Recovery Plan for the Gulf of Maine DPS in December 2005, after public hearings and independent peer review.<sup>287</sup> The Recovery Plan was prepared in consultation with Maine's Atlantic Salmon Commission; however, the Services described their Recovery Plan as more comprehensive than the Maine Plan.<sup>288</sup> The Recovery Plan proposed actions that complement the Maine Plan but, in the Services' view, addressed the threat of salmon farming in more detail and tackled rangewide threats beyond the State of Maine's jurisdiction, including low ocean survival. The Recovery Plan itemized over one hundred action items necessary for the Atlantic salmon's conservation and recovery, including stocking, population research, stream flow studies, and fish passage improvements. However, the Recovery Plan deferred on including any demographic reclassification and recovery criteria until the Plan could be reviewed and revised in three years.<sup>289</sup>

But what about those dams? Independent of the ESA listing and interagency recovery efforts, private and nongovernmental groups and the Penobscot Indian Nation began to tackle the dams.<sup>290</sup> In anticipation of the pending relicensing of several dams on the Penobscot, they brokered the Lower Penobscot River Multi-Party Settlement Agreement (the Agreement) to restore the Penobscot, the river to which most Atlantic salmon in Maine return.<sup>291</sup> The deal they struck would allow the coalition for the river's restoration to buy three of the dams on the

---

286. *Id.* at 122.

287. Endangered and Threatened Species: Notice of Availability for the Final Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon, 70 Fed. Reg. 75,473 (Dec. 20, 2005).

288. NMFS & USFWS, FINAL RECOVERY PLAN FOR THE GULF OF MAINE DISTINCT POPULATION SEGMENT OF ATLANTIC SALMON (*SALMO SALAR*) (2005), available at [http://www.nmfs.noaa.gov/pr/pdfs/recovery/salmon\\_atlantic.pdf](http://www.nmfs.noaa.gov/pr/pdfs/recovery/salmon_atlantic.pdf). After acknowledging the collaboration between the Services and the Maine Atlantic Salmon Commission, the authors note that "[t]his recovery plan builds on and expands recovery actions identified in the State of Maine's Atlantic Salmon Conservation Plan for Seven Maine Rivers (MASCP)." *Id.* at iii.

289. *Id.* at 3-3, 3-5, 3-6.

290. The Penobscot Trust members are: the Penobscot Indian Nation, American Rivers, Atlantic Salmon Federation, Maine Audubon, Natural Resources Council of Maine, The Nature Conservancy, and Trout Unlimited. Penobscot River Restoration Trust, *Fact Sheet 2* (2010), [http://www.penobscotriver.org/assets/Fact\\_Sheet\\_-\\_Dec\\_2010\\_Final.pdf](http://www.penobscotriver.org/assets/Fact_Sheet_-_Dec_2010_Final.pdf) (late updated Dec. 2010).

291. *Id.* at 1.

Penobscot from the private electric utility, in exchange for an agreement not to contest an application to the Federal Energy Regulatory Commission to increase power production at two other dams.<sup>292</sup> The Agreement followed in the spirit of the pact to remove the Edwards Dam on the Kennebec, an event that former Secretary Bruce Babbitt heralded as a new era in humanity's relationship with nature.<sup>293</sup> Unlike the removal of the Edwards Dam, which received federal funding, the coalition had to raise the estimated twenty-five million dollar purchase price.<sup>294</sup>

In February 2008, the Penobscot Indian Nation and its partners announced they had succeeded in raising twenty-five million dollars for the first phase of restoring the Penobscot, their ancestral river and watershed.<sup>295</sup> Included in the \$25 million was a \$10 million dollar appropriation from Congress that would allow them to buy and tear down the two dams closest to the ocean, build fishways at others, restore Atlantic salmon and other native fishes, and perhaps give real substance to the Penobscot Nation's tribal fishing rights.<sup>296</sup>

#### VIII. CONCLUSION

In this case study, we see that cooperation with the State of Maine broke down to the point of litigation, despite the federal agencies' efforts to exercise as much flexibility as they could plausibly read into the ESA. Maine regulatory officials, guarding the state's agriculture and fearing the loss of the salmon farming industry in an economically challenged county, were unable to impose the strict conditions made necessary by the federal determination that raising salmon in net-pens, adjacent to the river mouths, posed a risk to wild salmon running in those rivers. After the state failed to disprove the genetic distinctiveness of the remaining wild salmon populations running in its rivers and the endangered listing was upheld, the CWA cooperative federalism mechanisms became the focus.

---

292. *See id.* at 2.

293. *See* McPhee, *supra* note 19, at 50.

294. Penobscot River Restoration Trust, *Fact Sheet* 3 (2010), [http://www.penobscotriver.org/assets/Fact\\_Sheet\\_-\\_Dec\\_2010\\_Final.pdf](http://www.penobscotriver.org/assets/Fact_Sheet_-_Dec_2010_Final.pdf) (late updated Dec. 2010).

295. *See* Gail Courey Toensing, *Penobscot River Project Progresses*, INDIAN COUNTRY TODAY, Sept. 12, 2008; *see also* Gail Courey Toensing, *Restoring Fish, Preserving Culture*, INDIAN COUNTRY TODAY, May 19, 2008.

296. *See* Gail Courey Toensing, *Restoring Fish, Preserving Culture*, INDIAN COUNTRY TODAY, May 19, 2008.

But Maine's effort to maintain state control over discharge conditions, through federal delegation of the NPDES permit program, also failed, stopped by a CWA citizen suit.<sup>297</sup> In ruling that the salmon farmers were discharging pollutants by stocking their net-pens with non-native strains of Atlantic salmon—and requiring the farmers to empty their pens, under threat of contempt citations while they obtained an NPDES permit—the court exercised the very power to resolve the issue that had stymied cooperation under the ESA.

The court's intervention, in turn, cleared the way for the resumption of federal-state cooperation in developing an Atlantic salmon recovery plan. Prospects for recovery through incremental improvements in habitat, by this point, were rapidly dwindling, as fish numbers continued to decline. Bold new actions were needed. A cooperative effort, via a privately negotiated agreement among hydropower companies, conservation groups, and the Penobscot Indian Nation, now held the greatest promise. Their agreement brought the federal and state agencies together, in a multiparty pact, to remove the worst offending dams within the watershed and allow ecological restoration important to salmon and other fish species that are essential to the salmon's survival.

#### IX. EPILOGUE

A citizens' petition to revise the DPS to include salmon in the Kennebec River prompted the federal agencies to convene a new Biological Review Team to review newly available genetic data and other essential information that had been excluded from the 2000 DPS listing.<sup>298</sup> The Team's Status Review was unequivocal: the best available data indicated that that all Atlantic salmon in Maine should be in the same population segment, including the populations in the three large rivers that had been excluded from the DPS in 2000.<sup>299</sup> The inclusion of these salmon, which included fish spawned in the federal conservation hatcheries, did not change the DPS's conservation status. The numbers were so low that a new population viability analysis indicated a very high risk of extinction that ranged from 19 percent to 74 percent within the next one hundred years.<sup>300</sup>

---

297. U.S. Pub. Interest Research Group v. Atl. Salmon of Me., LLC, 257 F.Supp. 2d 407 (D. Me. 2003).

298. CLEM FAY ET AL., *supra* note 28.

299. *Id.* at 5.

300. *Id.* at 5.

In 2009, the Services finally listed the salmon inhabiting the three largest rivers in Maine – the industrialized Androscoggin and Kennebec, and the many-dammed Penobscot – as part of an expanded Gulf of Maine DPS.<sup>301</sup> A determination of the DPS's critical habitat including the entire geographic range of wild salmon in Maine followed on the heels of the new listing.<sup>302</sup> The State of Maine and its congressional delegation urged the Secretaries to classify the expanded DPS as threatened, but to exclude the Androscoggin (into which the largest remaining paper mill discharges its effluent) and continue to rely on state regulation to implement the recovery plan.<sup>303</sup> However, the Services remained unconvinced of the state's commitment to making the hard decisions needed to promote salmon recovery. The state had recently eliminated the Atlantic Salmon Commission and merged it into a marine resources department that had never been enthusiastic about dealing with the salmon's plight.<sup>304</sup> The Services were encouraged by news that the Penobscot Restoration Agreement partners had secured twenty-five million dollars to buy three of the dams and retire them, and to modify another with fish passages. However, the benefits of this voluntary conservation agreement were not yet certain enough to decrease the predicted risk of extinction. In the final analysis, the Maine Plan and restoration agreement were not enough to change the risk assessment under the criteria of the Services' joint "Policy for Evaluation of Conservation Efforts When Making Listing Decisions."<sup>305</sup> The Gulf of Maine Atlantic salmon was clearly endangered and it would be a shared federal responsibility to manage its recovery. The Services agreed with

---

301. Determination of Endangered Status for the Gulf of Maine Distinct Population Segment of Atlantic Salmon; Final Rule, 74 Fed. Reg. 29,343 (June 19, 2009).

302. Designation of Critical Habitat for Atlantic Salmon (*Salmo salar*) Gulf of Maine Distinct Population Segment; Final Rule, 74 Fed. Reg. 29,299 (June 19, 2009).

303. Determination of Endangered Status for the Gulf of Maine Distinct Population Segment of Atlantic Salmon; Final Rule, 74 Fed. Reg. at 29,385; STATE OF MAINE, COMMENTS ON THE PROPOSED ENDANGERED STATUS FOR THE GULF OF MAINE DISTINCT POPULATION SEGMENT OF ATLANTIC SALMON 43 (2008), available at <http://www.regulations.gov/search/Regs/contentStreamer?objectId=09000064807ca054&disposition=attachment&contentType=pdf>.

304. Edward Baum, Comment on Proposed Endangered Status for the Gulf of Maine Distinct Population Segment of Atlantic Salmon (posted December 3, 2008), available at <http://www.regulations.gov/search/Regs/home.html#documentDetail?R=09000064807ca46f>.

305. Determination of Endangered Status for the Gulf of Maine Distinct Population Segment of Atlantic Salmon; Final Rule, 74 Fed. Reg. at 29,377 (citing Policy for Evaluation of Conservation Efforts When Making Listing Decisions, 68 Fed. Reg. 15,100-15 (Mar. 28, 2003)).

the comments of Edward Baum, who had been the state's chief salmon biologist for decades and now supported the expansion of the DPS, that the history of state and federal cooperation showed that "Maine Atlantic salmon are not as important to the State as they are to the rest of the nation."<sup>306</sup>

---

306. Baum, *supra* note 304.