

1-1-2008

New Hope for Pacific Salmon? Northwest Resource Information Center v. Northwest Power Planning Council, Idaho Department of Fish & Game v. National Marine Fisheries Service, and the Aftermath of Judicial Impatience

Henry B. Lacey

Follow this and additional works at: https://repository.uchastings.edu/hastings_environmental_law_journal



Part of the [Environmental Law Commons](#)

Recommended Citation

Henry B. Lacey, *New Hope for Pacific Salmon? Northwest Resource Information Center v. Northwest Power Planning Council, Idaho Department of Fish & Game v. National Marine Fisheries Service, and the Aftermath of Judicial Impatience*, 14 *Hastings West Northwest J. of Env'tl. L. & Pol'y* 333 (2008)
Available at: https://repository.uchastings.edu/hastings_environmental_law_journal/vol14/iss1/10

This Article is brought to you for free and open access by the Law Journals at UC Hastings Scholarship Repository. It has been accepted for inclusion in *Hastings Environmental Law Journal* by an authorized editor of UC Hastings Scholarship Repository. For more information, please contact wangangela@uchastings.edu.

New Hope for Pacific Salmon?

Northwest Resource Information Center v. Northwest Power Planning Council, Idaho Department of Fish & Game v. National Marine Fisheries Service, and the Aftermath of Judicial Impatience

Henry B. Lacey*

- I. INTRODUCTION
- II. A SHORT HISTORY OF THE COLUMBIA RIVER BASIN AND ITS SALMON
- III. THE COUNCIL'S FISH AND WILDLIFE PROGRAM AND THE SALMON LISTINGS
 - A. *The Evolution of the Program: 1981-90*
 - B. *The Effects of the Salmon Listings*
- IV. THE STRATEGY FOR SALMON
 - A. *The Salmon Summit No Regional Consensus on Steps Needed to Save the Salmon*
 - B. *The 1991-92 Program Amendments: The Council's Strategy for Salmon*
- V. NORTHWEST RESOURCE INFORMATION CENTER V. NORTHWEST POWER PLANNING COUNCIL: THE NINTH CIRCUIT REJECTS THE STRATEGY FOR SALMON
 - A. *The Arguments*
 - B. *The Ninth Circuit's Decision*
 - 1. *The Northwest Power Act's Fish and Wildlife Provisions*
 - 2. *The Ninth Circuit's Interpretations of the Northwest Power Act*
 - a. *The Council Must Provide a Written Explanation of its Decision to Reject Program Recommendations*
 - b. *Biological Objectives*
 - c. *The Council Must Defer to the Expertise of Fish and Wildlife Agencies and Tribes*
 - d. *Fish and Wildlife Program Criteria*
 - (i) *The Act's Section 4(h)(6) Criteria are Mandatory And "Substantive"*
 - (ii) *Interpretation of the Section 4(h)(6) Criteria*
 - e. *Balancing the Biological Benefit of a Program Recommendation Against its Cost is Not Required*
 - C. *Summary: How Must the Council Change its Ways?*
- VI. IDAHO DEPARTMENT OF FISH & GAME V. NATIONAL MARINE FISHERIES SERVICE: THE END OF COMPROMISE?
 - A. *The Nature of NMFS' Power: ESA Section 7*

* Natural Resources Law Institute Fellow, 1994-95, Northwestern School of Law of Lewis & Clark College, Portland, Oregon. J.D. 1991, B.S. 1988, Arizona State University. The author thanks Mike Blumm, Janice Wies, Brad Borman, Jim Weber, Adam Berger, Dan Rohlf and Reed Benson for their helpful advice and comments. The author is also grateful to Northwestern School of Law of Lewis & Clark College for the fellowship that made research on this article possible.

- B. *The 1993 Biological Opinion*
- C. *The Arguments*
- D. *The Marsh Decision*
- E. *Implications of the Marsh Decision*
- VII. RESPONSES TO NORTHWEST RESOURCE INFORMATION CENTER AND IDAHO DEPARTMENT OF FISH & GAME: LITTLE CAUSE FOR HOPE, NECESSARY STEPS TOWARDS RECOVERY NOT FORTHCOMING
 - A. *The Council's December 1994 Program Amendments and Their Aftermath*
 - 1. *Written Explanation*
 - 2. *Biological Objectives*
 - 3. *Other Provisions*
 - 4. *Aftermath of the 1994 Program Amendments*
 - B. *The Revised 1994-98 Biological Opinion and the Proposed Recovery Plan*
 - 1. *Compliance with Idaho Department of Fish & Game*
 - 2. *Reasonable and Prudent Alternatives*
 - 3. *Flow Augmentation Measures*
 - 4. *Spills*
 - 5. *Changes to Dam Structures to Assist Adult Passage*
 - 6. *Transportation*
 - 7. *Putting it All Together: Will the 1994-98 Biological Opinion and Proposed Recovery Plan Restore Wild Salmon to the Pacific Northwest?*
- VIII. CONCLUSION
- IX. AFTERWORD

**There was a time when meadow, grove and
stream,
The earth, and every common sight
To me did seem
Apparell'd in celestial light,
The glory and the freshness of a dream.
It is not now as it has been of yore; -
Turn wheresoe'er I may,
By night or day,
The things which I have seen I now can see no
more!

Whither is fled the visionary gleam?
Where is it now the glory and the dream?¹**

I. Introduction

A defining characteristic of the Pacific Northwest is the Columbia River Basin's legendary wild salmon runs.² Sadly, however, some commentators say

1. W. Wordsworth, *Ode on Intimations of Immortality*, in RECOLLECTIONS OF EARLY CHILDHOOD.

2. *New York Times* reporter Timothy Egan has described the Pacific Northwest as "anywhere a salmon can get to." Michael C. Blumm, *Saving Idaho's Salmon: A History of Failure and a Dubious Future*, 28 IDAHO L. REV. 667, 668 (1991-92) [hereinafter Blumm, *Saving Idaho's*

the Columbia River Basin is now "the most endangered river system in the country."³ The backbone of an industry that supports 60,000 jobs in the Pacific Northwest,⁴ the region's salmon⁵ population has plummeted since the late nineteenth century. From stocks⁶ numbering in the many millions,⁷ the wild runs have deteriorated to levels approaching extinction.⁸ The salmon's decline is the

Salmon (citing Pat Ford, *And Now - The Last Salmon Ceremony?*, HIGH COUNTRY NEWS, Apr. 22, 1991, at 8). Captain Meriwether Lewis knew that his two-year-long expedition to the Pacific Ocean had neared an end when he ate roasted salmon "with a very good relish" as a guest of Shoshoni Indians on the banks of the Lemhi River, in what is now Idaho, on August 13, 1805. Charles F. Wilkinson & Daniel K. Conner, *The Law of the Pacific Salmon Fishery Conservation and Allocation of a Transboundary Common Property Resource*, 32 KAN. L. REV. 17, 22 (1983) (citing THE JOURNALS OF LEWIS AND CLARK 194 (B. DeVoto ed. 1953)).

3. Brad Knickerbocker, *Salmon Issue Poses a Stiffer Challenge Than The Spotted Owl*, CHRISTIAN SCIENCE MONITOR, Oct. 20, 1993, at 7.

4. OREGON RIVERS COUNCIL, THE ECONOMIC IMPERATIVE OF PROTECTING RIVERINE HABITAT IN THE PACIFIC NORTHWEST 10 (1992). See also THE WILDERNESS SOCIETY, 1 THE LIVING LANDSCAPE: WILD SALMON AS NATURAL CAPITAL v (1993) [hereinafter SALMON AS CAPITAL] (estimating that fishing industry provides 20,000 jobs in region). Salmon may have a current economic impact on the region of as much as \$1 billion. SAVE OUR WILD SALMON COALITION, WILD SALMON FOREVER: A CITIZEN'S STRATEGY TO RESTORE NORTHWEST SALMON AND WATERSHEDS 3 (1994) [hereinafter CITIZENS' STRATEGY].

5. The term "salmon," as used in this article, refers to all of the species of salmon native to the Columbia River Basin, as well as to steelhead. Salmon are anadromous fish, which means that they are born in fresh water, migrate to and live most of their lives in ocean saltwater, and then return to freshwater to spawn. Wilkinson & Conner, *supra* note 2, at 23-26. There are five species of anadromous salmon native to the Pacific coast. These are *Oncorhynchus* (O.) *tsawytscha*, or Chinook (king) salmon; O. *nerka*, or sockeye (red) salmon; O. *kisutch*, or coho (silver) salmon; O. *keta*, or chum (dog) salmon; and O. *gorbuscha*, or pink (humpback) salmon. A sixth species of anadromous fish found in the Columbia River Basin is *Salmo gairdneri*, or steelhead trout. The steelhead is a sea-run rainbow trout. Wilkinson & Conner, *supra* note 2, at 18 n.2 (citing R. CHILDERHOSE & M. TRIM, THE PACIFIC SALMON 25-26 (1979)).

6. The term "stock" is often used interchangeably with the words "run" or "population." A stock is "an isolated reproduction unit that shares both a common environment and a common gene pool and is identified with a specific season and watershed or stream." Wilkinson & Conner, *supra* note 2, at 24 n.33. This article discusses spring, summer and fall runs of Snake River Chinook and Snake River sockeye runs.

7. During the mid-nineteenth century, the estimated salmon population of the Columbia River Basin was 10 to 16 million fish. CHARLES F. WILKINSON, CROSSING THE NEXT MERIDIAN: LAND, WATER, AND THE FUTURE OF THE WEST 201 (1992); U.S. GENERAL ACCOUNTING OFFICE, ENDANGERED SPECIES: PAST ACTIONS TAKEN TO ASSIST COLUMBIA RIVER SALMON 8 (July 1992) [hereinafter GAO ENDANGERED SPECIES REPORT]; SALMON AS CAPITAL, *supra* note 4, at 5.

8. Recent estimates indicate that the Columbia River Basin's salmon population has declined to approximately 2.5 million fish. SALMON AS CAPITAL, *supra*

result of ecological harm caused by a variety of human activities.⁹ The most significant contributors to salmon mortality, however, are the numerous dams that transformed the once-wild Columbia and Snake Rivers into a series of flow-controlled reservoirs.¹⁰ Not surprisingly, from the dawn of the dam building era,

note 4, at 5; Michael C. Blumm & Andy Simrin, *The Unraveling of the Parity Promise: Hydropower, Salmon, and Endangered Species in the Columbia Basin*, 21 ENVTL. L. 657, 663 (1991) [hereinafter Blumm, *Parity V*] (citing NORTHWEST POWER PLANNING COUNCIL, 1987 COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM § 203, at 35 (1987) [hereinafter 1987 PROGRAM]); John Daniel, *The Dance of Denial*, SIERRA, March 1993, at 64. In 1990 only 1.1 million adult salmon returned to the Columbia River Basin from the ocean, of which 300,000 were believed to be wild or naturally spawning fish. GAO ENDANGERED SPECIES REPORT, *supra* note 7, at 11. In 1991, only four sockeye salmon returned to their spawning grounds at Redfish Lake, Idaho. Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 668. That was an improvement over the returns in the immediately preceding two years when none and one Redfish sockeye successfully reached its native spawning bed, *id.*, and compares to a total return of 771 spawners in 1976. *Id.* Unfortunately, even this minimal improvement did not continue. By 1994, Redfish Lake again was graced by only one sockeye spawner. Interview with Adam J. Berger, Sierra Club Legal Defense Fund, Inc. (Dec. 14, 1994). Nor are sockeye Idaho's only endangered run: Chinook nests in the Salmon and Clearwater Rivers of that state declined 92% between 1957 and 1992. Blumm, *Parity V*, *supra*, at 668-69 (citing S. Stuebner, *Counting the Declining "Redds" of Frenchman Creek*, HIGH COUNTRY NEWS, Apr. 22, 1991, at 12; BONNEVILLE POWER ADMINISTRATION, BIOLOGICAL ASSESSMENT ON THE 1992 OPERATION OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM 5 (Jan. 13, 1992)). Idaho's runs of Snake River spring and summer Chinook are at approximately one-half of one percent of their historic average levels. Idaho's historic habitat range - 8,300 miles - has declined to 5,400 miles, 3,000 of which are damaged. TIM PALMER, *THE SNAKE RIVER: WINDOW TO THE WEST* 221 (1991). Not surprisingly, returns of wild Snake River spring chinook to their spawning grounds has nose-dived from approximately 21,000 in the early 1990s to 3,116 in 1994, while the number of wild Snake River summer chinook fell from an average of 3000-7000 to 799 over the same period. Katherine P. Ransel, *The Last Salmon Run?*, NEW YORK TIMES, Feb. 18, 1995, at 21 (editorial).

9. Before large-scale dam construction began in the Columbia River Basin during the 1930s, excessive fishing was the leading cause of declining salmon populations. See *Wilkinson & Conner*, *supra* note 2, at 30-35. Other principal adverse influences on the salmon population include timber production, livestock grazing, mining, chemical contamination of streams and rivers, and water withdrawals associated primarily with irrigation. NORTHWEST POWER PLANNING COUNCIL, *COMPILATION OF INFORMATION ON SALMON AND STEELHEAD LOSSES IN THE COLUMBIA RIVER BASIN* 121-72 (1987) [hereinafter *LOSSES STUDY*]; Daniel, *supra* note 8, at 65. Timber production harms all salmon, but coho are especially affected because high mountain streams carry the resulting high loads of sediments downstream to coastal spawning beds. See Paul Koberstein, *The Decline and Fall of Salmon*, HIGH COUNTRY NEWS, Nov. 15, 1993, at 1, 11.

10. Blumm, *Parity V*, *supra* note 8, at 663-64 (referring to *Losses Study*, *supra* note 9; U.S. GENERAL ACCOUNTING OFFICE, *IMPACTS AND IMPLICATIONS OF THE NORTHWEST POWER BILL 20* app. IV at 1 (1979) [hereinafter *GAO STUDY*]); Clay Hathorn, *Save our Salmon, Save our Soul*, NATION, Jan. 6, 1992, at 14; Jeanne McDowell, *A Race to Rescue the Salmon*, TIME, Mar. 2, 1992, at 59. By 1968, the proliferation of dams along the Columbia River left only one, fifty-mile

Congress has often expressed its concern over the fate of the Pacific Northwest's once-magnificent salmon runs.¹¹ Finally, in 1980, Congress passed the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act or the Act).¹² The Northwest Power Act directs that fish and wildlife in the basin be placed on an equal footing with hydroelectric power generation.¹³

Unfortunately, the Northwest Power Planning Council¹⁴ (Council) has not generally implemented the Northwest Power Act in a manner likely to achieve the Act's promise of restored and harvestable runs. During the first decade of its existence, the Columbia River Basin Fish and Wildlife Program (Program) failed to achieve the Act's goal of a renewed salmon fishery in the Pacific Northwest.¹⁵ At the core of this tragic failure to reverse the salmon's

stretch of the river - the Hanford Reach - free-flowing. The completion of Lower Granite Dam in 1975 had a similar effect on the Snake River. The National Marine Fisheries Services estimates that 80% of the ten million fish loss that has occurred since the 1930s has been caused by the hydropower dams. NMFS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, FACTORS FOR DECLINE: A SUPPLEMENT TO THE NOTICE OF DETERMINATION FOR SNAKE RIVER SPRING/SUMMER CHINOOK UNDER THE ENDANGERED SPECIES ACT 8 (June 1991). The Columbia and Snake Rivers are commonly described as "placid pools." See, e.g., WILLIAM DIETRICH, NORTHWEST PASSAGE: THE GREAT COLUMBIA RIVER 42 (1995).

11. Michael C. Blumm, *Hydropower vs. Salmon: The Struggle of the Pacific Northwest's Anadromous Fish Resources for a Peaceful Coexistence with the Federal Columbia River Power System*, 11 ENVTL. L. 211, 228 (1981) [hereinafter *Hydropower vs. Salmon*]. See Bonneville Project Act of 1937, Pub. L. No. 75-329, 50 Stat. 731 (1937) (codified as amended at 16 U.S.C. §§ 832-832l (1985 & Supp. 1995)); S. Doc. No. 87, 75th Cong. 1st Sess. 1 (1937) (directing Commissioner of Fisheries to study effects of Bonneville Dam on Columbia River fishers and to recommend steps "to attain the full conservation of such fish. . .").

12. Pub. L. No. 96-501, 94 Stat. 2697 (codified at 16 U.S.C. §§ 839-839h (1985 & Supp. 1992)).

13. HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, H.R. REP. NO. 976, 96th Cong. 2d Sess. 49, 56, reprinted in 1980 U.S.C.C.A.N. 5989, 6015 [hereinafter COMMERCE COMMITTEE REPORT]. See also *Nat'l Wildlife Fed'n v. Fed. Energy Regulatory Comm'n*, 801 F.2d 1505, 1514-15 (9th Cir. 1986); *Confederated Tribes and Bands of the Yakima Indian Nation v. Fed. Energy Regulatory Comm'n*, 746 F.2d 466, 473 (9th Cir. 1984).

14. The Northwest Power Act mandated the establishment of the Northwest Power Planning Council, 16 U.S.C. § 839b(a). Although a creature of federal law, the Council is not a federal agency. 16 U.S.C. § 839b(a)(2)(A)(iv). Instead, the Council is a multi-state agency, analogous to an interstate compact agency, comprised of two members from Washington, Oregon, Idaho, and Montana. The constitutionality of the Council was upheld in *Seattle Master Builders Ass'n v. Pacific Northwest Elec. Power and Conservation Planning Council*, 786 F.2d 1359 (9th Cir. 1986), cert. denied, 479 U.S. 1059 (1987). See generally Dale D. Goble, *The Council and the Constitution: An Article on the Constitutionality of the Northwest Power Planning Council*, 1 J. ENVTL. L. & LT. 11 (1986); Symposium, *Seattle Master Builders and Creative Cooperative Federalism*, 17 ENVTL. L. 767 (1987).

15. A series of articles by Professor Michael Blumm persuasively lays out the history of the Council's ineffective attempts to restore a healthy salmon fishery to the Columbia

continued decline has been the Council's unwillingness to adhere to the role Congress created for it. The Council has generally subjugated state fish and wildlife agency and tribal views on the needs of salmon to a commitment to achieve consensus in the management of the Federal Columbia River Power System (FCRPS). Although Congress warned the Council that it should not assume the role of a "superfish and wildlife agency,"¹⁶ the Council has frequently refused to adopt measures thought by fish and wildlife agencies and tribes to be necessary to restore healthy salmon runs. Nor has the Council traditionally provided written explanations of its reasons for failing to defer to the mission, expertise, and unique roles of the fish and wildlife agencies and tribes.¹⁷

Recently, however, the United States Court of Appeals for the Ninth Circuit made clear the error of the Council's ways. In September 1994, the court invalidated the Council's 1992 Strategy for Salmon because the process that led to its creation violated several provisions of the Northwest Power Act.¹⁸ The court ruled that the Council unlawfully failed to provide a statutorily required written explanation of its rejection of fish and wildlife agency and tribal recommendations and omitted mandatory biological objectives from the Strategy.¹⁹ The court also indicated a strong belief that

River Basin during the 1980s. See Blumm, *Hydropower v. Salmon*, *supra* note 11; Michael C. Blumm & Brad L. Johnson, *Promising a Process for Parity: The Pacific Northwest Electric Power Planning and Conservation Act and Anadromous Fish Protection*, 11 ENVTL. L. 497 (1981) [hereinafter Blumm, *Parity I*]; Michael C. Blumm, *Fulfilling the Parity Promise: A Perspective on Scientific Proof, Economic Cost, and Indian Treaty Rights in the Approval of the Columbia Basin Fish and Wildlife Program*, 13 ENVTL. L. 103 (1982) [hereinafter Blumm, *Parity II*]; Michael C. Blumm, *Implementing the Parity Promise: An Evaluation of the Columbia Basin Fish and Wildlife Program*, 14 ENVTL. L. 277, 283 (1984) [hereinafter Blumm, *Parity III*]; Michael C. Blumm, *Reexamining the Parity Promise: More Challenges than Successes to the Implementation of the Columbia Basin Fish and Wildlife Program*, 16 ENVTL. L. 461 (1986) [hereinafter Blumm, *Parity IV*]. Blumm, *Parity V*, *supra* note 8; Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 682-87, 689-96.

16. The Northwest Power Act commands the Council to base the Program on fish and wildlife agency and tribal recommendations and to defer to the expertise of those agencies and tribes. See *infra* notes 159-163 and accompanying text. The quotation is of Congressman John Dingell, chief sponsor of the Act's fish and wildlife provisions and floor manager of the Act. 126 CONG. REC. 29,810 (1980).

17. Blumm, *Parity V*, *supra* note 8, at 661, 670, 675-76 & nn. 93-99, 683-85 & nn. 147-56, 691 & nn. 198-201. The Northwest Power Act allows the Council to reject fish and wildlife agency and tribal recommendations only on very limited grounds, and if the Council does reject such recommendations it must provide a written explanation of its decision to do so. See *infra* notes 159-163 and accompanying text.

18. *Northwest Resource Info. Center v. Northwest Power Planning Council*, 35 F.3d 1371, 1395 (9th Cir. 1994), *cert. denied*, 1995 U.S. LEXIS 5305 (1995).

19. *Id.* at 1385-86, 1391-92.

the Council failed to give appropriate deference to the region's fish and wildlife agencies and tribes in developing the Strategy for Salmon.²⁰

The immediate practical effect of the ruling in *Northwest Resource Information Center v. Northwest Power Planning Council* has been the adoption of 1994 Program amendments that incorporate many of the recommendations of the region's fish and wildlife agencies and tribes offered in 1991.²¹ Thus, the 1994 amendments may signal a shift away from the Council's past pattern of failure to lead the region toward resolution of the salmon crisis.²² *Northwest Resource Information Center* therefore has the potential to force a permanent solution to the Pacific Northwest's salmon crisis. The case provides a sweeping interpretation of the Northwest Power Act that confirms Congress' intent to force a revolutionary change in the way the FCRPS is managed. Moreover, the Ninth Circuit's opinion induced the Council, during its deliberations on the 1994 Program amendments, to afford significantly more deference to the scientific judgments of the region's fish and wildlife agencies and tribes than it had during the Program's first decade.²³ That change has been slow in coming, but the Council's recent decision to adopt recovery measures long advocated by salmon advocates indicates that *Northwest Resource Information Center* may fundamentally alter the weight traditionally accorded the Basin's fish and wildlife in the management of the Columbia River hydroelectric system. If the 1994 Program amendments are a reliable indicator, the Council has taken to heart the court's warnings that the Northwest Power Act's Program criteria impose substantive obligations on it and that the public must be given a complete explanation of the Council's decision to adopt or reject Program recommendations.²⁴

The Northwest Power Act is not, however, the only tool that can help bring back the salmon runs. In the short run, it may not even be the most important mechanism.²⁵ By the late 1980s, declines in many of the Columbia River Basin's salmon stocks, and the failure of the Northwest Power Act to bring about their restoration, motivated concerned citizens of the region to

20. *Id.* at 1386-89.

21. See Joan Laatz, *Power Council OK's Plan to Save Salmon*, OREGONIAN, Dec. 15, 1994, at A1, A26; Northwest Power Planning Council, News Release, Dec. 14, 1994 (on file with author).

22. See Blumm, *Parity V*, *supra* note 8, at 703, 711-13 (discussing Council's pattern of compromising the recommended fish mitigation measures).

23. See *infra* notes 359-405 and accompanying text.

24. See *infra* notes 359-361 and accompanying text.

25. Indeed, there may be some sentiment among the region's political leaders to re-examine the Northwest Power Act in the wake of *Northwest Resource Information Center* and the 1994 Program amendments. See Al Gibbs, *Gorton Suggests Federal Law to Solve Region's Salmon Crisis*, [TACOMA] NEWS TRIBUNE, Oct. 13, 1994, at B6 (reporting Washington Senator Slade Gorton's view that a legislative "solution" to the salmon crisis may be necessary).

seek protection of several runs under the Endangered Species Act (ESA).²⁶ The resulting listings²⁷ may guarantee the end of a long era in which federal dam operators downplayed the needs of salmon.

The National Marine Fisheries Service (NMFS) acquired substantial power to protect the runs against further declines in the aftermath of the salmon listings. Unfortunately, since the listings occurred, NMFS has not exhibited the willingness to force fundamental changes that would reduce the hydropower system's awesomely destructive impact on salmon. In 1992, 1993 and 1994, NMFS concluded that the operation of the region's hydroelectric system would not jeopardize endangered salmon. Judge Marsh, as well as the Ninth Circuit, have clearly expressed impatience with NMFS' failure to challenge the status quo in the Columbia River system. In *Idaho Department of Fish & Game v. National Marine Fisheries Service*, Judge Malcom Marsh warned all of the parties directly affected by the operation of the FCRPS that the courts and the region expect a "major overhaul" to rescue the imperiled salmon stocks.²⁸ *Idaho Department of Fish & Game*²⁹ therefore amounted to an invitation for NMFS to exercise bureaucratic courage in the continuing debate over the fate of salmon.³⁰

These expressions of judicial impatience should ensure that *Idaho Department of Fish & Game* will be a vital step toward restoration of the runs. If NMFS, and especially irrigators and the operators of the Columbia River hydropower system, respond appropriately to the court's sentiments, *Idaho Department of Fish & Game* will revolutionize the allocation of the region's

26. Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1544 (1985 & Supp. 1995).

27. 56 Fed. Reg. 58,619 (1991); 57 Fed. Reg. 14,653-54 (1992); 59 Fed. Reg. 54,840 (1994) (proposing downlisting of Snake River spring/summer and fall chinook to endangered). These requests resulted in findings that the Snake River sockeye salmon and the Snake River spring and summer Chinook salmon are endangered species. More salmon listings are possible. NMFS recently proposed to list certain coho runs native to California and Oregon. 60 Fed. Reg. 38,011 (1995). Moreover, while NMFS recently rejected a petition to list the mid-Columbia summer Chinook run, 59 Fed. Reg. 48,855 (1994), the agency is conducting comprehensive, Pacific coast-wide status reviews for coho, steelhead, pink salmon, chum, sockeye, Chinook, and sea-run cutthroat trout. 60 Fed. Reg. 38,011 (1995); 50 Fed. Reg. 46,808 (1994).

28. *Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv.*, 850 F. Supp. 886, 900 (D. Or. 1994), *remanded*, 56 F.3d 1071 (1995).

29. *Id.*

30. Because NMFS used a methodology in its original 1994-98 biological opinion on FCRPS operations similar to that employed in the 1993 biological opinion, *Idaho Department of Fish & Game* cast equal doubt on its validity as well. NMFS responded to *Idaho Department of Fish & Game* by revising the 1994-98 biological opinion on the FCRPS. See Letter from Fred R. Disheroon, Esq., U.S. Department of Justice, to Hon. Malcolm F. Marsh (Apr. 7, 1994) (copy on file with author).

water resources among power interests, navigation needs, irrigators, and fish and wildlife. Unfortunately, the decision has not had any obvious positive impacts to date. In a revised 1994-98 biological opinion on FCRPS operations and in a proposed recovery plan for listed salmon stocks, NMFS has acknowledged that salmon need more and faster water to survive. However, NMFS has failed to provide the tools necessary to provide such water. The revised 1994-98 biological opinion on FCRPS operations and the proposed recovery plan also do not effectively confront other significant impediments to salmon survival, including inadequate flows and excessive reliance on barge and truck transportation.³¹

Sections II, III, and IV of this article summarize the events that led to the listing of several salmon runs under the ESA, outline the fish and wildlife provisions of the Northwest Power Act, discuss the evolution of the Program during its first decade, and outline the Council's 1992 Strategy for Salmon.³² Sections V and VI describe the decisions in *Northwest Resource Information Center v. Northwest Power Planning Council* and *Idaho Department of Fish & Game v. National Marine Fisheries Service* and analyze the holdings in each case.³³ Section VII discusses and criticizes the impacts produced by the two cases thus far, particularly the 1994 Program amendments and the revised 1994-98 biological opinion on FCRPS operations. Section VIII concludes that *Northwest Resource Information Center* and *Idaho Department of Fish & Game* offer an avenue for overdue and essential changes in the region's hydropower system. However, the prospects for durable change rest on the willingness of the Council and NMFS to exert consistent leadership and on the commitment of the federal dam operators to abide by the Program and to accept fundamental changes in the Basin's scheme for allocating use of the rivers. Thus far, there is little assurance that these results will be forthcoming. *Northwest Resource Information Center* and *Idaho Department of Fish & Game* have not induced the necessary willingness to change the river's status quo.³⁴

II. A Short History of the Columbia River Basin and Its Salmon

From its headwaters high in the Selkirk Mountains of central British Columbia, the Columbia River drains nearly 259,000 square miles and flows 1,450 miles to its mouth on the Pacific coast at Astoria, Oregon.³⁵ The

31. See *infra* notes 406-419 and accompanying text.

32. See *infra* notes 35-121 and accompanying text.

33. See *infra* notes 122-353 and accompanying text.

34. See *infra* notes 3, 56-506 and accompanying text.

35. PALMER, *supra* note 8, at 228. The Columbia River drains portions of Oregon, Washington, Idaho, western Montana, western Wyoming, northern Nevada, and northern Utah in the United States and approximately 40,000 square miles of British

Columbia's principal tributary, the Snake River, flows westerly from its headwaters in western Wyoming³⁶ before moving north to form a confluence with the Columbia near the city of Pasco, Washington.³⁷

These rivers have been the stage for one of "nature's most engaging miracles."³⁸ Each year for millions of years,³⁹ salmon have migrated up the region's rivers to their spawning grounds.⁴⁰ For most of that millennia their numbers were huge.⁴¹ Before Europeans discovered the Pacific Northwest,⁴²

Columbia. See Michael C. Blumm, *The Columbia River Basin*, in WATERS AND WATER RIGHTS 57 (Robert E. Beck ed. 1994) [hereinafter Blumm, *Columbia River Basin*].

36. The Snake River is 1,056 miles long and rises in Yellowstone National Park, Wyoming. It is the tenth largest river in the United States and drains 109,000 square miles of the northern Rocky Mountains, an area larger than Colorado. PALMER, *supra* note 8, at 5. Other tributaries of the Columbia rise from headwaters in Montana, Idaho, and Nevada.

37. The Columbia River Basin is the second largest river basin on the continent, after the Missouri-Mississippi River Basin. The Columbia itself is North America's sixth largest river measured by annual runoff, ranking below the Mississippi, MacKenzie, St. Lawrence, Nelson, and Yukon Rivers. Blumm *Columbia River Basin*, *supra* note 35, at 57. In an average year the Columbia discharges into the Pacific Ocean more than twice the water discharged by the Nile River into the Mediterranean. The Columbia's average annual runoff of 198 million acre-feet (maf) is prodigious, but its flows are neither predictable nor stable: before the first dams were built in the basin, flows ranged from a low of 14,000 cubic feet per second (cfs) to as high as 550,000 cfs. The Columbia River is one of only two rivers in the American West that flow from the interior all the way to the Pacific Ocean. The other is the Klamath, in southern Oregon. *Id.*

38. Bob Devine, *The Salmon Dammed*, AUDUBON 82, 83 Jan. 1992.

39. Salmon were present in the rivers of the Columbia basin at least one million years before humans first arrived in the region. WILKINSON, *supra* note 7, at 179-80.

40. Pacific salmon migrate over a range extending from the California coast to the Alaskan seas. See Wilkinson & Conner, *supra* note 2, at 25.

41. One early account of Oregon's settlement declared that salmon "literally fill the rivers. . . in their season. And at all the falls and cascades in the various rivers of the country, the quantities take and that might be taken, are beyond all calculation. As they penetrate far into the interior, they afford almost inexhaustible supplies to the Indian tribes of the country, as well as the whites. . . ." Wilkinson & Conner, *supra* note 2, at 30 (quoting G. Hines, OREGON: ITS HISTORY, CONDITION AND PROSPECTS 331 (1851)). See also STEWART HOLBROOK, THE COLUMBIA 234-50 (2d ed. 1974) (describing early years of Columbia River fisheries).

42. Natives populated the Columbia River Basin for thousands of years before the first European explorers arrived. Wilkinson & Conner, *supra* note 2, at 27 (citing L. CRESSMAN, PREHISTORY OF THE FAR WEST 1-2 (1977)). See also GUS NORWOOD, COLUMBIA RIVER POWER FOR THE PEOPLE: A HISTORY OF POLICIES OF THE BONNEVILLE POWER ADMINISTRATION 7 (U.S. Dep't of Energy, Bonneville Power Administration 1981) (noting presence of humans in the Pacific Northwest for at least 15,000 years). The arrival in the region by the explorers Meriwether Lewis and William Clark was a "crackling, lightning-bolt event" for the 50,000 natives living in the Pacific

natives of the Columbia and neighboring river basins⁴³ annually caught millions of pounds of fish.⁴⁴ After the Lewis and Clark expedition to the region, mountain men, trappers, and settlers arrived and began building the region's resource-based economy.

The federal government began building the dams that now form the FCRPS in the 1930s.⁴⁵ During the following decades private parties built hundreds more dams in the Basin. By 1964, the hydroelectric system was integrated through a contract between

Northwest in 1805. WILKINSON, *supra* note 7, at 178. At that time the tribes constituted a strong society, and during the first fifty years after the Lewis and Clark expedition the native tribes felt relatively few adverse effects. Of course, large numbers of native Indians were killed off by diseases transmitted by the white settlers, and conflicts between the natives and white settlers took additional lives. Nevertheless, tribal societies continued to function and "the [Columbia and its tributaries were] completely intact, and so were the great salmon runs." *Id.*

43. Wilkinson & Conner, *supra* note 2, at 27.

44. The Pacific Northwest's tribes "relied on salmon more than the Plains Indians depended on buffalo." WILKINSON, *supra* note 7, at 184. Before the decline of the fishery began in the mid-nineteenth century, natives of the basin may have caught 42 million pounds of fish each year. *Id.* at 185 (discussing 1986 Council estimate of pre-settlement annual fishing by region's tribes). See also Wilkinson & Conner, *supra* note 2, at 28 n. 51 (natives caught approximately 18 million pounds of salmon each year); COURTLAND L. SMITH, FISH OR CUT BAIT 12 (Oregon State University Sea Grant College Program, Publication No. ORESU-T-77-006) (1977) (estimating the average annual catch at Celilo Falls on the lower Columbia to be 4-5 million pounds). In contrast, during the modern era the total commercial salmon catch in the Columbia River Basin is 5-8 million fish per year. The principal native fishery was located at Celilo Falls, near the current location of the city of The Dalles, Oregon, and two hundred miles inland from the Columbia's mouth. Wilkinson & Conner, *supra* note 2, at 26-29. Other falls at which tribal fishers gathered for seasonal harvests were the Cascades of the Columbia, 50 miles downriver of Celilo Falls; Salmon Falls on the Snake River; Kettle Falls on the upper Columbia near the Canadian border; and Willamette Falls southeast of what is now Portland. *Id.* at 27 n. 45. Celilo Falls was inundated when the gates of the Dalles Dam closed in April 1956. The United States government later paid the tribes \$15 million for their fishing rights. See *Whitefoot v. United States*, 293 F.2d 658 (Ct. Cl. 1961), *cert. denied*, 369 U.S. 818 (1962).

45. The FCRPS is composed of thirty federal dams in the Snake and Columbia basins. The major dams, and the dates of their completion, are: Bonneville (1938), The Dalles (1957), and John Day (1968) on the lower Columbia; and McNary (1953), Ice Harbor (1961), Lower Monumental (1969), Little Goose (1970), and Lower Granite (1975) on the lower Snake. In addition, the FCRPS includes, on the upper Snake River and in the upper Columbia Basin, Dworshak (1974), Hungry Horse (1952), Libby (1975), Chief Joseph (1955), Grand Coulee (1941), and Albeni Falls (1955) dams. BONNEVILLE POWER ADMINISTRATION, MULTIPURPOSE DAMS OF THE PACIFIC NORTHWEST (1993). For an excellent review of the history of dam building in the Pacific Northwest, including an analysis of Congress' purposes in authorizing construction of the region's many dams, see Blumm, *Hydropower vs. Salmon*, *supra* note 11, at 223-49; DIETRICH, *supra* note 10, at 249-322.

Bonneville Power Administration (BPA), the dam operators, and utility customers.⁴⁶ That same year, the United States entered into an agreement with Canada under which the U.S. Army Corps of Engineers and the Bureau of Reclamation obtained the ability to store large portions of the spring flows on the upper Columbia River behind four large dams.⁴⁷ As a result, the dams now provide seventy-five percent of the Pacific Northwest's electric power⁴⁸ and help farmers irrigate seven million acres east of the Cascades.⁴⁹ By the late 1970s, however, the cost of these benefits became apparent, as a salmon population that once numbered in the tens of millions each year dwindled to a few

46. See PACIFIC NORTHWEST COORDINATING AGREEMENT, AGREEMENT FOR COORDINATION OF OPERATIONS AMONG POWER SYSTEMS OF THE PACIFIC NORTHWEST (Contract No. 14-02-4822) (1964) (copy on file with author). The Pacific Northwest Coordination Agreement of 1964 established system operating criteria and power exchange guidelines and laid the basis for the system's annual integrated plan. See KAI N. LEE, DONNA LEE KLEMKA & MARION E. MARTS, *ELECTRIC POWER AND THE FUTURE OF THE PACIFIC NORTHWEST* 54-55 (1980).

47. COLUMBIA RIVER BASIN: COOPERATIVE DEVELOPMENT OF WATER RESOURCES, Jan. 17, 1961, U.S.-Canada, 15 U.S.T. 1555, T.I.A.S. No. 5538 (entered into force Sept. 16, 1964) [hereinafter *Columbia River Treaty*]. See generally Blumm, *Hydropower vs. Salmon*, *supra* note 11, at 215-19. The treaty authorized Canada to build three storage projects and the United States to build a fourth that would inundate Canadian lands. In exchange, the U.S. paid Canada \$64 million and promised Canada a one-half share of the hydropower generated. The four treaty projects went on line in 1970. Blumm, *Columbia River Basin*, *supra* note 35, at 80.

48. PUBLIC POWER COUNCIL, *PUBLIC POWER ESSENTIALS: AN INTRODUCTION TO NORTHWEST ENERGY ISSUES AS PUBLIC POWER APPROACHES THE 1990s* 9 (1987). Over 40% of America's hydropower is generated by the region's dams. Blumm, *Parity V*, *supra* note 8, at 662. The Pacific Northwest's cheap hydroelectricity has also made the region America's manufacturing mecca. Smelters in the Columbia River Basin produce approximately 2 million tons of aluminum each year, approximately 43% of the nation's total annual supply. Jim Simon & Marla Williams, *Lifestyles, Livelihoods Are At Stake Over Pending Endangered Species*, SEATTLE TIMES, Mar. 31, 1991, at A5.

49. Blumm, *Hydropower vs. Salmon*, *supra* note 11. In Idaho alone, more than 4 million acres are irrigated. 3.8 million of those acres are in the Snake River Basin. PALMER, *supra* note 8, at 90. That ranks Idaho second only to California among the states for total irrigated acreage. *Id.* at 103. Nevertheless, the reservoirs of the Columbia River Basin are not the only sources of irrigation water east of the Cascades. A significant amount of the region's agricultural land is watered by pumped groundwater and diversions from undammed rivers and streams. Interview with Reed D. Benson, Staff Attorney, WaterWatch of Oregon (Nov. 18, 1994). See also Palmer, *supra* note 8, at 118 (irrigation withdrawals from groundwater totaled 8.5 maf in 1986, while surface water withdrawals for irrigation totaled 16.6 maf the same year). Navigation is also a significant economic use of the Columbia and Snake Rivers. Shipping in the Columbia River system transports more than \$11 billion worth of goods each year, making it the nation's second-largest inland waterway. Marla Williams, *What Cost to Save Snake River Sockeye? Release of Salmon Recovery Plan Raises Stakes in Northwest Fish War*, SEATTLE TIMES, Mar. 20, 1995, at A1.

million fish.⁵⁰ The plight of the salmon became so severe that NMFS considered listing several runs under the ESA in 1978.⁵¹ The imminent listings convinced Congress that previous legislative efforts to restore the region's famed salmon runs had failed.⁵² As a result, Congress included in the Northwest Power Act substantial protection for salmon in an effort to ward off additional ESA listings.⁵³ Originally conceived as a response to expected power shortages in the Pacific Northwest,⁵⁴ the Act became an unprecedented fish and wildlife restoration law.⁵⁵

50. See *supra* note 8; Lorraine Bodi, *The History of Legislative Background of the Northwest Power Act*, 25 ENVTL. L. 365, 368 (1995). Several hundred wild runs native to the region are also at risk of extinction. See Willa Nehlsen et al., *Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington*, 16 FISHERIES 4 (1991) (concluding that more than 100 wild stocks are extinct and that 89 more face a high risk of extinction). The adverse effects of dams are numerous: they block access to upstream spawning habitats, flood spawning grounds, change water temperatures, increase water pollution, cause a reduction in available oxygen, and eliminate much of the spring and summer flows needed to transport juvenile salmon to the ocean. *Id.* at 664 (citing LOSSES STUDY, *supra* note 9, at 140, 146 (discussing flooding of spawning grounds and temperature effects)); JOHN D. ECHEVERRIA, ET AL. RIVERS AT RISK: THE CONCERNED CITIZEN'S GUIDE TO HYDROPOWER 4-5 (1989). Notwithstanding their well-known adverse effects, some continue to doubt that the dams are the principal culprit in the destruction of the runs. See Brief of the DSIs, at 11, *Idaho Dep't of Fish & Game v. National Marine Fisheries Serv.*, No. 94-35524 (9th Cir., filed Sept. 16, 1994) ("Opponents of the FCRPS and self-styled fishery 'advocates' have labored long and hard to create the myth that the FCRPS is almost single-handedly responsible for the decline of salmon.") (citation omitted). Even the owner of the FCRPS agrees, however, that the hydropower system has been the principal agent of salmon destruction. See NMFS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, BIOLOGICAL OPINION ON 1993 OPERATION OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM 51, 60 (1993) [hereinafter 1993 BIOLOGICAL OPINION]. Not surprisingly, calls for the removal of some dams are growing louder and more frequent. See Michael T. Pyle, *Beyond Fish Ladders: Dam Removal as a Strategy for Restoring America's Rivers*, 14 STAN. ENVTL. L.J. 97 (1995). Congress has even authorized removal of one of the Pacific Northwest's dams. See Elwha River Ecosystem and Fisheries Restoration Act of 1992, Pub. L. No. 102-495, 106 Stat. 3137.

51. See 43 Fed. Reg. 45,622, 45,628-29 (Oct. 3, 1978) (notice requesting public help in reviewing biological status of upriver salmon populations), cited in Lorraine Bodi, *Protecting Columbia River Salmon Under the Endangered Species Act*, 10 ENVTL. L. 349, 349-50 (1980) [hereinafter Bodi, *Protecting Salmon Under the ESA*].

52. See COMMERCE COMMITTEE REPORT, *supra* note 13, at 6015; Blumm, *Parity II*, *supra* note 15, at 108-11. The most important of those previous laws was the Fish and Wildlife Coordination Act (FWCA), 16 U.S.C. §§ 661-666(c) (1988). For a discussion of the flaws of FWCA, see *infra* note 148.

53. The U.S. General Accounting Office issued a report to Congress highlighting the plight of the salmon in 1979. See GAO STUDY, *supra* note 10.

54. See *Central Lincoln People's Utility Dist. v. Johnson*, 735 F.2d 1101, 1106 (9th Cir. 1984); Ralph Cavanagh, *The Pacific Northwest Electric Power Planning and Conservation (And Thermal Power Plant Relief) Act*, 4 U. PUGET SOUND L. REV. 27, 30-31 (1980).

55. Blumm, *Parity V*, *supra* note 8, at 666. Of course, salmon are not the only fish that have been grievously harmed by the region's huge hydroelectric network. The impacts of the dams are

III. The Council's Fish and Wildlife Program and the Salmon Listings

A. The Evolution of the Program: 1981-90

As the required first step toward issuance of the Program, the Act directed the Council to ask state fish and wildlife agencies and tribes to recommend actions needed to ensure mitigation of fish and wildlife losses and restoration of the runs.⁵⁶ In 1981, a coalition of state fish and wildlife agencies and Columbia River Basin tribes (the "fishery coalition") urged the Council to adopt minimum average weekly spring flows at The Dalles Dam on the lower Columbia⁵⁷ and recommended peak flows at The Dalles, Priest Rapids and Lower Granite Dams.⁵⁸ The fish and wildlife agencies also proposed a "sliding scale" plan that would allow dam operators to adjust flows in years with high or low runoff.⁵⁹

After unprecedented public involvement, the Council issued the Program in 1982,⁶⁰ but declined to fully implement the fishery coalition's proposal for a sliding scale of flows.⁶¹ Instead, the Council adopted a "Water Budget" designed to make available a given volume of water to salmon during their annual downstream migration season.⁶²

also felt by numerous other anadromous and resident fish, including Pacific Lamprey, burbot, white sturgeon, and redband trout. Each of these fish species is likewise at risk of extinction. See John Harrison, *The Forgotten Fish*, 14 NORTHWEST ENERGY NEWS 7 (Summer 1995).

56. Blumm, *Parity III*, *supra* note 15, at 285.

57. This flow level was below an optimum salmon survival flow level of 300-350 kcfs at The Dalles Dam. See NORTHWEST POWER PLANNING COUNCIL, I RECOMMENDATION FOR FISH & WILDLIFE PROGRAM UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT 167-69 (1981) [hereinafter 1981 COALITION RECOMMENDATIONS].

58. The recommended flows at Lower Granite Dam were 85 kcfs. *Id.* at 180. Such a flow level would be below the biologically optimum flow level for the lower Snake of 140 kcfs. See J. LAWRENCE, K. LEE & N. PALMER, *THE WATER BUDGET: A STEP TOWARDS BALANCING FISH AND POWER IN THE COLUMBIA RIVER BASIN* 76 (U. of Wash. Water Resources Technical Rep. No. 81) (1988) [hereinafter *THE WATER BUDGET*] (discussion recommendations of Columbia River Fisheries Committee made in 1979).

59. The "sliding scale" would have allowed dam operators to reduce flows 25% in low flow years and increase flows by 15% at Priest Rapids and by 60% at Lower Granite in high flow years. The region's tribes opposed the "sliding scale" plan. See 1981 COALITION RECOMMENDATIONS, *supra* note 57, at 170 (assertion of Columbia River Inter-Tribal Fish Commission that treaties entitled tribes to optimum flows of 300 kcfs or greater).

60. NORTHWEST POWER PLANNING COUNCIL, 1982 COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM (1982) [hereinafter 1982 PROGRAM].

61. Blumm, *Parity III*, *supra* note 15, at 294.

62. The Council adopted the "Water Budget" instead of a recommendation by a coalition of state fish and wildlife agencies and tribes that it set minimum flows at several lower Columbia

The Council also required installation of mechanical bypass systems to improve juvenile passage⁶³ and, to enhance the passage of adult fish migrating upriver, called for improvement of fish ladders.⁶⁴ Amendments during the early 1980s established specific plans for implementing Program provisions,⁶⁵ eliminated BPA's role as a source of funds for "goals" studies,⁶⁶ and established a goal of doubling the size of existing salmon runs.⁶⁷

and Snake River dams. The Council allocated 4.64 million acre-feet (maf) to the Water Budget and directed that it be made available for fish passage between April 15 and June 5 under the direction of managers selected by the fish and wildlife agencies and tribes each year. Blumm, *Parity III*, *supra* note 15, at 295-96. The Water Budget reduced the amount of water made available for power production at the dam operator's discretion and instead allocates it to increased flows during salmon migration season. *Id.* at 294 n. 71.

63. 1982 PROGRAM, *supra* note 60, § 401. Bypass measures are necessary to reduce salmon mortality caused by power turbines built into the dams. As juvenile salmon attempt to pass through the turbines, they are subjected to changes in water pressure, impacts of the turbine blades, and increased water turbulence. In addition to the adverse consequences of the turbines, the juvenile salmon become stunned and disoriented after passing through the turbines. In such a condition they become increasingly vulnerable to predators, especially squawfish, which are abundant at the base of each dam. See Blumm, *Parity III*, *supra* note 15, at 302 n.106 (quoting 1982 PROGRAM, *supra* note 60, § 401). The Council did not request biologically adequate interim flows at five public utility district dams on the mid-Columbia pending juvenile bypass improvements. *Id.* at 303-04 (quoting 1982 PROGRAM, *supra* note 60, § 401(a)(10)). For dams on the Snake operated by the Corps, the Council did not order any minimum flows. Instead the Council simply authorized the Corps to continue transporting juvenile salmon from reservoirs above Lower Granite and Little Goose Dams and asked for further studies and proposals for further, undefined action. *Id.* at 309-10 (quoting 1982 PROGRAM, *supra* note 60, § 401(b)(6)-(7)).

64. The Council established, for all of the dams on the mainstem Columbia and its tributaries, criteria for spills and flows that would ensure the attraction of adult salmon to fish ladders. The Council also ordered improved operation and maintenance of fish ladders and requested various studies of problems related to adult passage. *Id.* 310-12. The program also emphasized reduction of ocean harvests, consideration of habitat improvements in the Yakima River basin, and establishment of fish and wildlife criteria for all new hydroelectric projects and designation of stream reaches where such development would be discouraged. *Id.* at 320-31, 338-43.

65. See NORTHWEST POWER PLANNING COUNCIL, 1984 COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM §§ 1503-04 (1984) [hereinafter 1984 PROGRAM]. For a discussion of the three interim Program goals established by the 1984 Amendments, see Blumm, *Parity III*, *supra* note 15, at 298-93; Blumm, *Parity V*, *supra* note 8, at 679 n.127. The 1984 Amendments also attempted to improve fish passage survival a mainstem Columbia dams. "Efficient fish passage is critical to the Program's success because investments in habitat and fish flows cannot materially increase run sizes without significant reductions in fish mortality at mainstem dams." Blumm, *Parity V*, *supra* Note 8, at 680. To improve passage, the Council relied primarily on the Water Budget, which would increase flows and thereby allow fish to pass more efficiently through reservoirs: installation of mechanical bypass systems designed to keep juvenile salmon out of dam turbines; and barge or truck transportation of

The Council intended the innovative conception of the Water Budget to replace lost spring runoff and provide the flows necessary for juvenile salmon to migrate downstream.⁶⁸ Nevertheless, by mid-decade it became clear that the Water Budget was not working.⁶⁹ Nor were the Council's laudable efforts to encourage and accelerate mainstem passage improvements sufficient to materially increase run sizes. The 1982 Program did not include deadlines for installation of bypass systems on the Corps'

juvenile salmon around dams. The Council declined to adopt fish and wildlife agency and tribal recommendations to provide water spills to allow fish to move around the dams. *Id.* at 682. Unfortunately, these initiatives were doomed to fail once the Council decided not to require mainstem passage improvements sufficient to noticeably increase run sizes. *Id.*

66. The Program originally authorized BPA to fund such "goals studies." 1984 PROGRAM, *supra* note 65, § 201(1). However, some commentators expressed concern that BPA was not adequately committed to restoring the basin's fisheries. See Michael C. Blumm, *The Northwest Power Act's Institutional Innovations and Unfulfilled Promises*, 2 J. ENVTL. L. & LITIG. 165, 173 N.53 (1987). As a consequence, the Council amended the Program in 1985. COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM, FINAL AMENDMENTS, 50 Fed. Reg. 11,032, 11,033 (1985) (final amendments to Program § 201). See also Blumm, *Parity V*, *supra* note 8, at 682.

67. The Council concluded in 1986 that hydropower production was responsible for the loss of 5-11 million of the 7-14 million salmon killed each year by activities that destroy its habitat. LOSSES STUDY, *supra* note 9, at 1. Nevertheless, the 1987 amendments sought only to achieve a total annual run size of five million fish. The Council asserted that current socioeconomic and biological conditions reduce the possibility of restoring fish runs to historic levels. Blumm, *Parity V*, *supra* note 8, at 686.

68. The Water Budget allocated 4.5 million acre feet (maf) for replacement spring flows, and the Council created managers to oversee Corps implementation of the Budget's requirements. Blumm, *Parity IV*, *supra* note 15, at 470. The attraction of the Water Budget from the Council's point of view lay in its potential for less loss of hydropower revenues than would be the case in a minimum flow regime and also in its involvement of fishery advocates in the day-to-day operational management of the FCRPS. Blumm, *Parity V*, *supra* note 8, at 675.

69. Operators of the dams on the Snake and Lower Columbia Rivers usually responded to the expiration of the Water Budget period by reducing flows. This was done in order to store water behind the dams for power generation during the fall and winter, but its effect was "a marked reduction in flows during the summer migration season." Blumm, *Parity V*, *supra* note 8, at 688. In addition, the Corps did not consistently grant Water Budget requests, particularly in average or below-average flow years. The Corps' actions were often motivated by a desire to maximize power generation or refill reservoirs rather than meet fish and wildlife needs. *Id.* at 688-89. See also Blumm, *Parity IV*, *supra* note 15, at 494-501 (discussing Corps' evasion of Water Budget flow priority over reservoir refill and secondary power considerations, inflexible application of Water Budget during late migration season, and BPA efforts to control activities of managers responsible for assuring adequate Water Budget flows for fish).

dams on the lower Columbia and Snake,⁷⁰ and by 1991 six of thirteen mainstem Columbia and Snake federal dams still lacked such facilities.⁷¹ The Council also consistently failed to establish minimum interim spill levels at the mainstem dams, which are essential to reduce high levels of juvenile mortality associated with passage through hydroelectric turbines.⁷²

During the first decade after the enactment of the Northwest Power Act, the Council showed little willingness to directly confront these problems. The Council rejected fishery coalition recommendations that fish flows be increased and implementation of the Water Budget be improved in 1987, and in 1990 the Council declined to tighten requirements for future hydroelectric development in the basin.⁷³ The Council did act to improve fish flows in the basin in 1989, but its behavior did not reflect leadership on this issue. The Council merely ratified an agreement among the fish and wildlife agencies, tribes, BPA, and the Pacific Northwest Utilities Conference Committee (PNUCC) that resolved the long-running argument over spill magnitude and timing at mainstem Columbia dams.⁷⁴ The Council played no role in negotiating the settlement.⁷⁵

70. 1982 PROGRAM, *supra* note 60, § 404(b).

71. Installation schedules at the other seven dams are generally several years behind schedule. Blumm, *Parity V*, *supra* note 8, at 694.

72. Blumm, *Parity V*, *supra* note 8, at 677. The Council required spill plans that would achieve survival rates comparable to those associated with the best available bypass systems. *Id.* The Council's reluctance to require spills adequate to improve survival beyond that threshold might be a result of their high cost in terms of the electric power that could otherwise be generated with the water spilled.

73. In 1988 the Council designated approximately 44,000 miles of basin streams as "protected areas" which would be unavailable for hydroelectric project construction. Blumm, *Parity V*, *supra* note 8, at 696 (citing NORTHWEST POWER PLANNING COUNCIL, PROTECTED AREAS SUMMARY AND RESPONSE TO COMMENTS (1988)). However, in 1990, the Council declined to adopt a recommendation that the designation be applied to approved but unconstructed hydroelectric projects. The fishery coalition had urged the Council to invoke protected area designation to prevent construction of hydroelectric projects which were issued a preliminary permit or awaiting a decision by the Federal Energy Regulatory Commission (FERC) on a pending license application and to impose protected area status on all projects for which "there had not been a substantial investment of resources." *Id.* at 701-02 (citing NORTHWEST POWER PLANNING COUNCIL, PROTECTED AREA SUMMARY AND RESPONSE TO COMMENTS 2, 4-15, 17-18 (1990)). In fact, the Council's 1990 actions reflected a willingness to allow new hydroelectric development to go forward. The Council removed approximately 500 miles of basin streams from protected area designation in response to thirty requests for exemptions by FERC. *Id.*

74. *Id.* at 699 (citing NORTHWEST POWER PLANNING COUNCIL, NOTICE OF FINAL ACTION ON SPILL AMENDMENTS (1989)). The "Fish Spill Memorandum of Agreement" was a result of a settlement of litigation alleging that proposed Pacific Intertie expansion violated the National Environmental Policy Act, 42 U.S.C. § 4321. It provided for spills at Lower Monumental, Ice Harbor, John Day, and

By the end of its first decade, the Program enjoyed success in some key respects. However, many of the successes were evident only on paper or fleeting in terms of improved run sizes. In 1987 the Council restructured the implementation of the Program, creating a sub-basin planning process aimed at avoiding unanticipated impacts on local fish production and inconsistencies with overall Program goals and policies; issued principles to guide salmon research and production objectives; directed that implementation of the Program give priority to adequate genetic diversity, rapid improvement of mainstem dam passage, and restoration of fisheries existing above Bonneville Dam, frequently reiterated its concern that salmon production be increased and harvests reduced; and institutionalized "roundtable" discussions among all parties interested in fishery health.⁷⁶ The 1988 creation of the "Protected Areas" list must also be considered an accomplishment since it makes new hydroelectric development in the basin less likely, although not impossible.⁷⁷ The Council also took steps

The Dalles dams over a 10-year period. Those dams lack adequate fish bypass systems. The agreement is designed to provide spills sufficient to protect a significant percentage of salmon runs migrating between April 15 and August 21 each year and requires completion of an annual spill plan by November 1 of each year. The spill plan governs during the following year's spill and summer migration seasons and must be integrated with annual smolt monitoring programs maintained by the fish and wildlife agencies and tribes. Although the Corps of Engineers and the region's utilities refused to sign the Agreement, its implementation was "encouraging" in 1989 and 1990. *Id.* at 699-700. The Agreement was achieved following a long period of negotiations commenced after salmon advocates filed a complaint aimed at blocking expansion of BPA's proposed Pacific Intertie. The Pacific Intertie links power generating facilities in the Pacific Northwest to California, thereby increasing power sales to that state and making spills less likely. PNUCC is a non-profit corporation that represents many of the Pacific Northwest's electricity customers. Blumm, *Columbia River Basin*, *supra* note 35, at 134.

75. Blumm, *Parity V*, *supra* note 8, at 700 n.255. In 1990, the Council again failed to come to terms with the flow problem. That year the Council rejected a comprehensive, biologically-based flow regime proposed by a coalition of fish and wildlife agencies and tribes and supported by a detailed scientific justification. *Id.* at 671-72, 675-77. The recommendations would have required that the flows be considered "hard restraints" on hydropower system operations, to be met under all conditions; reiterated the 1981 request for minimum flows on the lower Columbia; requested summer flows through August of each year; and incorporated the "sliding scale" concept originally proposed in 1981. *Id.* The Council instead opted for flows still below the threshold through by biologists necessary to ensure juvenile salmon survival on the lower Columbia and Snake. *Id.* at 675-76. Nor did the Council improve flows in 1991. The 1991 Amendments established a "low flow target" of 200 kcfs on the lower Columbia, increased the Water Budget allocation to 6.45 million acre feet (maf), proposed the lowering of John Day reservoir to minimum operating pool, and removed a 140 kcfs "flow cap" on the mid-Columbia. See Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 691-92.

76. 1987 PROGRAM, *supra* note 8, §§ 204(a)-(g) to 205, at 39-44.

77. Blumm, *Parity V*, *supra* note 8, at 697.

toward prioritizing the implementation of the Program's wildlife mitigation provisions.⁷⁸ By 1988, the Council's efforts apparently helped stocks in some Columbia River sub-basins, such as the Yakima and the Hanford Reach, increase perceptibly.⁷⁹ However, the improvement proved illusory. By 1989, data indicated that runs throughout the Pacific Northwest and California were again uniformly in a rapid decline.⁸⁰ That decline continues to the present day.⁸¹

Notwithstanding the Council's adoption of these effective measures, the Council's refusal to adopt fishery coalition recommendations for larger flows effectively precluded significant reductions in heavy smolt mortality caused by the hydropower system.⁸² Without such improvements in juvenile passage survival, the health of many of the Pacific Northwest's salmon runs precipitously declined.⁸³ By 1990, the continued deterioration of the resource had induced several environmental groups and tribes to successfully petition for the listing of several stocks under the ESA. In April 1990, the Shoshone-Bannock tribe asked NMFS to list the Snake River sockeye as endangered.⁸⁴ Two months later, a coalition of Pacific Northwest environmental groups petitioned for the listing of the Snake River spring, summer, and fall chinook and lower Columbia coho runs.⁸⁵

78. *Id.* at 702 (citing Letter from Northwest Power Planning Council to Interested Parties (Oct. 24, 1990)).

79. John M. Volkman, *Making Room in the Ark: The Endangered Species Act and the Columbia River Basin*, 34 ENVIRONMENT 18, 38 (May 1992).

80. *Id.*

81. See Joan Laatz, *The New Order: The Endangered Species Act and Political Reality Clash as new Leaders Look to Save Salmon*, OREGONIAN Nov. 29, 1994, at A1 (noting that "[m]any salmon runs are at record lows").

82. The Water Budget for the lower Snake River was met in 1992, after a number of the basin's tribes and environmental groups successfully petitioned NMFS to list several stocks of salmon. Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 689 n.127.

83. According to a report issued by the American Fisheries Society in 1991, 101 wild salmon stocks native to the region between California and the U.S.-Canada border are facing a high risk of extinction, 58 are at moderate risk of extinction, and 54 others are considered to be of "special concern." See Willa Nehlsen, et al., *Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington*, 16 FISHERIES 4 (1991). BPA believes that thirteen wild runs native to the Columbia River Basin are in critical condition. See Paul Koberstein, *Battle Lines Form Over Wild Salmon's Future*, OREGONIAN, May 27, 1990, at A1. Some estimate that as many as 200 stocks in Oregon and Washington alone face the threat of extinction. See Volkman, *supra* note 79, at 19.

84. 55 Fed. Reg. 22,942 (1990).

85. 55 Fed. Reg. 37,342 (1990).

In 1991, NMFS responded by listing the Snake River sockeye as endangered.⁸⁶ The agency also listed the chinook runs as threatened in 1992.⁸⁷

B. The Effects of the Salmon Listings

The listing of several salmon stocks triggered the ESA's command that federal dam operators consult with NMFS before continuing status quo operations of FCRPS dams.⁸⁸ In 1992, NMFS⁸⁹ issued a biological opinion concluding that operation of the dams in the Columbia River Basin would not jeopardize the listed

86. 56 Fed. Reg. 58,619 (1991) (codified at 50 C.F.R. § 17.11.)

87. 57 Fed. Reg. 14,653 (1992) (codified at 50 C.F.R. § 17.11.) NMFS denied listing of the lower Columbia coho on grounds that those runs were not distinguishable from hatchery coho. Environmental groups have also requested listing of the mid-Columbia summer chinook runs. 58 Fed. Reg. 46,944 (1993). NMFS denied listing of the mid-Columbia summer chinook, 59 Fed. Reg. 48,855 (1994). However, NMFS recently proposed to list certain steelhead runs native to southwest Oregon and northern California as threatened, 60 Fed. Reg. 14,253 (1995), and will consider listing numerous coho stocks native to California and Oregon, 60 Fed. Reg. 38,011 (1995). NMFS is also considering petitions to list other steelhead and coho runs in the Basin, as well as a number of pink salmon, chum, sockeye, chinook, and sea-run cutthroat trout runs. 59 Fed. Reg. 46,808 (1994).

88. See 16 U.S.C. § 1536(a). See generally DANIEL J. ROHLF, *THE ENDANGERED SPECIES ACT: A GUIDE TO ITS PROTECTIONS AND IMPLEMENTATION* 12-35 (1989) [hereinafter ROHLF, *ESA*]; James C. Kilbourne, *The Endangered Species Act Under the Microscope: A Closeup Look from a Litigator's Perspective*, 21 *Env'tl. L.* 499, 525-60 (1991) (outlining the ESA § 7 process). Prior to 1986, agencies considered that an adverse effect did not have to be likely before the consultation requirement of the ESA applied. See ROHLF, *supra* at 114-16 (criticizing changes in regulations, issued that year, which allowed federal agencies to make decisions without complete biological information). Notwithstanding the 1986 regulation, the Ninth Circuit recently ruled that consultations is required whenever a federal agency action "may affect" a listed species. See *Pacific Rivers Council v. Thomas*, 30 F.3d 1050, 1056 (9th Cir. 1994), *cert. denied*, 115 S. Ct. 1793 (1995).

89. NMFS and the U.S. Fish and Wildlife Service share jurisdiction over salmon because they are species that survive in both marine and freshwater habitats at various stages of their life cycle. Bodi, *Protecting Salmon Under the ESA*, *supra* note 51, at 353. See 16 U.S.C. § 1532(15) (defining the term "Secretary" as either the Secretary of the Interior or Secretary of Commerce because both are vested with responsibilities under the ESA). However, NMFS has assumed primary jurisdiction over anadromous fish because they spend the bulk of their lives in the ocean. Bodi, *Protecting Salmon Under the ESA*, *supra* note 51, at 353, n.21 (citing "Memorandum of Understanding Between the U.S. Fish and Wildlife Service and the National Marine Fisheries Service Regarding Jurisdictional Responsibilities and Listing Procedures Under the Endangered Species Act" (August 28, 1974)).

salmon runs.⁹⁰ This conclusion was surprising in light of NMFS' notice to BPA, the Corps and the Bureau that those agencies would be asked to "make progress" toward reversing the decline of the listed salmon.⁹¹ The 1992 biological opinion did, however, warn BPA, the Corps, and the Bureau that "future standards [likely] will impose far more stringent requirements than are necessary to achieve the 1992 interim goal."⁹² Nevertheless, the 1993 biological opinion left the FCRPS status quo undisturbed. Although the 1993 biological opinion ratified the improvements called for in the Council's 1991-92 Program amendments, NMFS again found no jeopardy to the listed salmon even though the Corps' and the Bureau's mitigation measures were expected to result in only marginal improvements in salmon survival.⁹³

IV. The Strategy for Salmon

A. The Salmon Summit: No Regional Consensus on Steps Needed to Save the Salmon

The imminent listing of several stocks prompted Oregon Senator Mark O. Hatfield to convene a "grand roundtable on salmon issues"⁹⁴ in the spring of 1990. The participants included major users of the Columbia River system, including power interests, fishing industry representatives, and farmers, as well as representatives of environmental groups and the region's tribes.⁹⁵ Over a six-month period, the participants sought to find ways to increase the amount of water allocated by BPA, the Corps, and the Idaho Power Company⁹⁶ for fish flows.⁹⁷ The group also persuaded federal land managers to consider how best to protect salmon habitat under their jurisdiction.⁹⁸

The attempt to build a regional consensus on other steps needed to restore the runs failed, however. The participants could not agree on how

90. NMFS NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, BIOLOGICAL OPINION ON THE OPERATION OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM 50 (1992) [hereinafter 1992 BIOLOGICAL OPINION].

91. Letter from William M. Fox, Director, National Oceanic and Atmospheric Administration, to Maj. Gen. Ernest J. Harrell, U.S. Army Corps of Engineers (April 10, 1992), at 2 (quoted in Renewed Motion of Idaho Department of Fish & Game for Summary Judgment, at 4, *Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv.*, 850 F. Supp. 886 (D. Or. 1994) (Dec. 28, 1993) (Idaho Motion)).

92. 1992 BIOLOGICAL OPINION, *supra* note 90, at 15-16.

93. 1993 BIOLOGICAL OPINION, *supra* note 50, at 64-65.

94. Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 688.

95. Volkman, *supra* note 79, at 39.

96. *Id.* Idaho Power Company owns Hells Canyon Dam complex on the Snake River.

97. *Id.* at 39.

98. *Id.*

much to increase flows in the lower Columbia, the degree to which salmon harvests should be reduced, or on appropriate changes to the region's hatchery system.⁹⁹ The failure of the "Salmon Summit" to resolve these issues induced the governors of the four Pacific Northwest states to turn to the Council for solutions to them.¹⁰⁰ Thus, the Council again found itself acting as the region's *de facto* salmon manager. Unfortunately, the Council's subsequent attempt to play this role did not result in a restoration program likely to return healthy wild salmon runs to the region.

B. The 1991-92 Program Amendments: The Council's Strategy for Salmon

In May 1991, the Council requested recommendations for 1991 amendments to the Program. The fish and wildlife agencies of Idaho and Oregon, the Columbia River Inter-tribal Fish Commission (CRIT-FC),¹⁰¹ and the Columbia River Basin Fish and Wildlife Authority (CBFWA)¹⁰² were among the parties that responded to the Council's request.¹⁰³ At the core of the recommendations offered by these agencies and tribes were two concepts: (1) significant increases in spring and summer flows on the Columbia and Snake Rivers, as well as minimum flows on the lower Columbia and extension of summer flow requirements through August of each year; and (2) establishment of tangible biological objectives, which would make it easier to evaluate the restoration effort.¹⁰⁴

99. *Id.*

100. *Id.*

101. CRITFC is a coordinating fisheries agency representing four tribes that possess treaty rights to harvest salmon in the basin. CRITFC's participants are the Confederated Tribes and Bands of the Warm Springs, Umatilla, and Yakama Indian Nations, and the Nez Perce Tribe. Blumm, *Columbia River Basin*, *supra* note 35, at 133.

102. CBFWA is a coalition of Pacific Northwest fishery agencies and Indian tribes and was formed to enhance the coordination of fish and wildlife policies of regional importance. The coalition members include NMFS, the U.S. Fish and Wildlife Service, the fish and wildlife agencies of Oregon, Washington, and Idaho, and CRITFC. Blumm, *Columbia River Basin*, *supra* note 35, at 133.

103. See NORTHWEST POWER PLANNING COUNCIL, RECOMMENDATIONS FOR AMENDMENTS TO THE SALMON AND STEELHEAD PROVISIONS OF THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM (1991) [hereinafter 1991 RECOMMENDATIONS].

104. See 6 1991 RECOMMENDATIONS, *supra* note 103, at 1437-45 (Idaho Department of Fish and Game recommendations); 4 1991 RECOMMENDATIONS, at 663-63 (Oregon Department of Fish and Wildlife recommendations); 5 1991 RECOMMENDATIONS, at 889-92 (CRITFC recommendations); 4 1991 RECOMMENDATIONS, at 693-94 (U.S. Fish and Wildlife Service recommendations). CBFWA recommended minimum instantaneous flows all year at The Dalles Dam, with average daily flows of 80 kcfs between January-March and September-December, 250 kcfs between April 1-15, 300 kcfs between April 16-June 15, 200 kcfs between

The Basin's fish and wildlife agencies and tribes recommended flows of 140 thousand cubic feet per second (kcfs) on the lower Snake and 300 kcfs on the lower Columbia.¹⁰⁵ In addition, the agencies and tribes asked the Council to adopt specific water particle travel time objectives that would serve as an effective measure of the impact of increased spring and summer flows on juvenile survival.¹⁰⁶ BPA and several of its industrial customers argued against the adoption of a travel-time objective and questioned the increased biological benefits of flows above 85 kcfs on the lower Snake River and above 200 kcfs on the lower Columbia.¹⁰⁷

June 16-July 15, and 160 kcfs between July 16-August 21. At Priest Rapids Dam, CBFWA proposed minimum flows of 70 kcfs between January 1-May 31, 36 kcfs between June 1-October 15, and 50 kcfs between October 16-November 30. At Ice Harbor Dam, CBFWA recommended minimum flows of 10 kcfs between January 1-March 31 and 30 kcfs between April-December 31. CBFWA also advocated daily average flows of 140 kcfs at Priest Rapids between April 1 and June 15 and at Ice Harbor Dams between April 16 and June 15. Blumm, *Parity V*, *supra* note 8, at 708 (table).

105. See, e.g., 6 1991 RECOMMENDATIONS,, *supra* note 103, at 1437-39.

106. Most biologists believe that juvenile salmon survival is related to the velocity of river flows. See generally THE BIOLOGICAL AND TECHNICAL JUSTIFICATION FOR THE FLOW PROPOSAL OF THE COLUMBIA BASIN FISH AND WILDLIFE AUTHORITY 8-30 (citing numerous scientific studies and academic articles), *attached as appendix to* Comments of Northwest Environmental Defense Center (1991), *reprinted in* 3 1991 RECOMMENDATIONS,, *supra* note 103, at 582. A consensus exists among the Pacific Northwest's fish and wildlife agencies and tribes that the Council should adopt a juvenile travel time objective. The recommendation for travel time objectives submitted by the Idaho Department of Fish and Game (IDFG) is representative of that view. IDFG recommended that the Council:

Establish[] a biological objective of decreasing fish travel time from the point of origin to below Bonneville Dam to as near the pre-dam condition as practicable. This biological objective is measured by the physical parameter of water particle travel time, which is directly related to fish travel time.

6 1991 RECOMMENDATIONS,, *supra* note 103, at 1437 (Text of Proposed Program Amendment). For a non-scientific overview of the importance of smolt travel-time objectives, see John Ogan, *The Need for a Smolt Travel Time Objective in the Columbia River Basin Fish and Wildlife Program to Protect and Restore the Northwest's Imperiled Salmon Runs*, 21 ENVTL. L. 673 (1994).

107. BPA urged the Council to retain a 1.5 maf Water Budget for the Snake and a 3.45 maf Water Budget for the lower Columbia. 5 1991 RECOMMENDATIONS,, *supra* note 103, at 1187, 1189. Interestingly, BPA admitted that it did not support even these modest flow targets. BPA acknowledged that its Snake River Water Budget recommendation would achieve a minimum flow of 50 kcfs for 46 days of the April 15-June 15 migration period, with "pulses" to achieve flows of 85-100 kcfs on "as many of the 46 days as possible." *Id.* at 1271. The Pacific Northwest Utilities Conference Committee (PNUCC) recommended even less, adoption of Water Budgets

In phase two of the 1991 amendments,¹⁰⁸ the Council improved flows in the mainstem Columbia and on the Snake for the first time since the adoption of the Program nearly a decade before. The Council called upon FCRPS operators to provide, as an "immediate action," a minimum monthly average flow equivalent of 85 kcfs at Lower Granite Dam between mid-April and mid-June¹⁰⁹ and to achieve a "low flow target" of 200 kcfs on the lower Columbia.¹¹⁰ The adoption of even these status quo flow targets was not reassuring, however, because phases one and two did not include specific measures guaranteed to achieve them.¹¹¹ Moreover, the Council postponed consideration of long-term biological objectives, escapement goals, and run rebuilding schedules until phase three.¹¹²

of 1.2-1.5 maf for the Snake and 3.45 maf for the mid-Columbia. 4 1991 RECOMMENDATIONS,, *supra* note 103, at 793-95.

108. The Council completed phase one of the 1991 amendments on September 10, 1991. The phase two amendments were adopted on December 11, 1991. *See* 57 FED. REG. 3,077 (1992).

109. NORTHWEST POWER PLANNING COUNCIL, AMENDMENTS TO THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM (PHASE TWO) 34 (1992) (hereinafter PHASE TWO AMENDMENTS). A "flow equivalent" is "the flow level required to achieve the same particle travel time as 85,000 cfs at average normal pool elevations at all projects." *Id.* at 34 n.9. To achieve the desired minimum monthly flow equivalent on the lower Snake, the Council asked the Corps to lower the four mainstem Snake River dams to "near minimum operating pools," which would cause the release of 900,000 acre-feet from Dworshak Dam for fish flows in low water years; shifted flood control storage space away from Snake basin reservoirs; requested use of uncontracted storage water at several Bureau of Reclamation reservoirs and at Idaho Power Company's Brownlee project to enhance fish flows; and called for efficiency improvements, marketing, conservation, option-leasing, and storage buy-backs that would produce excess water to be made available for juvenile migration. Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 690-91. To accomplish the "low flow target" on the lower Columbia, the Council called for lowering John Day reservoir to minimum operating pool during the summer, *id.* at 39; removed a "flow cap" on the mid-Columbia, *id.* at 42; and asked BPA to release an unspecified amount of water from its non-treaty storage allocation, so that studies of greater summer flows on the lower Columbia could be performed, *id.* at 43.

110. PHASE TWO AMENDMENTS, *supra* note 109, at 34.

111. *See* Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 692 (noting that provisions for summer flows depend on cooperation by actions by the Bureau and Idaho Power Company that may be considered "uncertain propositions").

112. *See* Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 693-94 (citing PHASE TWO AMENDMENTS, *supra* note 109). The Council did ask the Corps to study the impacts of drawing down reservoirs and to begin planning to implement them. PHASE TWO AMENDMENTS, *supra* note 109, at 43-48. The Council also emphasized continued mechanical bypass installation, harvest management, *id.* at 63, and predator control measures. *Id.* at 27. Earlier in 1991 the Council requested certain high priority habitat projects; a program to insert screens in water diversion canals; and that measures to protect wild salmon from hatchery stocks proceed. NORTHWEST

Phase three incorporated the first two phases of the 1991 amendments and was adopted by the Council as its "Strategy for Salmon" in September 1992.¹¹³ The Strategy did not adopt the smolt travel time objectives advocated by the fish and wildlife agencies and tribes,¹¹⁴ and it did not alter the lower Columbia and lower Snake flow levels to those levels decided upon during phase one.¹¹⁵ The Strategy did include numerous measures designed to improve juvenile salmon passage at federal and privately owned hydroelectric projects throughout the Basin,¹¹⁶ called for various measures to reduce predation of juvenile salmon¹¹⁷ and improve adult passage at federal and non-federal dams,¹¹⁸ recommended that fishery regulators effectively

POWER PLANNING COUNCIL, AMENDMENTS TO THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM (PHASE I) (1991) (hereinafter PHASE ONE AMENDMENTS).

113. COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM, FINAL AMENDMENTS, 57 Fed. Reg. 56,935 (1992).

114. The Council adopted a goal of doubling the basin's salmon from 2.5 million fish returning to the mouth of the Columbia each year to 5 million fish "with no appreciable risk to the biological diversity of fish populations." 2 NORTHWEST POWER PLANNING COUNCIL, STRATEGY FOR SALMON 1-2 (1992) [hereinafter STRATEGY FOR SALMON]. The Council also announced that it would seek to achieve "rebuilding targets" for naturally spawning Snake River salmon, and to apply six principles to the evaluation of planning activities. *Id.* at 20. These principles include: (1) giving priority to rebuilding weak, upriver populations; (2) avoiding appreciable risk to biological diversity among or within fish populations; (3) approaching habitat and production activities from a total-watershed perspective; (4) fulfilling obligations under Indian treaties and providing fish for harvesters; (5) engaging in activities that are designed as experiments to increase understanding of salmon, and (6) avoiding hatchery construction unless existing hatcheries cannot meet fishery resource needs or a new hatchery would better achieve Program objectives. *Id.* at 18-19.

115. See STRATEGY FOR SALMON, *supra* note 114, at 2.

116. The specific measures include studying and installing screens and other turbine bypass systems. The Council called for turbine screen installation to be completed at Lower Monumental Dam by March 1992, Ice Harbor Dam by March 1996, and The Dalles Dam by March 1998, and also requested that the Corps spill sufficient water over the tops of those dams to aid juvenile migration in the interim. The Council also asked the Corps to design and test extended-length turbine screens at McNary Dam by March 1995; Lower Granite Dam by March 1996; Little Goose Dam by March 1996; John Day Dam by March 1998; and The Dalles Dam by March 1998, and to immediately commence improvements to the both powerhouses at Bonneville Dam. The Council asked Eugene Water and Electric Board to improve the screening and bypass systems at its Leaburg Canal and Walterville Canal projects and requesting testing, evaluation, and installation of appropriate screening and bypass systems at the public utility district dams: Wells Dam, Rocky Reach Dam, Rock Island Dam, Wanapum Dam, and Priest Rapids Dam. STRATEGY FOR SALMON, *supra* 114, at 36-38.

117. *Id.* at 38-39.

118. *Id.* at 41-43.

monitor and control salmon harvests,¹¹⁹ and required actions to improve habitat enhancement and mitigation, weakened wild stock populations, and hatchery operations.¹²⁰ However, the Council never attempted to explain its reasons for failing to adopt the recommendations of the region's fish and wildlife agencies and tribes.¹²¹

V. Northwest Resource Information Center v. Northwest Power Planning Council: The Ninth Circuit Rejects the Strategy for Salmon

A. The Arguments

Few parties interested in the management of the Columbia River system found the Strategy for Salmon satisfactory. Consequently, in February 1993, Northwest Resource Information Center (NRIC),¹²² the Yakama Indian Nation,¹²³ and a group of BPA industrial customers petitioned the United States Court of Appeals for the Ninth Circuit for review of the 1991-92 Program amendments.¹²⁴

NRIC's principal concern with the Strategy was that it did not guarantee adequate flows.¹²⁵ Accordingly, NRIC argued that the Strategy was invalid because the Council violated the Northwest Power Act by (1) failing

119. *Id.* at 45-51.

120. *Id.* at 53-78. Among the specific steps the Council requested were studies to determine the impacts of hatchery production on wild spawning salmon populations. *Id.* at 63.

121. See STRATEGY FOR SALMON, *supra* note 114, at 8-9, 15 (noting "intense debate" over "relationship of increased flows to fish survival"), 17-22 (establishing "Program Framework and Goal" without discussion or mention of fishery coalition recommendations), 23-26 (discussing mitigation measures without mention of fishery coalition recommendations).

122. NRIC, the brainchild of Idaho consultant Ed Chaney, has consistently maintained that changes in the dams and reservoirs are needed to restore wild salmon to the region. Hathorn, *supra* note 10, at 16 (quoting Ed Chaney as criticizing barge and truck transportation of juvenile salmon in the Basin and harvest reductions as tools to restore the runs: "Once they stop fishing, you can't blame *them*. Then you figure it has to be something else. It doesn't take a rocket scientist to figure out what that something else is.").

123. After the tribal council agreed to change the spelling of the tribes' name to its original form, Congress recognized the change of the Yakima Indian Nation's name to "Yakama" in the Yakima River Basin Water Enhancement Project Act of 1994, Publ. L. No. 103-434, Tit. XII, § 1204(g), 108 Stat. 4526, 4557. The name change does not affect the city, river, or ski rack of the same name.

124. NRIC and the Yakama Indian Nation filed petitions for review of the Council's phases one and two rules on March 27, 1992. Briefing on these petitions for review were stayed until after the Council issued its phase three amendments, and ultimately the petitions were consolidated with those challenging the Council's adoption of the entire Strategy for Salmon.

125. See Adam Berger, *An Insider's Perspective on Northwest Resource Info Center v. Northwest Power Planning Council*, 25 ENVTL. L. 369, 372-73 (1995) [hereinafter *An Insider's Perspective*].

to establish biological objectives for the operation of FCRPS and for provision of instream flows;¹²⁶ (2) failing to adopt flow targets deemed beneficial by fish and wildlife agencies, tribes, and its own staff and instead instituting measures that would not ensure the attainment of the adopted flow targets;¹²⁷ (3) rejecting fish and wildlife agency and tribal recommendations without adequate written explanation and failing to give the "due weight" to those recommendations required by the Act;¹²⁸ and (4) improperly subjecting the biological opinions of the fish and wildlife agencies and tribes to a standard of proof higher than "best available scientific knowledge."¹²⁹

The Yakama Indian Nation shared NRIC's belief that the Council established flows on the lower Columbia and lower Snake at levels too low to protect migrating smolts. However, the Yakamas' motivation for participating in the process of formulating the Program, and its reason for contesting the Strategy for Salmon, lay in its obligation to protect its treaty rights to harvest Snake River chinook.¹³⁰ Thus, the Yakamas' principal objections to the 1991-92 amendments centered around the Council's failure to adopt measures likely to restore those runs to stable sizes. The Yakamas were concerned that the 1991-92 amendments did not include measures designed to assess progress toward harvestable wild runs and argued forcefully that the Council had not adequately deferred to the scientific expertise of the region's state and tribal fish and wildlife managers.

The Direct Service Industries (DSIs),¹³¹ as large-scale purchasers of federal hydropower, believed that the Council had adopted recommendations that would dramatically increase power costs while offering very little benefit for salmon. Thus, while agreeing with NRIC and the Yakamas that the Council had not adequately explained the basis for its

126. Brief for Northwest Resource Information Center, Inc. at 30-31, 39-42, Northwest Resource Info. Center, Inc. v. Northwest Power Planning Council, 35 F.3d 1371 (9th Cir. 1994) (Nos. 92-70190, 70064) (Sept. 10, 1993) (NRIC Brief) (relying on 16 U.S.C. § 839(h)(2)(B), (6)(E)(ii)).

127. *Id.* at 31-32, 43-47.

128. *Id.* at 32, 47.

129. *Id.* at 33-34, 48.

130. Brief for Petitioner Yakama Indian Nation, at 7-42, -45. Confederated Tribes and Bands of the Yakama Indian Nation v. Northwest Power Planning Council, 35 F.3d 1371 (9th Cir. 1994) (Nos. 92-70191-92, -70055) (Sept. 10, 1993) (Yakama Brief).

131. The DSIs are aluminum and other electro-process industries, including one pulp and paper plant, many of which were drawn to the Pacific Northwest during the 1940s and 1950s by an abundance of low-cost federal hydroelectric power. HOUSE COMM. ON INTERIOR AND INSULAR AFFAIRS, H.R. Rep. No. 976, pt. II, 96th Cong., 2d sess. 27, reprinted in 1980 U.S.C.C.A.N. 6023, 6025. There are fifteen such industries operating 51 plants in the region. They account for approximately one-third of BPA's energy sales. *Id.* at 27-28.

adoption of the measures contained in the Strategy for Salmon,¹³² the DSIs complained that the Council improperly had failed to compare the biological benefit of each adopted measure to its expected cost in terms of power losses and increases in BPA power rates.¹³³

The Council's response to the petitions for review rested on a claim that its decisions were, for all practical purposes, beyond judicial scrutiny.¹³⁴ The Council also argued that the Northwest Power Act did not obligate it to provide any more of a written explanation of its decisions regarding particular recommendations than it had.¹³⁵ Thus, the arguments of all of the parties revolved around two basic questions: (1) which regional interests or parties determine the scientific soundness of proposed salmon mitigation and restoration measures? and (2) to what extent must the Council explain publicly the reasons for its refusal to adopt such proposals?

B. The Ninth Circuit's Decision

On September 9, 1994, the Ninth Circuit granted review and remanded the Strategy for Salmon to the Council for reconsideration.¹³⁶ The court did not determine the measures that the Council should have included in the Strategy for Salmon. Instead, the court held that the Council (1) improperly declined to explain its reasons for failing to adopt fish and wildlife agency and tribal recommendations,¹³⁷ and (2) unlawfully omitted biological objectives from the 1991-

132. Brief for Petitioners Aluminum Co. of America, Columbia Aluminum Corp., Columbia Falls Aluminum Co., Elf Achem North America, Inc., Intalco Aluminum Co., Kaiser Aluminum & Chemical Corp., Northwest Aluminum Co., Oregon Metallurgical Corp., Reynolds Metals Co., and Vanalco, Inc., at 11-12, 22-26, *Pacific Northwest Generating Cooperative v. Pacific Northwest Electric Power Planning and Conservation Council*, 35 F3d 1371 (9th Cir. 1994) (No. 93-70070) (Sept. 10, 1993) (DSI Brief).

133. DSI Brief, *supra* note 132, at 11, 12-20; Reply Brief of DSIs, at 7-11, *Pacific Northwest Generating Cooperative v. Northwest Power Planning Council*, 35 F3d 1371 (9th Cir. 1994) (No. 93-70070) (Mar. 16, 1994).

134. *See* Brief for Respondent Northwest Power Planning Council, at 20-22, *Northwest Resource Info. Center, Inc. et al. v. Northwest Power Planning Council*, 35 F3d 1371 (9th Cir. 1994) (Nos. 92-70190, 92-70064) (Council Brief) (asserting that Strategy cannot be judicially reviewed for compliance with 16 U.S.C. § 839(h)(6) because the statutory section "set[s] the agenda but does not dictate the substance of measures" that must be included in Program and that Congress intended for court to review only whether Council "considered" the measures specific in that statutory section and arguing that court should not review Strategy because issues are too "factually complex").

135. *Id.* at 63.

136. *Northwest Resource Info. Center*, 35 F.3d at 1395.

137. *Id.* at 1386-89.

92 amendments.¹³⁸ While important as mandatory constraints on the Council's procedure for developing future Program amendments, these two rulings were not the only noteworthy findings of the court. The court also provided the Council with a detailed explanation of its obligations under the Fish and Wildlife Program provisions of the Northwest Power Act, including: (1) the Council must afford significant deference to the expertise and mission of state and tribal fish and wildlife agencies, and (2) the Council is not obligated to compare, before including a recommended measure in the Program, its biological benefits to the costs it imposes on the power system.¹³⁹ Moreover, the Ninth Circuit determined that each of the Program criteria contained in section 4(h)(6) of the Act¹⁴⁰ are mandatory and function as judicially-enforceable constraints on the Council's discretion.¹⁴¹ The judges also provided the Council and the public with its interpretation of each of those criteria.¹⁴² Each of these findings strongly reinforced Congress' intent that the Northwest Power Act elevate fish and wildlife considerations in regional river planning. They also substantially increased the likelihood that the Council would take more aggressive action to restore the runs.¹⁴³

This subsection will first provide an overview of the Northwest Power Act's fish and wildlife provisions.¹⁴⁴ The following subsection will then explain the court's resolution of (1) the Council's argument that it was not obligated to afford more than nominal deference to state fish and wildlife agencies and tribes, and (2) the DSIs' claim that no Program measure can be adopted unless the benefit it produces for fish and wildlife is likely to outweigh the costs it imposes on the power system.¹⁴⁵ Finally, the subsection summarizes the court's interpretation of each of the Act's mandatory Program criteria.¹⁴⁶

1. The Northwest Power Act's Fish and Wildlife Provisions

The Northwest Power Act is an unprecedented law. Congress' primary reason for enacting it was a desire to avoid then-predicted power shortages in the region.¹⁴⁷

138. *Id.* at 1389.

139. *Id.* at 1394-95. However, the Council can reject a recommendation on the ground that it is inconsistent with the Act's mandate to ensure an economical and reliable power system. *See* 16 U.S.C. §§ 839b(h)(5), (7).

140. 16 U.S.C. § 839b(h)(6).

141. *Northwest Resource Info. Center*, 35 F.3d at 1389.

142. *Id.* at 1390-93.

143. *See infra* notes 354-419 and accompanying text for a discussion of the Council's response to the Ninth Circuit's decision.

144. *See infra* notes 147-168 and accompanying text.

145. *See infra* notes 194-200, 239-241 and accompanying text.

146. *See infra* notes 208-237 and accompanying text.

147. Devine, *supra* note 38, at 83.

However, Congress also wanted to return healthy and harvestable salmon fisheries to the Pacific Northwest. Previous legislative efforts to assure the conservation of the region's salmon populations were not successful, in part because they did not afford fish and wildlife protection and enhancement significant priority in the management of the FCRPS.¹⁴⁸ Congress therefore specified that one purpose of the Northwest Power Act is to ensure the "protect[ion], mitigat[ion] and enhance[ment] [of] fish and wildlife" native to the Columbia River Basin.¹⁴⁹ To accomplish this purpose, Congress directed the Council to create and implement the Program. Congress specified that the Program's aim should be to "protect, mitigate, and enhance" the Basin's fish and wildlife "to the extent affected by the development and operation" of the FCRPS and other hydroelectric projects in the region.¹⁵⁰ The Program provisions of the Act sharply limit the Council's discretion in designing the Program by including a number of procedural and substantive constraints.¹⁵¹

Five basic principles form the statutory boundaries of the Council's freedom in developing the Program. First, protection and enhancement of fish and wildlife is to be afforded management consideration equivalent to that given power production and other economic uses of the Columbia River system. This provision, also known as the

148. Before the Northwest Power Act was created, the Fish and Wildlife Conservation Act (FWCA) was the principal federal law protecting fish and wildlife in the region not listed as endangered or threatened under the ESA, FWCA aimed to assure "equal consideration" of wildlife and "other features" of water-resource development programs, 16 U.S.C. § 661. However, the consultation process created by FWCA to achieve this objective failed for a number of reasons. While Congress intended that fish and wildlife agency recommendations for mitigation be given "full consideration," water project managers were given the discretion to reject mitigation measures if they determined that they did not maximize "overall project benefits." 16 U.S.C. § 662(b). See Blumm, *Parity II*, *supra* note 15, at 110-11. Second, because the extent of water project impacts on fish and wildlife frequently could not be determined until after operation of the project commenced, water project managers were able to reject proposed mitigation measures on grounds that they were not tied to losses proven at the time the project was approved. *Id.* A third reason for FWCA's failure was that the mitigation measures most often adopted were hatcheries concentrated in the lower Columbia Basin, thus depriving upriver fishers, recreationalists, and native Americans the benefits of restored salmon runs. *Id.* Finally, FWCA does not allow citizens to judicially enforce any particular substantive level of wildlife protection. See *Enos v. Marsh*, 616 F. Supp. 32, 64 (D. Haw. 1984), *aff'd* 769 F.2d 1363 (9th Cir. 1985); *Environmental Defense Fund v. Froehlke*, 473 F.2d 346, 356 (8th Cir. 1972). For a general overview of FWCA's ineffectiveness, see MICHAEL J. BEAN, *THE EVOLUTION OF NATIONAL WILDLIFE LAW 181-95* (1983).

149. 16 U.S.C. § 839(6).

150. 16 U.S.C. § 839b(h)(10)(A).

151. 16 U.S.C. § 839B(d)-(f). See *Seattle Master Builders Ass'n v. Pacific Northwest Elec. Power and Conservation Planning Council*, 786 F.2d 1359, 1367 (9th Cir. 1986) ("The preparation and consideration of the [1983 Northwest Conservation and Electric Power] [P]lan is a matter within Council authority over which the Act accords the Council considerable flexibility."), *cert. denied*, 479 U.S. 1059 (1987).

equitable treatment mandate, was added to the regional power bill by the House Committee on Energy and Commerce after fishery advocates complained to then-chairman John Dingell that federal managers of the FCRPS "ignored or treated with disdain" their concerns.¹⁵² The Ninth Circuit has indicated that the equitable treatment mandate constitutes a judicially enforceable restraint on the Council's discretion to adopt or reject the policies, plans and priorities contained in the Program.¹⁵³

Second, the Act requires the Council to set appropriate objectives by which the success or failure of the Program can be measured.¹⁵⁴ Congress intended that these biological objectives remedy the tendency of hydropower system managers to focus only on power production and other economic goals.¹⁵⁵ Thus, the Council must determine which species must be protected, recovered, or restored and then incorporate into the Program appropriate biological methods by which such goals will be achieved.¹⁵⁶ The biological objectives in turn help hydrosystem managers to focus on the impacts of power production on fish and wildlife. The Council must establish the Program's biological objectives with the guidance of the region's fish and wildlife agencies and tribes.¹⁵⁷

The Act's public participation requirements constitute the third significant limit to the Council's authority. The Council is to obtain the benefits of the fish and wildlife agencies' and tribes' biological expertise by

152. H.R. Rep. No. 976, Pt. 1, 96th Cong., 2d Sess. 45, 46 (1980), *reprinted in* 1980 U.S.C.C.A.N. 5989.

153. *See* *Confederated Tribes and Bands of the Yakima Indian Nation v. Fed. Energy Regulatory Comm'n*, 746 F.2d 466, 473 (9th Cir. 1984). Some commentators have argued that the equitable treatment mandate obligates the Council and federal dam operators only to consider hydropower production impacts on fish and wildlife. Michael B. Early & Egil Krogh, *Balancing Power Costs and Fisheries Values Under the Northwest Power Act*, 13 U. Puget Sound L. Rev. 281, 311 (1990) (citing H.R. Rep. No. 976, Pt. II, 96th Cong., 2d Sess. 37 (1980), *reprinted in* 1980 U.S.C.C.A.N. 6023). Under this view, the clause does not require any increased protection of the region's salmon runs if such an effort would cause losses of power production, increases in BPA's costs, or higher regional electricity rates. *Id.* at 295. Aside from the Ninth Circuit's apparent disagreement with this view, see *infra* note 264, this interpretation of the Act's other fish and wildlife provisions. For example, Congress explicitly contemplated that changes in dam operations would be necessary. *See* 16 U.S.C. § 839(h)(2)(B). Moreover, the Act specifies that the Program must require flows sufficient to allow "improve[d] production, migration and survival" of salmon. 16 U.S.C. § 839(h)(6)(E)(ii).

154. 16 U.S.C. § 839b(h)(2)(B) (directing the Council to establish "objectives for the development and operation of [hydroelectric] project on the Columbia River and its tributaries in a manner designed to protect, mitigate, and enhance fish and wildlife").

155. *See, e.g.*, 126 Cong. Rec. 29,808 (Nov. 17, 1980) (statement of Rep. Dingell) ("[The biological objective requirement] is clearly intended that no longer will fish and wildlife be given a secondary status by [BPA] or other federal agencies.").

156. 16 U.S.C. § 839b(h)(2)(B).

157. *Id.*

requesting recommendations for Program measures, including appropriate biological objectives.¹⁵⁸ In addition to complying with Congress' command that interested parties be given a voice in the creation and modification of the Program, the Council must explain in writing its reasons for failing to adopt those recommendations not incorporated into the Program.¹⁵⁹

Fourth, the Council is forbidden to act as a scientific free agent. All recommendations accompanied by scientific justification that are submitted by fish and wildlife agencies or tribes must be presumed to be scientifically meritorious.¹⁶⁰ In the event that fish and wildlife agency or tribal recommendations conflict with those submitted by other interested parties, the Council must resolve the differences by giving "due weight" to the "expertise" of the fish and wildlife agencies and tribes, as well as to their "legal rights and responsibilities."¹⁶¹ The Northwest Power Act permits the Council to reject recommendations submitted by fish and wildlife agencies and tribes only if they are economically or technically infeasible. The Council may not reject such recommendations on grounds that "it knows more biology."¹⁶² Indeed, the Act specifies the particular types of technical or economic infeasibility adequate to support rejection of fish and wildlife agency or tribal recommendations. Such recommendations may be rejected only if: (1) they are inconsistent with the Act's goal of ensuring an "adequate and economical power supply" for the region; (2) they would be "less effective" than other fish and wildlife protection, mitigation, and enhancement measures to be included in the Program; or (3) they will not complement the existing or future structure of the region's fish and wildlife management system, are not supported by the "best available scientific knowledge," or would achieve the same biological objectives as other measures but at a higher cost.¹⁶³

The fifth constraint on the Council's discretion exists in Congress' desire to achieve biological objectives through changes in dam operations.¹⁶⁴ In addition to requiring the Program to mandate flows sufficient to recover the region's salmon runs,¹⁶⁵ the Act commands that the Program be based on the "best available

158. *Id.*

159. 16 U.S.C. § 839b(h)(7).

160. *Id.*

161. *Id.*

162. Blumm, *Parity V*, *supra* note 8, at 737.

163. 16 U.S.C. § 839b(h)(7).

164. *See* 16 U.S.C. §§ 839b(h)(1)(A), (h)(2)(B), (h)(5), (h)(6)(E)(ii); Blumm, *Parity V*, *supra* note 8, at 667.

165. 16 U.S.C. § 839b(h)(6)(E)(ii). Congress specified that the Program must establish adequate flows because the legislators were convinced that the absence of this essential characteristic of salmon habitat has been the main cause of the salmon's decline. *See* H.R. REP. NO. 976, *supra* note 152, at 46 (quoting GAO STUDY, *supra* note 10) ("The river no longer has the strong, swift current needed to carry the smolts rapidly downstream and out to sea. It now

scientific knowledge.¹⁶⁶ The Council must, as is the case with biological objectives, primarily rely on the region's fish and wildlife agencies and tribes for a determination whether Program measures meet this standard.¹⁶⁷ Moreover, Congress intended that the Council build the Program upon a foundation of today's scientific knowledge, not on a concern that biologists may change their minds in the future. The Council must act without waiting for certainty and may not delay efforts to restore the wild runs while endless study proceeds. The Act therefore effectively forbids the Council from imposing upon fish and wildlife advocates the burden of proving that the region's dams cause harm to salmon or that appropriate modifications to them will produce ecological benefits for the region.¹⁶⁸

2. The Ninth Circuit's Interpretations of the Northwest Power Act

a. The Council Must Provide a Written Explanation of its Decision to Reject Program Recommendations

Section 4(h)(7) of the Northwest Power Act provides:

[i]f the Council does not adopt any recommendation of the fish and wildlife agencies and tribes as part of the program or any other recommendation, it shall explain in writing, as part of the program, the basis for its finding that the adoption of such recommendation

takes young fish more than twice as long to migrate downstream as it did before the dams were built. . . . It is the cumulative effects of hydro facilities which is so destructive. . . . River waste is released from upstream reservoirs when needed to best serve flood control, power production, and irrigation purposes. This may or may not provide enough water at the right time to aid the downstream migration of young salmon and steelhead."); 126 CONG. REC. 28,814 (Nov. 17, 1980) (letter from U.S. Comptroller General) (recommending that Power Act bill "establish minimum stream flows on the main-stream Columbia River system adequate to protect and enhance the anadromous salmon and steelhead fisheries"); *id.* at 29,814 (statement of Rep. Dingell) (expressing view that Congress expected Council to adopt "increased flows at opportune times to enhance fish migration").

166. 16 U.S.C. § 830b(h)(6)(B). See H.R. REP. NO. 976, *supra* note 152 ("The quality or quantity of the data should not serve as a basis for turning down any recommendation.") See Blumm, *Parity V*, *supra* note 8, at 667-68 n.47 (Northwest Power Act essentially places Council in circumscribed role as a regional biological policy analyst) (citing Kai N. Lee & Jody Lawrence, *Adaptive Management: Learning from the Columbia Basin Fish and Wildlife Program*, 16 ENVTL. L. 431, 435 (1986)).

167. 16 U.S.C. §§ 839b(h)(5), requiring Council to develop Program, "on the basis of, *inter alia*, consultation with the [fish and wildlife] agencies [and] tribes"); 839b(h)(6)(B) (Program must be "based on, and supported by, the best available scientific knowledge").

168. See Blumm, *Parity V*, *supra* note 8, at 667-68 n.46; Blumm, *Hydropower vs. Salmon*, *supra* note 11, at 298.

would be (A) inconsistent with paragraph (5) of this subsection; (B) inconsistent with paragraph (6) of this subsection; or (C) less effective than the adopted recommendations for the protection, mitigation, and enhancement of fish and wildlife.¹⁶⁹

In *Northwest Resource Information Center* the Ninth Circuit ruled, unsurprisingly, that this clear language requires the Council to explain in writing its reasons for rejecting Program recommendations.¹⁷⁰ The court also confirmed that the written justification must be supported by specific constraints contained in section 4(h)(7) of the Act and that the explanation must be made a part of the Program itself.¹⁷¹

The Council acknowledged that it had failed to include in the Strategy for Salmon itself a response to recommendations not incorporated into the Program. However, the Council argued that it complied with the Act's written explanation requirement by providing a separate official response to comments during the phase one and two rulemakings. The Council, in effect, urged the court to find that those responses applied to comments received during phase three.¹⁷² The Ninth Circuit did not find the Council's position persuasive because the Council had previously announced its intent that phase three supersede phases one and two. The judges thought the Council's argument "somewhat analogous to a court's reference to a judicial decision it previously vacated."¹⁷³ Accordingly, the court noted that its agreement with the Council on this point would cause "the validity and authoritativeness of final decisions" to be undermined.¹⁷⁴ Alternatively, the Council maintained that its official response to the comments received during phase three satisfied the Act's explanation requirement. The court rejected this argument because the Council had not based its written responses on the factors allowable under section 4(h)(7).¹⁷⁵

The Ninth Circuit's ruling that the Council failed to comply with the Act's written explanation requirement is significant for two reasons. First, it confirms Congress' intent that the public be given an opportunity to participate in the creation and evolution of the Program. Future Program amendments will also be subject to effective judicial review. The Council will be less able to insulate itself from popular pressure to restore the salmon runs. Consequently, Council decisions may more clearly reflect the importance Congress assigned to protection and enhancement of the Columbia River Basin's fish and wildlife. In the past the Council

169. 16 U.S.C. § 839b(h)(7).

170. *Northwest Resource Info. Center*, 35 F.3d at 1384-85.

171. *Id.*

172. *Id.* at 1385.

173. *Id.*

174. *Id.* at 1385-86.

175. *Id.* at 1386.

has often failed to give appropriate weight to this aspect of its mandate, preferring instead to consider the economic concerns of BPA, utilities, and industrial energy consumers the most significant restraints on its power.¹⁷⁶ The Council may also take more care to assure that its actions are supported by the statutory constraints on its authority, since its actions will be more easily scrutinized by the public and the region's fish and wildlife managers.

The second benefit of the court's ruling will be its reinforcement of the Act's deference principle. The court apparently found the Council's failure to explain in writing its reasons for rejecting fish and wildlife agency and tribal recommendations more troubling than the Council's omission of appropriate responses to other recommendations.¹⁷⁷ The public can expect less second-guessing of the scientific foundations supporting fish and wildlife agency recommendations if the Council heeds the Ninth Circuit's warning on this point in the future. Moreover, the Council will face increased pressure to provide scientifically and legally adequate explanations for its decisions. As a result, the Council will find it difficult to continue its practice of summarily announcing that recommendations beneficial to salmon are not supported by "good science" or enough information.¹⁷⁸

b. Biological Objectives

The Northwest Power Act contains several references to "biological objectives."¹⁷⁹ However, Congress failed to explain how the Council should proceed to establish them or to define the term.¹⁸⁰ In *Northwest Resource Information Center* the Ninth Circuit confirmed that Congress nevertheless

176. Blumm, *Parity V*, *supra* note 8, at 711-12.

177. *Northwest Resource Info. Center*, 35 F.3d at 1386 ("Th[e] [written explanation] mandate is particularly forceful with respect to the recommendations of those to whom the statute gives deference—fish and wildlife agencies and Indian tribes.").

178. The Council often rejected fish and wildlife agency and tribal recommendations during the first decade of the Program without providing reasons consistent with the Act's equitable treatment mandate or deference principle. *See supra* notes 79, 86, 112-119 and accompanying text.

179. *See* 16 U.S.C. § 839b(h)(2)(B) ("The Council shall request...recommendations for...establishing objectives for the development and operation of such [hydroelectric] projects...in a manner designed to protect, mitigate, and enhance fish and wildlife."); 839b(h)(6)(C) ("The Council shall include in the Program measures which it determines...will...utilize, where equally effective alternative measures of achieving the same sound biological objective exist, the alternative with the minimum economic cost."); 839B(h)(6)(E)(ii) ("The Council shall include in the Program measures which it determines...will...in the case of anadromous fish...provide flows of sufficient quality and quantity between such [hydroelectric] facilities to improve production, migration, and survival of such fish as necessary to meet sound biological objectives.")

180. *See* Blumm, *Parity II*, *supra* note 15, at 131.

West v Northwest, Vol. 14, No. 1, Winter 2008

intended that clear benchmarks by which the Program's success could be measured should guide the Council's administrative discretion.¹⁸¹ The court also limited the Council's ability to fashion such measurement tools by requiring the Council to give "due weight" to fish and wildlife agency and tribal opinions as to appropriate biological objectives.¹⁸² Moreover, the judges explained that the Act requires biological objectives to be "specific" and "discrete."¹⁸³ Although the court did not find that the Council failed to adhere to these principles, the court instructed the Council to assure, on remand, that the Strategy for Salmon incorporated adequate biological objectives.¹⁸⁴

The genesis of the dispute over this issue was the Council's refusal to establish smolt travel-time objectives. A number of state fish and wildlife agencies and tribes had unsuccessfully urged the Council adopt them as the Program's primary tool of measuring salmon survival.¹⁸⁵ NRIC and the Yakamas argued that their omission from the Program would render it impossible to evaluate the success of flow requirements aimed at achieving the ultimate goal of increased juvenile survival.¹⁸⁶ The Council maintained that the Strategy for Salmon's goal of doubled salmon populations, rebuilding targets and performance standards were adequate

181. *Northwest Resource Info. Center*, 35 F.3d at 1392.

182. *Id.*

183. *Id.*

184. *Id.*

185. *See supra* notes 106-107, 114 and accompanying text.

186. *Northwest Resource Info. Center*, 35 F.3d at 1391; Berger, *An Insider's Perspective*, *supra* note 125, at 375. Some commentators oppose travel-time objectives as an ineffective and costly burden on the hydropower system. *See, e.g.*, James L. Buchal, *some Fallacies About Salmon Restoration*, 25 ENVTL. L. 375, 380 (1995) (discussing "gross fallacies" in argument that salmon survival will increase with greater instream flows; "[T]he correlation between flow and travel time is weak, nonexistent for some stocks, a little stronger for others. But the correlation is nowhere near one to one."); Harvey Spigal, *The Implications of Salmon Recovery for the Bonneville Power Administration and the Region*, 25 ENVTL. L. 407, 408-09 (1995) ("[W]e do not know whether there is a causal relationship between the types of measures which we have been taking and proposes to take, [including smolt travel-time objectives,] and the survival and recovery of these species. . . . [A]lchemy cannot turn lead into gold, and the law cannot turn politics into science."); Al Wright, *Should the Courts Run the River?*, 25 ENVTL. L. 403, 405 (1995) ("[T]he courts have apparently concluded, and a lot of the socially correct rhetoric is, that we do not need a balanced, comprehensive fishery management plan. Apparently all we need is an adequate water particle travel time. . . . [I]f we follow that particular quest, I urge that there be at least consideration to the costs of losing a 12,000 megawatt firm hydrosystem. . . ."). Notwithstanding the skepticism of these utility and industrial power consumer representatives, there is substantial reason to believe that smolt travel-time objectives are highly likely to provide a reliable device for assuring increased juvenile survival. *See generally* Ogan, *supra* note 106.

biological objectives.¹⁸⁷ The court did not find the Council's position persuasive, explaining that the Council's expressed desire that the Strategy for Salmon result in doubled salmon populations was no more than a "policy statement" and not a "sound," "specific," and "discrete" biological objective.¹⁸⁸ The judges pointed out that the Council failed to establish a deadline by which the salmon populations were to reach this hoped-for threshold. The same flaw contaminated the Strategy for Salmon's rebuilding targets and performance standards. All three "framework elements" of the Program were therefore deemed insufficient as measuring tools because the Council did not specify a way to determine the Strategy for Salmon's progress in achieving them.¹⁸⁹

The significance of the Ninth Circuit's finding that the Strategy for Salmon may not have incorporated appropriate biological objectives lies in the central importance of these devices to the success of the Program. Without biological objectives, the public cannot know the return on its investment in fish and wildlife restoration.¹⁹⁰ But biological objectives provide more than measurement capability.¹⁹¹ They also facilitate application of the Act's command that fish and wildlife needs be given more consideration than the costs of fulfilling them.¹⁹² Congress specified that the Council must first distinguish between Program recommendations on the basis of their effectiveness at achieving the Act's fish and wildlife mitigation, protection, and enhancement criteria. The costs of the recommendations are properly taken into account only after the Council determines that they are equally likely to achieve the same fish and wildlife-related objectives.¹⁹³ Biological objectives must exist in order for this analytical process to take place.

187. *Northwest Resource Info. Center*, 35 F.3d at 1392.

188. *Id.*

189. *Id.* The Ninth Circuit also noted the Council's failure to use the population goals, rebuilding targets, or performance standards as guides in evaluating Program recommendations submitted during the 1991-92 amendment process. Accordingly, the court pointedly remarked that the Council may have intended these devices to serve as substitutes for biological objectives. *Id.*

190. *See Ogan*, *supra* note 106, at 706-11 (explaining necessity of biological objectives as tools to measure Program success).

191. The measurement function is particularly vital in light of the Act's mandate that the Program ensure "improved survival of [anadromous] fish at hydroelectric facilities located on the Columbia river system" and "flows of sufficient quality and quantity between such facilities to improve production, migration, and survival of [anadromous] fish." 16 U.S.C. § 839b(h)(6)(E).

192. *See Blumm*, *Parity II*, *supra* note 15, at 131-39. Section 4(h)(6)(C) implies that the Council must create a mechanism for determining the effectiveness of Program measures: "The Council shall include in the Program measures which it determines...will...utilize, *where equally effective alternative means of achieving the same sound biological objective exist*, the alternative with the minimum economic cost." 16 U.S.C. § 839b(h)(6)(C) (emphasis added).

193. *See* 16 U.S.C. §839b(h)(6)(C).

c. The Council Must Defer to the Expertise of Fish and Wildlife Agencies and Tribes

All of the parties agreed that fish and wildlife agencies and tribes were entitled to deference, although the Council asserted that it was obligated to afford only "minimal" deference.¹⁹⁴ NRIC and the Yakamas maintained that the Council had not adequately deferred to the fishery managers. Although the court declined to rule on this point because the Council had failed to provide a written explanation of its decisions,¹⁹⁵ the opinion nevertheless provides guidance on the question of how much deference is due the fish and wildlife agencies and tribes.¹⁹⁶ The court's conclusion is another important legacy of its decision because it will force the Council to include in the Program, subject only to the Council's authority to ensure that other specific requirements of the Act are not violated, fish and wildlife agency and tribal recommendations for appropriate mitigation measures.

The Ninth Circuit found that the Act's fish and wildlife provisions "bind[], more than unleash[], the Council's discretion."¹⁹⁷ This conclusion followed from the "stark contrast" between the fish and wildlife provisions and the rest of the Northwest Power Act.¹⁹⁸ In particular, the court's comparison of the Act's fish and wildlife provisions to

194. *Northwest Resource Info. Center*, 35 F.3d at 1386, *See also id.* at 1389 (discussing Council's argument that 16 U.S.C. § 839b "grants it virtually unfettered discretion in creating a fish and wildlife program") (emphasis omitted).

195. *Id.* at 1389. The court did, however, express its "concern" that the Council had not appropriately deferred to the expertise of the fish and wildlife agencies and tribes. *Id.* ("This failure of the Council is disturbing given that it adopted, for the most part, the flows and measures recommended by power interests and DSIs, despite the overwhelming consensus among agencies and tribes in favor of significantly higher flows and more scientifically-based biological objectives.").

196. *Id.* at 1389-93.

197. *Id.* at 1388.

198. *Id.* at 1387. The court explained that the Act's fish and wildlife provisions "require[] the Council to develop the [P]rogram from sources outside the Council," and that the Council "must adopt [P]rogram measures that are consistent with ...the protection, mitigation, and enhancement of fish and wildlife, while assuring the region an adequate, efficient, economical, and reliable power supply." *Id.* Accordingly, Congress specified, in section 4 of the Northwest Power Act, detailed rules governing the Council's responsibility for creating the Program. In contrast, the power conservation plan requirements contained in section 3 of the Act are significantly less confining. *See Seattle Master Builders Ass'n v. Pacific Northwest Electric Power Planning and Conservation Council*, 786 F.2d 1359, 1367 (9th Cir. 1986) (noting that the Council has "considerable flexibility" under the Act's power conservation planning provisions), *cert. denied*, 479 U.S. 1059 (1987). In preparing the power conservation plan, the Council is directed only to "set forth a general scheme for implementing conservation measures and developing resources," and must give "due consideration" to environmental quality, the limitations of the existing hydropower system, and conservation and enhancement of fish and wildlife. 16 U.S.C. §

its power planning requirements proved persuasive. Quoting Congressman Dingell's admonition that the Council should "not try to become a superfish and wildlife entity," the court concluded that "Congress intended that the Council not simply tap this resource of information and advice, but that it heavily rely upon it."¹⁹⁹ Thus, the court found that the Act "require[s] that a high degree of deference be given to fishery managers' interpretations of such provisions and their recommendations for [P]rogram measures."²⁰⁰

d. Fish and Wildlife Program Criteria

(i) The Act's Section 4(h)(6) Criteria are "Mandatory" and "Substantive"

The court rejected the Council's argument that the criteria for the Program contained in section 4(h)(6) of the Act²⁰¹ are advisory only, and declared that the criteria are "mandatory."²⁰² The court thought the matter was resolved by reference to Congress' choice of the word "shall" in that statutory section.²⁰³ Nevertheless, the court also explained that a construction of section 4(h)(6) that circumscribes the Council's ability to

839b(e)(2). Congress also required the Council to give priority to alternative energy resource determined to be "cost effective," and mandated that the power conservation plan include: (1) an energy conservation program; (2) recommendations for research and development; (2) recommendations for research and development; (3) a method for determining environmental costs and benefits; (4) an energy demand forecast; (5) data on the region's energy reserve and power reliability needs and ways of providing for them at minimum cost; and (6) a method for calculating any surcharges imposed pursuant to the Act. *Id.* § 839b(e)(3). The Council must also incorporate the Program into its power conservation plan. *Id.* § 839(e)(3)(F).

199. *Northwest Resource Info. Center*, 35 F.3d at 1388 (quoting 126 Cong. Rec. E10,683 (1980)). Three paragraphs later, the court gave an additional hint about the degree of deference due fishery managers and implied that it is substantial indeed: the court declared that the Act's fish and wildlife provisions "*significantly circumscribed* the Council's discretion." *Id.* at 1389 (emphasis added).

200. *Id.* at 1388. The court did not limit the applicability of the Act's deference requirement to Program recommendations. The court also declared that the Council must defer to fish and wildlife agency and tribal interpretations of the Act's fish and wildlife program provisions: "We find it inherently reasonable to give agencies and tribes, those charges with the responsibility of managing our fish and wildlife, a high degree of deference in the creation of a program and in the interpretation of the Act's fish and wildlife provisions." *Id.* at 1389.

201. 16 U.S.C. § 839b(h)(6).

202. *Northwest Resource Info. Center*, 35 F.3d at 1389. Standards specified by 16 U.S.C. § 839b(h)(6) are "substantive" criteria that each program measure must meet. *Id.*

203. *Id.*

West ◊ Northwest, Vol. 14, No. 1, Winter 2008

evade the Program criteria was consistent with Congress' intent to limit the Council's discretion in creating the Program.²⁰⁴

The Council's position that the section 4(h)(6) criteria "merely set the agenda but do not dictate the substance of measures" failed to satisfy the court.²⁰⁵ The court reiterated that the Northwest Power Act "significantly circumscribe[s] the Council's discretion with respect to fish and wildlife" and invoked precedent holding other provisions of section 4(h) "substantive" to conclude that the fish and wildlife program criteria should be treated similarly.²⁰⁶

(ii) Interpretation of the Section 4(h)(6) Criteria

The court did not limit its opinion to the procedural questions at the heart of the case. It also focused on the five specific Program criteria contained in section 4(h)(6) of the Act, and provided its interpretation of each. The court's discussion of many of these criteria may be dictum because the application of only a few of them was contested by the parties. Nevertheless, the court's interpretation of the Act's detailed Program mandate will no doubt influence the Council's future actions.²⁰⁷ Moreover, the court's interpretation will undoubtedly be invoked by the Ninth Circuit itself should the Program again be challenged in the future.

(a) Section 4(h)(6)(A)

This provision "requires that measures complement the existing and future activities of the Federal and the region's state fish and wildlife agencies and appropriate Indian tribes."²⁰⁸ The court quoted at length from Judge Marsh's ruling in *Idaho Department of Fish & Game* and pointed out that that case "involve[d] . . . what to do about preserving and restoring the salmon [and] urge[d] policy and operation in a direction away from the status quo towards affirmative action."²⁰⁹ The court also expressed concern that "the Council's rejection of the agencies' and

204. *Id.* The court also took the opportunity to warn against inclusion in the Program of measures unaccompanied by specific completion dates and commitments to meet the Act's specified Program criteria: "[We] construe the Program as the Council's binding commitment to the timely implementation of all measures, if they satisfy the substantive criteria" of the Act. *Id.* at 1389.

205. *Id.* at 1389.

206. *Id.* (citing *Confederated Tribes and Bands of the Yakima Indian Nation v. Federal Energy Regulatory Comm'n*, 746 F.2d 466, 473 (9th Cir. 1984) (interpreting "equitable treatment" clause of 16 U.S.C. § 839b(h)(11)(A)(i)).

207. *See infra* notes 362-419 and accompanying text for a discussion of the Council's December 1994 Program amendments, which were issued after the Ninth Circuit's decision.

208. *Northwest Resource Info. Center*, 35 F.3d at 1390.

209. *Id.*

tribes' consensus as to increased flows and biological objectives does not appear to square well with those efforts."²¹⁰ The significance of this portion of the opinion is easy to overlook, but it underscores Judge Marsh's warning six months earlier that the courts would not long remain satisfied with the status quo on the river.²¹¹

(b) Section 4(h)(6)(B)

The court pointed out that the "best available scientific knowledge" standard "ensures action in the promulgation and implementation of a [Program]."²¹² Importantly, however, the court explained that the Council must defer to the fish and wildlife agencies' and tribes' view as to what is "best available scientific knowledge."²¹³ The standard does *not* require the "best available data"; decisions may be based on "reasonable inferences and predictions" extracted from the "best available scientific knowledge."²¹⁴ The court did not rule on the question whether the Strategy for Salmon was based on the "best available scientific knowledge" because the Council did not provide the required written explanation of its decisions to reject fish and wildlife agency and tribal recommendations.²¹⁵

The court's interpretation of section 4(h)(6)(B) may be the most significant portion of the opinion. During the first decade of the Program, the Council frequently rejected recommendations for mitigation measures submitted by fish and wildlife agencies and Indian tribes. The Council frequently justified these decisions by professing doubt about the scientific support for such recommendations.²¹⁶ Requiring the Council to defer to the scientific expertise of fish and wildlife managers will foreclose that mechanism for avoiding decisions likely to be unpopular with parties primarily interested in economic uses of the Columbia River system. The Council may therefore find itself somewhat less able to continue its traditional cautious approach to salmon recovery.²¹⁷

210. *Id.*

211. *See Idaho Dep't of Fish & Game*, 850 F. Supp. at 900.

212. *Northwest Resource Info. Center*, 35 F.3d at 1391.

213. *Id.*

214. *Id.* ("[T]he standard requires only the best available scientific knowledge, not data.")

215. *Id.*

216. *See supra* notes 60, 72, 103-112 and accompanying text.

217. Indeed, the Council's response to *Northwest Resource Information Center* indicates that the Council intends to be more aggressive in leading the region's effort to restore wild salmon runs. *See infra* notes 354-419 and accompanying text.

(c) Section 4(h)(6)(C)

This standard requires the Council to evaluate alternative Program measures "for effective[ness] in achieving sound biological objectives."²¹⁸ The court instructed the Council to determine the extent to which recommended measures achieve "specific" biological objectives and ordered the Council to give "due weight" to agency and tribal recommendations as to what biological objectives to employ.²¹⁹

(d) Section 4(h)(6)(D)

This provision makes clear that the Northwest Power Act does not affect either treaties which guarantee Pacific Northwest Indian tribes the right to take fish at "accustomed grounds and stations"²²⁰ or tribal rights to adequate water supplies.²²¹ Because the Northwest Power Act does not

218. *Northwest Resource Info. Center*, 35 F.3d at 1391.

219. *Id.* at 1392.

220. Treaty of Medicine Creek, Dec. 26, 1854, 10 Stat. 1132, 1133. Similar language was included in other treaties protecting tribal fishing rights. *See, e.g.*, Treaty of Point No Point, Jan. 26, 1855, 12 Stat. 933, 934. The treaties protecting tribal fishing rights, known as the "Stevens Treaties" in honor of Washington territorial Governor and federal Indian Affairs Superintendent Isaac Stevens, also secured for America 64 million acres of land. Comment, *Empty Victories: Indian Treaty Fishing Rights in the Pacific Northwest*, 10 ENVTL. L. 413, 416-17 (1980). Governor Stevens negotiated the Treaty of Medicine Creek; the Treaty of Point Elliot, Jan. 22, 1855, 12 Stat. 927; the Treaty of Point No Point; the Treaty of Neah Bay, Jan. 31, 1855, 12 Stat. 939; the Treaty with the Walla Walla, June 9, 1855, 12 Stat. 945; the Treaty with the Yakimas, June 9, 1855, 12 Stat. 951; the Treaty with the Nez Perce, June 11, 1855, 12 Stat. 957; the Treaty with the Tribes of Middle Oregon, June 25, 1855, 12 Stat. 963; the Treaty with the Quinaielts, July 1, 1855 and Jan. 25, 1856, 12 Stat. 971; and the Treaty with the Flathead, July 16, 1855, 12 Stat. 975. The Shoshone-Bannock tribe does not have a Stevens Treaty - guaranteed right to a tribal fishery. However, their treaty hunting rights have been interpreted to include fishing rights. *See State v. Tinne*, 94 Idaho 759, 497 P.2d 1386 (1972) (implying fishing right from Article IV of the Treaty of Fort Bridger, July 3, 1868, 15 Stat. 1020-21).

221. Under the rule of *Winters v. United States*, 207 U.S. 564 (1908), the establishment of an Indian reservation implies reservation of water sufficient to fulfill the purposes of the reservation. Thus, the *Winters* doctrine protects tribal water rights utilized for agricultural production or maintenance of fisheries. *Id.* (enjoining construction of off-reservation dams and reservoirs that would have deprived the Fort Belknap Indian Reservation of water needed for irrigation); *Cappaert v. United States*, 426 U.S. 128 (1976) (fishery needs may be basis of reserved water right under *Winters* doctrine); *Colville Confederated Tribes v. Walton*, 647 F.2d 42 (9th Cir.) (reaching similar holding), *cert. denied*, 454 U.S. 1092 (1981). But *cf., e.g., Crow Tribe of Indians v. Reppis*, 866 F. Supp. 520 (D. Wyo. 1994) (tribe is not guaranteed right to hunt or fish on national forest lands by applicable treaties, notwithstanding *Winters* doctrine or *United States v. Winans*, 198 U.S. 371 (1905) and *Tulee v.*

authorize the Council or any federal agency to infringe on the tribes' treaty fishing rights, the Program must protect such rights.²²² Accordingly, the Ninth Circuit expressed sympathy with the Yakamas' argument that the Strategy for Salmon violated section 4(h)(6)(D).

The court found it "reasonable" to conclude, based on the administrative record before the Council which demonstrated that the Program would allow the extinction of Snake River fall chinook, that the Strategy for Salmon "may very well" have violated the Yakama Indian Nation's treaty-reserved fishing rights.²²³ There is no reason to assume that this warning does not also apply to other salmon stocks and other tribes. This aspect of the Ninth Circuit's opinion is therefore likely to induce the

Washington Dep't of Game, 315 U.S. 681 (1942)). For a good overview and critique of the federal government's handling of its trust obligations to the treaty tribes, see Mary Christina Wood, *Indian Land and the Promise of Native Sovereignty: The Trust Doctrine Revisited*, 1994 UTAH L. REV. 1471 (1994), and Mary Christina Wood, *Fulfilling the Executive's Trust Responsibility Towards the Native Nations on Environmental Issues: A Partial Critique of the Clinton Administration's Promise and Performance*, 25 ENVTL. L. 733 (1995).

222. Tribal treaty rights are reserved rights, subject to infringement only if Congress explicitly abrogates them. *See generally* *Washington v. Washington State Commercial Passenger Fishing Vessel Ass'n*, 443 U.S. 658 (1979). Courts are generally extremely reluctant to find that Congress has exercised its power to negate treaty-guaranteed rights. *Id.* at 690. Thus, unlike other policy priorities that federal agencies may balance in an effort to implement Congress' will, tribal treaty rights are property. Unless purchased by agreement or through subsequent treaty, or extinguished in a "just war," they must be left undiminished by the United States and its political subdivisions. *See* FELIX S. COHEN, *HANDBOOK OF FEDERAL INDIAN LAW* 50-58 (1982). Treaty tribes have an "absolute right" to maintain their historic fisheries in the Columbia River Basin and are entitled to a "fair share" of the fish present in the river system. *See* *Sohappy v. Smith*, 302 F. Supp. 899 (D. Or. 1969), *aff'd as modified sub nom.*, *United States v. Oregon*, 529 F.2d 570 (9th Cir. 1976). Later judicial decisions have clarified that treaty tribes must be allocated fifty percent of each fishrun destined for or passing through traditional tribal fishing areas. *See* *United States v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974), *aff'd* 520 F.2d 676 (9th Cir. 1975), *cert. denied sub nom.*, *Northwest Steelheaders Council v. United States*, 423 U.S. 1086 (1976). The Supreme Court upheld this allocation in *Washington State Commercial Passenger Fishing Vessel Association*. Tribal treaty rights also require federal, state and local governments to impose "environmental restraints on activities" that may adversely affect treaty fishing or water rights. *United States v. Washington*, 694 F.2d 1374, 1375, 1381-82, 1389 (9th Cir. 1982), *vacated, op. replaced, on rehearing en banc*, 759 F.2d 1353 (9th Cir.), *cert. denied*, 474 U.S. 994 (1985). *But see* *Nez Perce Tribe v. Idaho Power Co.*, 847 F. Supp. 791 (D. Id. 1994) (adopting magistrate's report that concluded that Stevens treaties do not provide tribes with right to protection of ecosystems). *See Generally* Michael C. Blumm, *Why Study Pacific Salmon Law?*, 22 IDAHO L. REV. 629, 637 n.94 (1986) (asserting that all appellate judges who have considered the issue on the merits have concluded that an implied environmental right exists). The Pacific Northwest's treaty tribes estimate that violations of their fishing rights caused by reductions in harvest quotes entitles them to \$4 billion in damages. *See Tribes Declare Ambitious Salmon Recovery Proposal*, AMERICAN POLITICAL NETWORK: GREENWIRE, June 19, 1995 (available on Westlaw, APN-GR Database).

223. *Northwest Resource Info. Center*, 35 F.2d at 1392.

West v Northwest, Vol. 14, No. 1, Winter 2008

Council to adopt only those Program recommendations not likely to allow any stocks to slide closer to extinction.²²⁴

(e) Section 4(h)(6)(E)

This provision specifies Program criteria unique to anadromous fish. The Council must: (i) provide for improved survival of such fish at hydroelectric facilities located on the Columbia River system; and (ii) provide flows of sufficient quality and quantity between such facilities to improve production, migration, and survival of such fish as necessary to meet sound biological objectives.²²⁵

The court explained that the criteria in this subsection "accent[ed] the importance of the Council strictly complying with the Act's mandates with regard to fish and wildlife, especially that requiring that a high degree of deference be given to fishery managers."²²⁶ While the court did not decide whether the Council had failed to afford adequate deference to the fish and wildlife agencies and tribes, it expressed concern that the Council has been more concerned with avoiding economic duress than in improving salmon survival: "The record evokes in us . . . a strong sense of skepticism; without explanation, the Council rejected the consensus of most fishery managers on the issues of flows and biological objectives in favor of the recommendations of power interests and DSIs."²²⁷

The court declined to address the argument that the Council did not, as the Act requires, defer to the expertise of fish and wildlife agencies and tribes and therefore afford a presumption of scientific correctness to their recommendations. The judges could not do so because the Council's failure to explain its decisions rendered it impossible to determine how much deference was actually given.²²⁸ But the court made it clear that the Council had provided very weak support for its decision not to increase fish flows. Rejecting the Council's reliance on NMFS' 1992 biological opinion on FCRPS operations, the court pointed out that NMFS had warned the Council that the status quo would not sustain the runs.²²⁹ The court also noted that the Council's own staff had concluded that the Strategy for Salmon would "probably" push low productivity stocks to extinction and stabilize, but not rebuild, medium productivity stocks.²³⁰

224. *But see* *Nez Perce Tribe v. Idaho Power Co.*, 847 F. Supp. 791 (D. Idaho 1994) (treaty tribe cannot pursue claim for damages based on adverse impacts of FCRPS on salmon runs under Federal Power Act, 16 U.S.C. § 803(c), or federal or state common law).

225. 16 U.S.C. § 839b(h)(6)(E)(i), (ii).

226. *Northwest Resource Info. Center*, 35 F.3d at 1392.

227. *Id.* at 1392-93.

228. *Id.* at 1389.

229. *Id.* at 1393.

230. *Id.*

**e. Balancing the Biological Benefit of a Program
Recommendation Against its Cost is Not Required**

The court rejected the DSIs' argument that each Program measure must be subjected to a comparison of its biological benefit to the costs it imposes on the hydropower system. Because Congress did not intend for cost considerations to preclude restoration of the basin's salmon runs as long as the Act's baseline condition of an "adequate, efficient, economical, and reliable power supply" remains in place, the court found that such comparisons are not permitted.²³¹ The court's dismissal of the DSIs' argument on this point eliminates an obstacle often invoked by commentators as a basis for blocking ecologically beneficial reform of the Basin's hydropower system.²³² This aspect of the Ninth Circuit's decision is therefore another important legacy of the case.

The court offered a summary of the role of cost calculations in the adoption of a Program that confirms academic opinion that measures are acceptable even if they impose substantial costs on the hydropower system.²³³

We conclude from our study of § 839b(h)(5) and the legislative history that: (1) Congress did not say the Council should perform a critical cost-benefit analysis of each measure; (2) a fish and wildlife measure cannot be rejected solely because it will result in power losses and economic costs; and (3) the Council must assess overall power and economic impacts so that the Program does not cause an inadequate, inefficient, uneconomic, and unreliable power supply.²³⁴

231. *Id.* at 1394. 16 U.S.C. § 839b(h)(6)(c) "emphasizes the achievement of predetermined biological objectives in a least cost manner....[C]ost effectiveness, in this context, prevents cost considerations from precluding the biologically sound restoration of anadromous fish in the Columbia River Basin to the extent affected by hydropower development and operations so long as an adequate, efficient, economical, and reliable power supply is assured." *Id.* Note the use of the word "power." As the court explained, "the statute assures a 'power supply,' not a 'hydropower supply.'" *Id.* at 1378, no.13.

232. *See, e.g.,* Early & Krogh, *supra* note 153, at 300 (arguing that the intent behind the Northwest Power Act was to require the Council to balance "the incremental cost to power as measured from current power costs, against the incremental value to the fishery of the proposed mitigation measure.").

233. *See* Blumm, *Parity I*, *supra* note 15, at 122-38 (biologically sound measure must be adopted unless it would cause "large scale power outages," a "demonstrated BPA inability to fulfill [its] self-financing requirement," or "an entire class of power customers [being forced] out of business.").

234. *Northwest Resource Info. Center*, 35 F.3d at 1394.

West v Northwest, Vol. 14, No. 1, Winter 2008

The court's handling of this issue turned on the state of the administrative record before the Council. The judges found that there was insufficient evidence to conclude that the "minimum cost" requirement imposed by section 4(h)(5) was violated.²³⁵ Nevertheless, the court also explained that it could not apply section 4(h)(5) of the Act unless a biological objective was first established.²³⁶ The court also noted that the DSIs had not proved that the Program's "overall economic impact" on the hydropower system was "unreasonable."²³⁷

C. Summary: How Must the Council Change its Ways?

The Ninth Circuit's decision ensures several important changes in the way the Council has traditionally crafted the Program. First, the court's opinion left the Council no choice but to establish clear biological objectives. Moreover, the Council must not dismiss as scientifically unsupported, without adequate explanation, the fish and wildlife agencies' and tribes' view that smolt survival can best be improved by anchoring the Program to water particle travel times. The Program may therefore include smolt travel time objectives in the future.²³⁸ The Council must also heed the court's warnings that it should give substantial deference to the scientific views and recommendations of state fish and wildlife agencies and tribes.²³⁹ The court did not say, or even imply, that the recommendations of the fish and wildlife agencies and tribes are conclusive. However, the court left the Council very little room to ignore these recommendations, going so far as to say that deference is due even the interpretation of the Act by the fish and wildlife agencies and tribes.²⁴⁰

Northwest Resource Information Center eliminates the possibility that future Program amendments will be so weak as to allow the extinction of listed salmon stocks.²⁴¹ The court strongly suggested in its discussion of section 4(h)(6)(D) that protection of tribal treaty rights to a salmon harvest must be

235. *Id.* at 1395.

236. *See id.*, at 1394-95.

237. *Id.* The court also rejected the DSIs' argument that reservoir drawdowns would violate the Act because the Council had included in the Strategy qualifying language to the effect that drawdowns would not proceed if they are not consistent with sections 4(b)(5)-(7) of the Act. *Id.* at 1395.

238. *See Ogan, supra* note 106.

239. The Council apparently is finally convinced. Although speaking as an individual and not in his role as the Council's chief counsel, John Volkman has indicated that the Council reads the Ninth Circuit's opinion as a warning that the Council should avoid substituting its own view of biology for that of the fish and wildlife agencies and tribes. John M. Volkman, *Steering By Dicta*, 25 ENVTL. L. 385 (1995).

240. *Northwest Resource Info. Center*, 35 F.3d at 1388.

241. *See supra* notes 220-224 and accompanying text.

protected, and in any event a failure to provide this protection raises questions of potential liability that counsel against risking the loss of any runs.²⁴² Thus, the Program is likely to include measures more protective of the most imperiled runs, particularly Snake River fall chinook.

The Council must justify, in writing, any decision not to adopt recommendations submitted by fish and wildlife agencies or tribes. The Council must also avoid the temptation to act as the region's scientific arbitrator. One immediate consequence of these two limitations on the Council's authority should be the adoption of higher minimum instream flows on the lower Columbia and lower Snake Rivers, since such measures have been advocated and scientifically justified by the fishery coalition for more than a decade.²⁴³

Northwest Resource Information Center does not erase all of the Council's discretion. The Act gives the Council authority to make an independent evaluation of Program recommendations for consistency with the section 4(h)(6) criteria and also authorizes the Council to reject any recommendation that is "less effective than the adopted recommendation for the protection, mitigation, and enhancement of fish and wildlife."²⁴⁴ These provisions of the Act allow the Council to reject recommendations on the grounds that they are insufficiently supported by current scientific knowledge, so long as the Council affords fish and wildlife agencies and tribes the deference to which they are entitled.²⁴⁵

242. Although the Council is an interstate compact agency, and not a part of the federal government, it is obligated to respect Indian tribal treaty rights. *See* 16 U.S.C. § 839b(h)(6)(d). Moreover, the region's tribes might well have a substantial claim for compensation under the takings clause of the Constitution if a government agency allows the tribes' treaty-guaranteed property right to a productive fishery to be destroyed. Lorraine Bodi, Panel Discussion, in *Colloquium: Who Runs the River?*, 25 ENVTL. L. 417, 421 (1995).

243. In the past the Council has asserted authority to determine whether fishery coalition flow recommendations are justified by its own view of correct biology. Kai N. Lee, *Rebuilding Confidence: Salmon, Science, and Law in the Columbia Basin*, 21 ENVTL. L. 745, 750, 795 N.190 (1991) (maintaining that Council has engaged in a "science-driven planning process" and that requests for higher flows on lower Columbia and lower Snake Rivers do not "represent any biology"). Of course, if the Council adheres to Professor Lee's views on the flow issue, it will be at risk of violating the Ninth Circuit's admonition that the Council's task is to find out from the state fish and wildlife agencies and tribes the nature and extent of management actions justified by scientific knowledge. *See* Blumm, *Parity V*, *supra* note 8, at 737 n.442.

244. 16 U.S.C. § 839b(h)(7)(B), (C).

245. Thus, future Program amendments may incorporate additional scientific information aimed at reinforcing application of section 4(h)(7) criteria. In addition, the Ninth Circuit's opinion does not affect the Council's authority to require scientific support for all submitted recommendations. Nevertheless, rejection of fish and wildlife agency and tribal recommendations on the grounds that biological knowledge does not support them entails the risk that the Council will cross the line between permissible independence and necessary deference to fishery managers' expertise.

West & Northwest, Vol. 14, No. 1, Winter 2008

During future proceedings to amend the Program the Council may invoke the Act's power supply assurance clause as an excuse for avoiding fishery coalition or environmentalist recommendations.²⁴⁶ The Ninth Circuit has not defined the scope of this constraint on the Program.²⁴⁷ However, *Northwest Resource Information Center* indicates that Congress' desire to preserve for the region a reliable and affordable source of electricity may not be a significant barrier to an aggressive salmon restoration effort. The Ninth Circuit emphasized that the Act's drafters sought only to prevent the creation of an "inadequate, inefficient, uneconomical, and unreliable power supply."²⁴⁸

While BPA may legitimately fear intense price competition from other electric wholesalers if salmon restoration costs rise,²⁴⁹ the Northwest Power

246. See 16 U.S.C. § 839b(h)(7)(A), (B).

247. *Northwest Resource Information Center* does not include any detailed discussion of the power supply assurance. Cf. PACIFIC NORTHWEST UTILITIES CONFERENCE COMMITTEE, DEGREE OF POWER COUNCIL FLEXIBILITY IN RESPONDING TO FISHER AGENCY RECOMMENDATIONS FOR DEVELOPMENT AND ADOPTION OF A FISH AND WILDLIFE PROGRAM 5 (no date) (arguing that phrase should be read as a qualifying ingredient to the Act's specific requirements to "compliment[|] existing and future agency and tribal objectives," "achiev[e] sound biological objectives," and "be consistent with treaty rights"), *quoted in* Blumm, *Parity II*, *supra* note 15, at 120 n.71. *But see* Early & Krogh, *supra* note 153, at 295 (arguing that Congress did not intend for electricity consumers to pay a higher price for power in order to pay for fish and wildlife restoration and protection measures; power costs "must be considered before large scale power shortages occur, before the BPA is unable to pay its bills, and before customers are driven from the region due to high power costs"). The Krogh and Early view of Congress' intent is not supported by the language of the Act. Section 4(h)(8)(B) explicitly contemplates that power users must "bear the cost of measures designed to deal with adverse impacts caused by the development and operation of electric power facilities and programs." 16 U.S.C. § 839b(h)(8)(B).

248. *Northwest Resource Info. Center*, 35 F.3d at 1394. BPA has hinted that it would invoke this clause to avoid implementing Program measures it deems too expensive. See Bill Mackenzie & Joan Laatz, *Planners Weigh Cheap Power, Salmon*, OREGONIAN, Dec. 7, 1994, at C1, C7 (quoting BPA Administrator Randy Hardy) (BPA considers costs of saving salmon "risk[y]...from a reliability and financial standpoint" and would "rather not be in the position of having the [C]ouncil say to do something and we say, 'No, we won't....'").

249. Increased costs associated with salmon recovery are hardly the most significant drain on BPA's bank account, since they amount to a very small fraction of the amount BPA allocates toward payment on bonds issued to build Washington Public Power Supply System (WPPSS) nuclear plants. Blumm, *Parity V*, *supra* note 8, at 741. BPA owes approximately \$7 billion to the lenders who financed the one remaining and three discontinued plans. *Nuke Debt: Hole That May Become a Grave*, 14 NORTHWEST CONSERVATION ACT REPORT 1, 3 (Mar. 17, 1995). Maintenance of BPA's WPPSS debt costs the agency approximately one-fourth its entire annual budget. See BONNEVILLE POWER ADMINISTRATION, SERVING THE NORTHWEST: 1994 ANNUAL REPORT 26 (reporting FY1994 WPPSS debt service of approximately \$469 million) [hereinafter BPA 1994 REPORT].

Act does not permit BPA to disregard the Program. BPA must implement the Program unless the Administrator can provide specific reasons why doing so would be inconsistent with either the power conservation plan, into which the Program is incorporated, or other legal obligations facing that agency.²⁵⁰ In fact, Congress clearly explained that BPA must "coordinate," "to the greatest extent practicable," its actions under the Program with federal and state fish and wildlife managers and tribes.²⁵¹ Refusal to do so solely on the grounds that the agency fears losing customers does not appear to fit within the statutory authority for such a decision. Section 4(h) of the Act does not contemplate resistance to the Program simply because it will increase power production costs or reduce BPA's revenues.²⁵²

The structure of the Act also indicates that the Program cannot be evaded on financial grounds. The Act mandates that the hydropower system pay the costs of fish and wildlife losses for which it is responsible.²⁵³ Moreover, section 4(h)(8)(D) of the Act indicates that Congress contemplated that the Program would cause a loss of electric power and that BPA should allocate those costs and power losses "consistent with individual project impacts and system wide objectives."²⁵⁴ Thus, *Northwest Resource Information Center* unsurprisingly confirms that the Council may not reject recommended measures just because they impose power losses and economic costs on the region.²⁵⁵ The Northwest Power Act does not guarantee an effective, efficient, economic, and reliable *hydropower* supply.²⁵⁶ Thus, while the Council theoretically possesses the ability to reject biologically beneficial measures thought by the region's power interests and DSIs to be too onerous, its discretion to do so does not appear to be wide enough to accommodate the status quo.

250. See 16 U.S.C. § 839b(j)(2)(B).

251. *Id.* § 839b(h)(11)(B).

252. See *Northwest Resource Info. Center*, 35 F.3d at 1394 (Northwest Power Act guarantees only that an "inadequate, inefficient, uneconomical, and unreliable power supply" should not be the consequence of Program implementation).

253. 16 U.S.C. § 839b(h)(8)(B). Section 2)4) of the Act declares that this allocation of the burdens of salmon restoration follows from the Act's purpose to ensure that users of electricity "pay all costs necessary to produce, transmit, and *conserve* resources to meet the region's electric power requirements." 16 U.S.C. § 839(4) (emphasis added).

254. 16 U.S.C. § 839b(h)(8)(D). See also COMMERCE COMMITTEE REPORT, *supra* note 13, at 57 ("[C]ost should not be a deterrent if a fish and wildlife need might be sacrificed to save dollars.").

255. *Northwest Resource Info. Center*, 35 F.3d at 1395.

256. See *id.* at 1379, n.13. There is some doubt as to how large a power cost increase has to be before being considered "uneconomic." However, the Council has indicated that this standard is *not* violated where power rate increases "constitute a burden for specific consumers and relatively electricity-intensive industries." NORTHWEST POWER PLANNING COUNCIL, DOC. NO. 94-56, ASSURING AN EFFECTIVE, EFFICIENT, ECONOMICAL AND RELIABLE POWER SUPPLY AND THE ABILITY TO CARRY OUT OTHER PURPOSES OF THE POWER ACT 26 (Dec. 1994) [hereinafter ASSURING POWER SUPPLY].

West & Northwest, Vol. 14, No. 1, Winter 2008

Of course, the Council's future course of action implies that the Council members will continue to agree on one. The Council, however, faces a risk that its members will deadlock and be unable to maintain majority support for a more aggressive Program. The Act requires that Program amendments be approved by either a majority of the Council's members, "including the vote of at least one member from each State" represented on the Council, or at least six members.²⁵⁷ The Council's recent decision to pursue a more effective salmon restoration effort will not prove durable unless a consensus of each state's Council representatives can be maintained. That may prove elusive. The Washington representatives object, in general, to measures that would require drawdowns of lower Snake reservoirs.²⁵⁸ The newly-appointed Idaho members have made clear their unwillingness to support allocation of upper Columbia River Basin water currently used by that state's irrigated agriculture sector for salmon recovery.²⁵⁹ Montana can be expected to continue its resistance to bold salmon recovery efforts, since it has little incentive to surrender storage water or hydroelectric generating capacity to sustain anadromous fish that do not reach its rivers, streams and lakes.²⁶⁰ The Montana representatives to the Council have also expressed concern about the possible impacts of drawdowns and increased flows on resident fish indigenous to reservoirs in that state.²⁶¹ These conflicts among Pacific Northwest states may render it impossible for the Council to achieve the necessary degree of agreement on the kinds of steps needed to restore the salmon runs.²⁶²

257. 16 U.S.C. § 839b(c)(2).

258. Interview with Laird Lucas, Esq., Land and Water Fund of the Rockies (Nov. 4, 1994).

259. Northwest Power Planning Council, UPDATE, vol. 12, no. 2 (Feb. 1995), at 1; *Idaho Power Attacks Salmon Recovery Plan*, OREGONIAN, Feb. 25, 1995, at F3; interview with Tim Weaver, Esq., counsel for Yakama Indian Nation (Nov. 4, 1994). That attitude will likely be strengthened as a consequence of Idaho voters' election of Republican onion farmer Phil Batt as Governor. Batt has said that he believes reservoir drawdowns are unnecessary and too costly for Idaho's agriculture and navigation interests. Bill Loftus, *Salmon Plan: Power Council's Idaho Members Have Doubts: Republican Governor Also Has His Own Ideas*, LEWISTON MORNING TRIBUNE, Jan. 17, 1995, at A5.

260. See John Etchert & Stan Grace, *Salmon Plan Disregards Evidence*, SEATTLE POST-INTELLIGENCER, Jan. 12, 1995, at A15 (editorial).

261. *Id.* Additional water needed to provide fishery coalition-recommended flows for salmon may be sought from Montana reservoirs that provide habitat for kokanee, white sturgeon, and bull trout. Montana may find it difficult in any event to surrender water stored in that state's reservoirs, since the bull trout may be listed under the ESA in the near future and therefore conservation requirements affecting the availability of stored water may be imposed. See *Groups Sue for Protection of Bull Trout*, OREGONIAN, Nov. 1, 1994, at B8; *Alliance for the Wild Rockies v. U.S. Fish & Wildlife Serv.*, No. CV 94-1318-JO (D. Or. Filed Oct. 31, 1994). Indeed, Montana has threatened to sue in an effort to prevent use of water stored in that state for salmon recovery. Lynn Francisco, *Doubts over Spill and Salmon Flows Plague Idaho and Montana*, CLEANING UP: NORTHWEST ENERGY MARKETS, May 8, 1995, at 7.

262. That prospect has already led the Council to reconsider the scientific rationale for its December 1994 Program amendments. See *infra* note 426 and accompanying text.

Even if the Council maintains the consensus necessary to sustain support for a stronger Program that includes higher flow levels and reservoir drawdowns, the Ninth Circuit's decision does not guarantee that the dam operators will follow the Program. Although BPA must abide by the Program,²⁶³ the Northwest Power Act gives the Corps and the Bureau discretion in deciding how much of the Program to incorporate into their activities.²⁶⁴ The question is how much that discretion is confined.²⁶⁵ Ninth Circuit

263. See 16 U.S.C. § 839b(h)(1)(A). BPA's general counsel has hinted that BPA may not consider the Program enforceable against it because it constitutes "state law." He also has stated his personal belief that section 4(h)(11)(A)(i) of the Act grants BPA the authority to reject Program measures if they are not "consistent with" the Act's other purposes, particularly the assurance of an "adequate, efficient, economical, and reliable power supply" for the region. Spigal, *supra* note 186, at 412. See *infra* notes 265-267 and accompanying text for this writer's view of the validity of those arguments.

264. 16 U.S.C. § 839b(h)(11)(A) provides that BPA, the Corps, the Bureau, "and other [f]ederal agencies...responsible for...regulating Federal or non-Federal" dams in the basin must:

- (i) exercise such responsibilities consistent with the applicable purposes of this chapter and other applicable laws, to adequately protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, affected by such projects or facilities *in a manner that provides equitable treatment* for such fish and wildlife with the other purposes for which such system and facilities are managed and operated; [and]
- (ii) exercise such responsibilities, *taking into account each relevant stage of decision-making processes to the fullest extent practicable*, the Program adopted by the Council...."

(emphasis added). The Ninth Circuit has not interpreted the extent to which this provision gives federal agencies the authority to ignore the Program or its particular requirements. Nevertheless, it is clear that the agencies retain "a great deal of discretion." Blumm, *Columbia River Basin*, *supra* note 35, at 129.

265. In making decisions that affect FCRPS operations, BPA, the Corps, and the Bureau must take the Program into account "to the fullest extent practicable." 16 U.S.C. § 839b(h)(11)(A)(ii). The Council apparently believes that the Northwest Power Act essentially places it in the position of an "advocate" with respect to the federal agencies, rather than as a basin manager with authority over their decision making. Blumm, *Parity V*, *supra* note 8, at 712. BPA, on the other hand, may doubt that the Program is enforceable against it. According to BPA's general counsel, BPA is concerned that Congress has not clearly subjected that agency to the authority of an interstate compact agency. Spigal, *supra* note 186, at 412. The courts will defer to BPA's interpretation of the Northwest Power Act. See *California Energy Resources Conservation & Dev. Comm'n v. Bonneville Power Admin.*, 831 F.2d 1467, 1472 (9th Cir. 1987) (citing *Aluminum Co. of America v. Central Lincoln People's Utility Dist.*, 467 U.S. 380, 389 (1984)). Nevertheless, this objection is difficult to take seriously in light of the Act's clear reflection of Congress' intent to create a regional mechanism for solving the basin's salmon crisis. To be effective, Congress must authorize state regulation of a federal agency in

West v Northwest, Vol. 14, No. 1, Winter 2008

case law and Council evidence conflict on that issue. Several cases have indicated that BPA, the Corps, the Bureau, and FERC are obligated only to consider the Program as one factor controlling their actions, not as a restraint.²⁶⁶ The Council has interpreted this to mean that these agencies must either implement the measures included in the Program or provide a written explanation of the physical, legal, or other reason that would make compliance impracticable.²⁶⁷

On the other hand, the broad language of the Northwest Power Act and the lack of clear judicial guidance does not necessarily mean that no constraints exist. Whatever amount of discretion is conferred on federal dam operators and regulators by the broad language of the Act is constrained by two more specific factors. First, the Act includes an explicit recognition of Indian treaty rights to harvest salmon.²⁶⁸ Thus, to the extent that a Program measure is necessary to protect treaty rights, a federal dam operating or regulatory agency is obliged to follow it.²⁶⁹ Second, the Act

language that is "clear and unambiguous." *Hancock v. Train*, 426 U.S. 164, 179 (1976). See also *United States Environmental Protection Agency v. California ex rel. State Water Resources Control Board*, 426 U.S. 200, 211 (1976). The foundation for this rule is the supremacy clause of the Constitution. Because the Constitution and federal law take priority over state law, "the activities of the Federal Government are free from regulation by any state" unless Congress declares otherwise. *Hancock*, 426 U.S. at 178 (quoting *Mayo v. United States*, 319 U.S. 441, 445 (1943)). This principle does not apply to the Council, however. The Council is an agency of an interstate compact and has received Congress' express sanction. See *Seattle Master Builders*, 786 F.2d at 1363. Thus, the Program, which is issued by the Council pursuant to Congress' command, is enforceable as a matter of federal, not state, law. See *Cuyler v. Adams*, 449 U.S. 433, 440 (1981). Moreover, the language of the Act leaves little doubt that Congress has clearly subjected BPA to the authority of the Council. See 16 U.S.C. § 839b(h)(11)(A)(i), (ii). Cf. *Flint Ridge Dev. Co. v. Scenic Rivers Ass'n*, 426 U.S. 776, 787-88 (1976) (finding that federal agencies must comply with the similar requirements of the National Environmental Policy Act unless doing so would conflict with other statutory obligations). As to the obligations of the Federal Energy Regulatory Commission (FERC), which licenses privately built hydroelectric projects, to comply with the Program, see Blumm, *Parity IV*, *supra* note 15, at 508-10.

266. See *Public Utility Dist. No. 1 of Douglas County v. Bonneville Power Admin.*, 947 F.2d 386, 392 (9th Cir. 1991) (interpreting 16 U.S.C. § 839(h)(11)(A) to mean not that BPA and other agencies "are limited to the program in exercising their responsibilities under the Act," but only that "a measure be something that results from a federal agency taking the Program into consideration at each relevant state of the decision-making processes, in exercising their responsibilities consistent with the Act and other applicable law."), *cert. denied*, 503 U.S. 1004 (1992); *Nat'l Wildlife Fed'n v. Fed. Energy Reg. Comm'n*, 801 F.2d 1505, 1514-15 (9th Cir. 1986), *later proceeding*, 870 F.2d 542 (9th Cir. 1989).

267. See Blumm, *Parity III*, *supra* note 15, at 296, n.80, 336-37.

268. See 16 U.S.C. § 839b(h)(b)(A) (Program measures must "complement the existing and future activities" of region's tribes), (D) (Program must "be consistent with the legal rights of appropriate Indian tribes in the region.").

269. See 16 U.S.C. § 839b(h)(6)(D); *Washington v. Washington State Passenger Fishing Vessel Ass'n*, 443 U.S. 658, 695 (1979).

specifically requires federal agencies to "exercise [their] responsibilities consistent with . . . other applicable laws."²⁷⁰

While the Council has never tested the extent of its authority to require the Corps and the Bureau to comply with the Program,²⁷¹ the question is, for the present, academic. The ESA unquestionably removes a substantial amount of the federal dam operators' freedom to ignore some of the measures contained in the Program because similar mandates may be imposed as a result of consultation or in a recovery plan. Thus, the importance of the recent decision in *Idaho Department of Fish & Game v. National Marine Fisheries Service* is clear: the case could prove to be a strong boost of the Council's ability to enforce the Program, at least if NMFS requires dam operators to undertake similar measures. NMFS' reaction to the holding in *Idaho Department of Fish & Game* also may have the effect of severely reducing the ability of the Corps, the Bureau, and FERC to avoid taking actions that would effectively restore and mitigate salmon populations at the expense of power generation.

VI. Idaho Department of Fish & Game v. National Marine Fisheries Service: The End of Compromise?

The Ninth Circuit's decision in *Northwest Resource Information Center* was not the first occasion for judicial scrutiny of the Pacific Northwest's response to the continuing decline of the salmon runs. In March 1994, Judge Malcolm Marsh of the U.S. District Court for the District of Oregon ruled that NMFS violated the ESA and the Administrative Procedure Act (APA)²⁷² when it decided that operation of the FCRPS would not jeopardize the continued existence of listed salmon stocks.²⁷³ *Idaho Department of Fish & Game v. National Marine Fisheries Service* should produce, in the short run, a greater impact than will *Northwest Resource Information Center*. The ESA, and thus *Idaho Department of Fish & Game*, will govern the actions of BPA and the region's federal dam operators until the listed stocks are no longer at risk of extinction. *Idaho Department of Fish & Game* should also motivate NMFS and the Council to coordinate their salmon recovery actions.²⁷⁴

270. 16 U.S.C. § 839b(h)(11)(A)(i). See also 16 U.S.C. § 839 (Purposes of Act "are . . . intended to be construed in a manner consistent with applicable environmental laws.").

271. Blumm, *Parity V*, *supra* note 8, at 738.

272. 5 U.S.C. §§ 701-06.

273. *Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv.*, 850 F. Supp. 886 (D. Or. 1994), *remanded*, 56 F.3d 1071 (9th Cir. 1995).

274. *Idaho Department of Fish & Game* may have already affected the Council's actions in the wake of the Ninth Circuit's decision in *Northwest Resource Information Center*. See *infra* notes 354-405 and accompanying text. Both the Council and NMFS have expressed a desire to coordinate their actions in an effort to avoid judicial control of the region's salmon recovery process. See Laatz, *Power Council OK's Plan to Save Salmon*, *supra* note 21, at A1, A26; Volkman, *supra* note 79, at 41-43.

West ◊ Northwest, Vol. 14, No. 1, Winter 2008

This section first outlines NMFS' power, under section 7 of the ESA, to force changes in federal agency activities.²⁷⁵ It next provides an overview of the 1993 biological opinion on FCRPS operations, which concluded that status quo management of the region's hydropower system would not cause an increased threat to the survival of listed stocks.²⁷⁶ After summarizing the arguments of the parties in the case, this section analyzes Judge Marsh's opinion in *Idaho Department of Fish & Game*.²⁷⁷ The section concludes with a brief discussion of the decision's likely impacts on other Basin-wide river management efforts and other activities affecting the salmon's vitality.²⁷⁸

A. The Nature of NMFS' Power: ESA Section 7

The ESA allows NMFS to exercise substantial control over the actions of federal dam operators insofar as they affect listed species. The foundation of this power lies in section 7 of the ESA.²⁷⁹ Under the ESA, BPA, the Corps and the Bureau are required to "insure" that "any action" that they "authorize[], fund[], or carr[y] out. . . is not likely to jeopardize the continued existence of any endangered species or threatened species."²⁸⁰ The relevant federal agency must therefore first determine whether its proposed action will affect a listed species.²⁸¹ If so, then the action agency must evaluate the effects of the proposed action in a biological assessment.²⁸²

If the biological assessment demonstrates that listed species will be adversely affected, then the action agency must consult with NMFS before engaging in the action.²⁸³ NMFS then issues a biological opinion²⁸⁴ which evaluates the nature and extent of the impacts to a listed species posed by the action agency's proposed undertaking.²⁸⁵ During the pendency of this required consultation, the action agency is forbidden to make "any irreversible or irretrievable commitment of resources with respect to the. . . action which has the effect of foreclosing the formulation or

275. See *infra* notes 279-287 and accompanying text.

276. See *infra* notes 288-302 and accompanying text.

277. See *infra* notes 303-326 and accompanying text.

278. See *infra* notes 328-353 and accompanying text.

279. 16 U.S.C. § 1536.

280. 16 U.S.C. § 1536(a)(2).

281. 16 U.S.C. § 1536(c)(1); 50 C.F.R. §§ 402.02, 402.12. See generally Rohlf, ESA, *supra* note 88, at 107-10.

282. 16 U.S.C. § 1536(c)(1). The implementing regulations for the ESA limit an agency's obligation to prepare a biological assessment to "major construction activities." 50 C.F.R. § 402.12(b).

283. 16 U.S.C. § 1536(a)-(b); 50 C.F.R. § 402.13.

284. 16 U.S.C. § 1536(b).

285. *Id.*

implementation of any reasonable and prudent alternatives."²⁸⁶ The action agency is also prohibited from "taking" a listed species without first obtaining the "incidental take statement" that ordinarily accompanies a biological opinion.²⁸⁷

B. The 1993 Biological Opinion

After the listings of chinook and sockeye occurred, NMFS had its first opportunity to compel changes in FCRPS operations, but NMFS declined to issue a jeopardy opinion.²⁸⁸ That unwillingness to compel ecologically beneficial change on the river persisted in 1993. The biological opinions on FCRPS operations issued during 1992 and 1993 were limited in scope to a nine and one-half month period and did not require any immediate changes in FCRPS operations.²⁸⁹ NMFS issued a "no jeopardy" opinion in 1992, but the agency also put BPA, the Corps, and the Bureau on notice that it would require changes in dam operations in future years.²⁹⁰

Notwithstanding its own warning, NMFS was unwilling to challenge the FCRPS status quo in 1993.²⁹¹ NMFS first concluded in a draft 1993 biological opinion that FCRPS operations *would* jeopardize listed salmon,²⁹²

286. 16 U.S.C. § 1536(d). See *Pacific Rivers Council v. Thomas*, 30 F.3d 1050, 1057 (9th Cir. 1994), *cert. denied*, 115 S. Ct. 1793 (1995); *Connerv. Burford*, 848 F.2d 1441, 1455 N.34 (9th cir. 1988), *cert. denied sub nom.*, *Sun Exploration & Prod. Co. v. Lujan*, 489 U.S. 1012 (1989); *North Slope Borough v. Andrus*, 486 F. Supp. 332, 356 (D.D.C.), *aff'd in part, rev'd in part on other grounds*, 642 F.2d 589 (D.C. Cir. 1980).

287. 16 U.S.C. § 1536(b)(4), (o); 1538(a)(1)(B). See *generally* *Forest Conservation Council v. Roseboro Lumber Co.*, 50 F.3d 781 (9th Cir. 1995). In theory, BPA, the Corps, and the Bureau could reject an NMFS opinion that their actions in operating the dams jeopardize salmon. 50 C.F.R. § 402.15. See *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of Navy*, 898 F.2d 1410, 1418 (9th Cir. 1990). Such a response is unlikely, however, because failing to abide by the reasonable and prudent alternatives suggested by NMFS would place the agencies at risk in violating the prohibitions against jeopardizing and taking species contained in ESA sections 7(a)(2) and 9, 16 U.S.C. §§ 1536(a)(2), 1538(a)(1)(B). See, e.g., *Tribal Village of Akutan v. Hodel*, 859 F.2d 651 (9th Cir.), *amended*, 869 F.2d 1185 (9th Cir. 1988), *cert. denied sub nom.*, *Cowper v. Secretary of Interior*, 493 U.S. 873 (1989); *Roosevelt Campobello Int'l Park Comm'n v. U.S. EPA*, 684 F.2d 1041 (1st Cir. 1982); *Nat'l Wildlife Fed'n v. Coleman*, 529 F.2d 359 (5th Cir. 1976), *cert. denied sub nom.*, *Boteler v. Nat'l Wildlife Fed'n*, 429 U.S. 979 (1976).

288. 1992 BIOLOGICAL OPINION, *supra* note 90, at 50.

289. 1992 BIOLOGICAL OPINION, *supra* note 90, at 2; 1993 Biological Opinion, *supra* note 50, at 1.

290. 1992 BIOLOGICAL OPINION, *supra* note 90, at 15-16.

291. See 1993 BIOLOGICAL OPINION, *supra* note 50.

292. NMFS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, 1993 DRAFT BIOLOGICAL OPINION ON THE OPERATIONS OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM (May 5, 1993) [hereinafter 1993 DRAFT BIOLOGICAL OPINION], *cited in* Idaho Department of Fish & Game's Renewed Motion for

West v Northwest, Vol. 14, No. 1, Winter 2008

but came to a different conclusion after receiving rainfall projections from the Corps that predicted "slightly increased river flows."²⁹³ In the final 1993 biological opinion, NMFS stated that slower river velocity caused by the dams delays juvenile migration and increases smolt mortality. In addition, NMFS confirmed that large numbers of young salmon are killed when they pass through hydroelectric turbines.²⁹⁴ NMFS also determined that dams delay upriver adult passage, causing significant adult mortality.²⁹⁵ Thus, the 1993 biological opinion seemed to reiterate the bleak predictions about the fate of the Snake River runs issued by NMFS two years earlier in a status report on spring and summer chinook: These stocks were "likely to become endangered in the near future if corrective actions are not taken";²⁹⁶ fall chinook "face a substantial risk of extinction if present conditions continue";²⁹⁷ and sockeye have "declined dramatically in recent years."²⁹⁸

Notwithstanding its conclusion that the FCRPS is the largest single human-induced cause of salmon mortality,²⁹⁹ NMFS issued a no jeopardy opinion. This result was particularly surprising in light of computer modeling results that showed continued substantial mortality rates for all of the listed runs.³⁰⁰ However, these models did not sway NMFS from its resolve not to issue a jeopardy opinion. NMFS decided not to consider "low case" test results that demonstrated a likelihood of only a 41-42% chance that stable populations of the listed species would be achieved.³⁰¹ NMFS also declined to

Summary Judgment, Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv., 850 F. Supp. 886 (D. Or. 1994) (Dec. 28, 1993) [hereinafter Idaho Motion].

293. Compare DRAFT 1993 BIOLOGICAL OPINION, *quoted in* Idaho Motion, *supra* note 292, at 5, with 1993 BIOLOGICAL OPINION, *supra* note 50.

294. 1993 BIOLOGICAL OPINION, *supra* note 50, at 18. See also 57 Fed. Reg. 14,653, 14,660 (1992).

295. 57 Fed. Reg. at 14,660. See also 57 Fed. Reg. 14,653-14,654, 14660.

296. See NMFS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, STATUS REVIEW FOR SNAKE RIVER FALL CHINOOK 50 (1991) [hereinafter FALL CHINOOK REVIEW]. NMFS downlisted Snake River spring and summer chinook to endangered in summer 1994. 50 Fed. Reg. 54,840 (1994).

297. FALL CHINOOK REVIEW, *supra* note 296, at 50.

298. 56 Fed. Reg. at 58,622 (1991).

299. 1993 BIOLOGICAL OPINION, *supra* note 50, at 51, 60 ("mortality of Snake River Chinook salmon associated with passage through the FCRPS is much higher than other sources of human-induced mortality").

300. NMFS concluded that 55-77% of juvenile spring and summer chinook, 81-92% of juvenile fall chinook, 33-41% of adult spring-summer chinook, and 41% of adult fall chinook, would be killed while attempting to pass through FCRPS dams. 1993 Biological Opinion, *supra* note 50, at 46, 48, 51 (table 7).

301. 1993 BIOLOGICAL OPINION, *supra* note 50, at 56, 64, NMFS used three tests to calculate the probabilities of achieving a desired spring/summer chinook goal in 2008: the System Planning

factor into its jeopardy decision certain biological risks—the "extinction vortex" and "demographic risk"—unique to very small species populations.³⁰²

C. The Arguments

The Idaho Department of Fish and Game (IDFG) challenged the 1993 biological opinion, arguing that it violated the ESA because NMFS had failed to consider all scientific information, including the "low case" test results, the extinction vortex and demographic risk.³⁰³ IDFG also argued that a "no jeopardy" conclusion was unjustified because the FCRPS is responsible for the destruction of too many salmon.³⁰⁴ IDFG also argued that NMFS had arbitrarily and capriciously used the years 1986-90 as the base period against which future salmon survival would be measured.³⁰⁵

A coalition of DSLs and utility interests intervened in the case.³⁰⁶ They argued that (1) the existence of the dams could not be considered as a potential cause of jeopardy; and (2) NMFS was legally barred from finding jeopardy once the agency had concluded that survival of juvenile listed salmon would improve in 1993 over the

Model (SPM), developed by the Council; the Stochastic Life-Cycle Planning Model (SLCM), developed for BPA; and the Empirical Life-Cycle Model (ELCM), developed for state fish and wildlife agencies and tribes. In 17 of 18 results under low-, mid-, and high-range assumptions, the likelihood of continued decline for spring and summer Snake River chinook was greater than one-third. *Id.* at 18-20. NMFS also failed to consider corrected ELCM results, prepared several months prior to the release of the 1993 biological opinion, that demonstrated no scenario under which Snake River falls chinook would return to levels equivalent to the "base period" employed in the biological opinion's jeopardy analysis. Idaho Motion, *supra* note 292, at 19.

302. 1993 BIOLOGICAL OPINION, *supra* note 50. Attachment Appendix 1, at 13 ("[I]t appears that the target population size is large enough that no significant problems from inbreeding would be expected if the population behaved as a single, randomly mating unit"). NMFS had earlier expressed its view that adult salmon generally mate with fish from the same spawning stream and therefore that no significant likelihood of a particular stock acting as a single mating unit exists. See Idaho Motion, *supra* note 292, at 26 (quoting NMFS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, STATUS REVIEW FOR SNAKE RIVER SPRING/SUMMER CHINOOK SALMON 23-24 (1991) [hereinafter SPRING/SUMMER CHINOOK STATUS REVIEW]). These risks, called the "extinction vortex," include increased in-breeding between individual fish of the same run and random events such as drought or fire. *Id.* (citing SPRING/SUMMER CHINOOK STATUS REVIEW, *supra*, at 22).

303. The States of Oregon and Alaska joined Idaho in challenging the 1993 biological opinion. Several of the region's Indian tribes, including the Warm Springs Tribe, the Yakama Nation, the Nez Perce Tribe, and the Umatilla Tribe, participated as *amici* and generally supported the states' arguments. *Idaho Dep't of Fish & Game*, 850 F. Supp. at 890-91 & nn.10-11.

304. Idaho Motion, *supra* note 292, at 10-24.

305. *Idaho Dep't of Fish & Game*, 850 F. Supp. at 892-93.

306. *Id.* at 891.

West v Northwest, Vol. 14, No. 1, Winter 2008

chosen base period.³⁰⁷ The DSIs, as well as NMFS and the other federal defendants, also asserted that NMFS properly took into account qualitative judgments about the likely impacts of future regulatory and other activities that would reduce ecological impacts on listed salmon.³⁰⁸ In addition, the government and the DSIs maintained that the disputes over which test results to consider in crafting the biological opinion and the proper interpretation of the various test results were questions of scientific dispute beyond the reach of judicial review.³⁰⁹

D. The Marsh Decision

NMFS' struggle to avoid confronting the impacts of hydropower production on salmon produced a court ruling that should encourage the region's river users to find the consensus and commitment needed to reverse the decline of the runs. In March 1994, Judge Malcolm Marsh of the U.S. District Court for the District of Oregon ruled that NMFS' issuance of a "no jeopardy" opinion in 1993 violated the ESA and the APA. Just as the Ninth Circuit later invoked procedural flaws in the process to reject the Strategy for Salmon,³¹⁰ Judge Marsh rejected NMFS' 1993 biological opinion on FCRPS operations because NMFS had not adhered to procedural requirements mandated by those two laws.³¹¹

The court first ruled that NMFS improperly selected 1986-90 as the "base period," or period against which salmon survival would be measured, to determine whether population stability targets would be reached.³¹² NMFS had used this four year period without explanation of why the longer base period used in the 1992 biological opinion was no longer adequate.³¹³ Judge Marsh concluded that the base period selected did not accurately reflect average numbers of listed species in the region or reflect the region's ordinary annual rainfall and runoff.³¹⁴ The court also

307. See Joint Memorandum of DSIs, PPC & PNGC in Opposition to IDFG's Motion for Summary Judgment, *Pacific Northwest Generating Coop v. Brown*, 850 F. Supp. 886 (D. Id. 1994) (No. CIV 92-973-MA) (Feb. 9, 1994), at 15-18 [hereinafter DSI Memorandum].

308. Federal Defendants' Reply to IDFG on Summary Judgment, *Idaho Dep't of Fish & Game v. Nat'l marine Fisheries Serv.* (Mar. 11, 1994), at 7-20; DSI Memorandum, *supra* note 307, at 19-30.

309. *Id.*

310. See *supra* notes 137-138 and accompanying text.

311. *Idaho Dep't of Fish and Game*, 850 F. Supp. 886.

312. *Id.* at 892-93.

313. *Id.* at 893.

314. *Id.* at 893 & n.21. If years characterized by more rainfall and runoff were included in the base, then improvements in survival of salmon during years where runoff improves cannot with certainty be attributed to FCRPS operation improvements.

found reason to reject the biological opinion in NMFS' failure to consider the "low case" test results and "extinction vortex" risks.³¹⁵ The court also rejected the government's (and the DSIs') attempt to prevent NMFS from considering the impact of the dams' existence on salmon.³¹⁶ Judge Marsh found that the administrative record indicated that no effort had been made to distinguish between salmon mortality caused by dam existence and salmon mortality caused by dam operations.³¹⁷ Moreover, the court found that the relevance of the "environmental baseline" dispute was limited only to the question of consultation requirements, not to the permissible scope of alternatives to actions that would cause jeopardy.³¹⁸

Nor did the DSIs' other arguments fair well. Although the DSIs protested that NMFS lacked authority to require changes in FCRPS operations as a condition of a no jeopardy opinion,³¹⁹ the court refused to draw a bright line between preventing injury to the survival of listed salmon and increasing the likelihood of their survival.³²⁰ The court explained that Congress intended the focus of the ESA to remain on the needs of the listed species, as opposed to requiring NMFS actions to fall strictly in categories of permissible "alternatives," "measures," "conservation requirements," or "recovery plans."³²¹ In other words, the court declared that NMFS may require agencies to take mitigation actions with one goal in mind: jeopardy to the species.³²² Because NMFS concluded that measures to increase salmon survival are needed to reduce the likelihood of extinction, the court found that NMFS was within its discretion.³²³

Idaho Department of Fish & Game is important in two fundamental respects. First, Judge Marsh's decision will drive NMFS' handling of the consultation process on a revised 1994-98 biological opinion; and second, the decision is one of the first ESA cases in the nation to rule on the legality of a no jeopardy opinion.³²⁴ But the more lasting impact of the ruling may lie

315. *Id.* at 896-99.

316. *Id.* at 893-95. The DSIs and the federal government argued that 50 C.F.R. § 402.02 precluded NMFS from considering the fact of the dam's existence in determining whether the FCRPS jeopardized salmon.

317. *Id.* at 894.

318. *Id.*

319. DSI Memorandum, *supra* note 307, at 14.

320. *Idaho Dep't of Fish & Game*, 850 F. Supp. at 895 ("I expressly reject any attempt to impose bright-line definitions upon the hydropower system's 'existence' vs. 'operations' or the terms 'survival' vs. 'recovery'.").

321. *Id.* at 895.

322. *Id.* at 895-96.

323. *Id.* at 896.

324. But it is not the first. In *Conner v. Burford*, 836 F.2d 1521 (9th Cir. 1988), *cert. denied sub nom.*, *Sun Exploration & Prod. Co. v. Lujan*, 489 U.S. 1012 (1995), the court invalidated a

West ◊ Northwest, Vol. 14, No. 1, Winter 2008

in Judge Marsh's rejection of the government's argument that NMFS could not consider modifications to dam structures, as opposed to their operation, in determining whether agency action would jeopardize listed salmon stocks and in considering alternatives available for avoiding jeopardy.³²⁵ Moreover, although the decision does not immediately compel any specific changes in the FCRPS operations, Judge Marsh indicated that the court will not tolerate indefinitely the delays that have thus far blocked serious efforts to restore the salmon runs:

NMFS has clearly made an effort to create a rational, reasoned process for determining how the action agencies are doing in their efforts to save the listed salmon species. But the process is seriously, "significantly," flawed because it is too heavily geared towards a status quo that has allowed all forms of river activity to proceed in a deficit situation—that is, relatively small steps, minor improvements and adjustments—when the situation literally cries out for a major overhaul. Instead of looking for what *can* be done to protect the species from jeopardy, NMFS and the action agencies have narrowly focused [sic] their attention on what the establishment is capable of handling with minimal disruption.³²⁶

E. Implications of the Marsh Decision

Just as the Ninth Circuit did in *Northwest Resource Information Center*,³²⁷ Judge Marsh put NMFS and the federal dam operating agencies on notice that substantial

biological opinion that did not evaluate all of the phases of a proposed sale of oil and gas leases on two National Forests. In *Conservation Law Foundation v. Watt*, 560 F. Supp. 561 (D. Mass), *aff'd*, 715 F.2d 946 (5th Cir. 1983), the court rejected a biological opinion that failed to consider recent research results. For examples of decisions rejecting challenges to biological opinions, see, e.g., *Greenpeace Action v. Franklin*, 982 F.2d 1342 (9th Cir.), *amended*, 14 F.3d 1324 (9th Cir. 1992); *Village of False Pass v. Clark*, 733 F.2d 605 (9th Cir. 1984); *Friend of Endangered Species, Inc. v. Jantzen*, 589 F. Supp. 113 (N.D. Cal. 1984), *aff'd*, 760 F.2d 976 (9th Cir. 1985); *Swan View Coalition, Inc. v. Turner*, 824 F. Supp. 923 (D. Mont. 1992).

325. *Idaho Dep't of Fish & Game*, 850 F. Supp. at 894-95.

326. *Id.* at 900.

327. *Northwest Resource Info. Center v. Northwest Power Planning Council*, 35 F.3d 1371, 1395 (9th Cir. 1994) ("The Council's approach seems largely to have been from the premise that only small steps are possible, in light of entrenched river user claims of economic hardship. Rather than asserting its role as regional leader, the Council has assumed the role of consensus builder, sometimes sacrificing the Act's fish and wildlife goals for what is, in essence, the lowest common denominator acceptable to power interests and DSLs.").

changes from the river's status quo are required.³²⁸ That warning prompted NMFS to issue a jeopardy opinion for 1994-98.³²⁹ However, the 1994-98 biological opinion may represent only "[s]mall steps, minor adjustments and improvements," and accordingly may be subject to future ESA challenges.

Little improvement in the river's suitability for salmon has occurred since 1993, and Judge Marsh's decision required NMFS to consider pessimistic test results and demographic risks associated with the small populations of some of the basin's endangered salmon stocks. The court's expression of impatience with current conditions on the river suggests that NMFS must require more than marginally improved smolt survival in order to fulfill its statutory obligation to assure the "survival" and "recovery" of listed salmon runs.

The revised 1994-98 biological opinion is not, however, the only forum in which *Idaho Department of Fish & Game* will be noticed. NMFS' plan for recovering the listed salmon was also affected by the decision. Although the recovery team's recommendations, issued in October 1993,³³⁰ recognized the

328. Although the judgment in *Idaho Department of Fish & Game* was vacated by the Ninth Circuit on mootness grounds, the court hinted that it approves of Judge Marsh's warning. In *Northwest Resource Information Center*, Judge Tang's opinion for the court favorably discussed and quoted the language cited in the text. *Northwest Resource Info. Center*, 35 F.3d at 1390-91. The Ninth Circuit also concluded its opinion in that case with language quite similar in its meaning:

[T]he Council's approach seems largely to have been from the premise that only small steps are possible, in light of entrenched river user claims of economic hardship. Rather than asserting its role as a regional leader, the Council has assumed the role of consensus builder, sometimes sacrificing the Act's fish and wildlife goals for what is, in essence, the lowest common denominator acceptable to power interests and DSIs.

Id. at 1395. Moreover, in *Idaho Department of Fish & Game* the Ninth Circuit did not vacate or reverse Judge Marsh's opinion containing his criticism of NMFS' actions. Interestingly, the Council's current chairman has publicly warned that consensus on the merits of recovery measures is virtually impossible to achieve. See Angus Duncan, *Biology, Politics, and Salmon Recovery*, *WILD FISH* (Nov.-Dec. 1992) 4 ("There is no such creature as unanimous conclusive scientific opinion when it comes to divisive questions of how much water the fish need, what kind of travel times [fish need]...").

329. See *infra* notes 458-464 and accompanying text, NMFS first issued a 1994-98 biological opinion on FCRPS operations in March 1994 and again reached a "no jeopardy" opinion. See Blumm, *Columbia River Basin*, *supra* note 35, at 84. However, that biological opinion adopted a similar methodology as the 1993 biological opinion overturned in *Idaho Department of Fish & Game*. *Id.* Accordingly, in the aftermath of Judge Marsh's ruling, NMFS asked the parties to recommend mutually acceptable alternatives to be considered for incorporation into the amended 1994-98 Special Litigation Counsel, U.S. Department of Justice (Nov. 1, 1994).

330. SNAKE RIVER SALMON RECOVERY TEAM, DRAFT SNAKE RIVER SALMON RECOVERY PLAN RECOMMENDATIONS (1993), cited in Blumm, *Columbia river Basin*, *supra* note 35, 1t 86 [hereinafter DRAFT RECOVERY RECOMMENDATIONS].

West & Northwest, Vol. 14, No. 1, Winter 2008

importance of many of the measures long urged upon the Council by the fishery coalition,³³¹ NMFS' draft recovery plan did not ask for the needed fundamental changes in FCRPS operations. Instead, the draft recovery plan included only two major alternatives for increasing smolt survival through the FCRPS gauntlet: drawdown of several Snake River reservoirs to enhance flows,³³² and increased reliance on transportation of smolts past lower Snake and Columbia River dams.³³³

331. The recovery team recommended improved fish ladders for adult salmon, Draft Recovery Recommendations at XI-3; augmentation of flows during migration seasons, *id.* at VIII-6; reduction of salmon harvests, *id.* at IX-12; improvement of hatchery practices, *id.* at VI-ii, VII-ii; restoration of spawning and rearing habitat, *see generally id.* ch. V; and control of salmon predators, *see generally id.* ch. X; Blumm, *Columbia River Basin*, *supra* note 35, at 87.

332. *See* STRATEGY FOR SALMON, *supra* note 114, at 30-32. The proposal to drawdown several Snake River reservoirs during the spring as a device to improve flows and juvenile passage is controversial. Opponents argue that lowering reservoirs will not speed juvenile migration or reduce smolt mortality, and navigation and agricultural interests are concerned that drawdowns would have a seriously adverse effect on use of the river for shipping and irrigation. In addition, drawdowns would cause a decline in hydropower production, which in turn would cause a reduction in BPA's revenues derived from the sale of surplus power to California utilities. Blumm, *Columbia River Basin*, *supra* note 35, at 103. On the other hand, the agriculture community's share of drawdown consequences could be reduced by modifying the pumps that remove irrigation water from the reservoirs and the adverse effects on navigation would be limited to a two-month period each spring, during which time only five percent of the tonnage shipped downriver would be affected. Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 688 n.123. The Corps tested the drawdown proposal by lowering Lower Granite and Little Goose reservoirs in March 1992. Initial results indicate that the economic consequences of lowering reservoirs in the region are not as high as was previously feared. Andrew S. Noonan, *Just Water Over the Dam? A Look at the Endangered Species Act and the Impact of Hydroelectric Facilities on the Anadromous Fish Runs of the Northwest*, 28 IDAHO L. REV. 781, 799 (1992). Businesses and highways suffered damages of approximately \$1.1 million during a 1992 test. *See House Panel Approves Aid for River Drawdown Damage*, Oregonian, June 11, 1992, at B6. A more recent analysis concluded that drawdown of Lower Granite, Little Goose, Little Monumental, and Ice Harbor dams to spillway crest (approximately 33 feet) may cost approximately \$9.5 million per year, plus approximately \$259 million for construction costs. Daniel D. Huppert & David L. Fluharty, *ECONOMICS OF SNAKE RIVER SALMON RECOVERY: A REPORT TO THE NATIONAL MARINE FISHERIES SERVICE 3-71* (Feb. 1995).

333. The recovery team advocated increased reliance on transportation on the basis of social and economic factors. DRAFT RECOVERY RECOMMENDATIONS, *supra* note 330, at VIII-3 (explaining that the team used social factors for want of sufficient information to make a wholly biology-based decision). Unfortunately, state, federal, and tribal fishery scientists generally oppose continued transportation because its benefits for fish are unclear and because there is some evidence that transported fish suffer adverse stress effects upon release back into the river. Blumm, *supra* note 35, at 104-05. The Corps' transportation program has been in full operation since 1981. Juvenile salmon are captured above upper Snake River dams and are transported by barge or truck to the lower

Judge Marsh's ruling also aggrandizes NMFS' recent designation of critical habitat for Snake River sockeye and chinook.³³⁴ For Snake River sockeye, NMFS designated the Columbia and Snake Rivers, historical spawning lakes, and certain inlet creeks.³³⁵ For chinook, NMFS designated the Columbia and Snake Rivers and all tributaries presently or historically accessible to the stock except the Clearwater River in Idaho.³³⁶ In addition, as NMFS lists more salmon stocks,³³⁷ additional critical habitat designations are likely and each of those may affect FCRPS operations.³³⁸

Columbia below Bonneville Dam, where they are released. For a thorough discussion of the Corps' collection and transportation program, see U.S. ARMY CORPS OF ENGINEERS, ET AL., INTERIM COLUMBIA AND SNAKE RIVERS FLOW IMPROVEMENT MEASURES FOR SALMON DRAFT AND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT 244 (1992). Federal water managers favor transportation because, unlike modifications to dam operations, it does not require a decline in hydropower production. Blumm, *Columbia River Basin*, *supra* note 35, at 104. One might find it ironic that the Corps' transportation program often results in a situation in which what is afforded the use of the river is grain while fish are forced to use I-84. Daniel J. Rohlf, *Legal Issues Shaping Salmon's Future*, 25 ENVTL. L. 415, 416 (1995).

334. See 58 Fed. Reg. 68,543 (1993). NMFS must designate critical habitat in order to effectuate the ESA's goal of conserving ecosystems. See 16 U.S.C. § 1533(a)(3). "Critical habitat" is loosely defined as areas with physical and biological features that are essential to the conservation of a given species and that require special management considerations or protection. 16 U.S.C. § 1532(5)(A); 50 C.F.R. § 424.12.

335. 58 Fed. Reg. at 68,543.

336. *Id.*

337. See *supra* notes 30, 87, 91. Although the language of the statute leaves the question open to some doubt, NMFS may be prohibited from listing additional imperiled salmon stocks under the ESA until October 1, 1995 by the Emergency Supplemental Appropriations and Rescissions for the Department of Defense to Preserve and Enhance Military Readiness Act of 1995, Pub. L. No. 104-6, Tit. II, ch. IV, 109 Stat. 73, 86 (1995) (prohibiting Fish and Wildlife Service from listing species under the ESA after Sept. 30, 1995).

338. Federal dam operators are also preparing a plan for FCRPS operations. See UNITED STATES DEPARTMENT OF ENERGY, BONNEVILLE POWER ADMINISTRATION, COLUMBIA RIVER SYSTEM OPERATIONS REVIEW: DRAFT ENVIRONMENTAL IMPACT STATEMENT (1994) [hereinafter SOR]. The SOR is intended to help BPA, the Corps, and the Bureau coordinate management of the hydropower system and was commenced in order to facilitate renegotiation of the Pacific Northwest Coordinating Agreement (PNCA) and the Canadian Entitlement Allocation Agreement (CEAA). UNITED STATES DEPARTMENT OF ENERGY, BONNEVILLE POWER ADMINISTRATION, MIGHTY COLUMBIA: DESTINY OF A GIANT, DRAFT ENVIRONMENTAL IMPACT STATEMENT (Portland, OR., July 1994), at 1. The three federal dam operators have announced that SOR will select a management plan for the FCRPS that accommodates salmon, *id.*, but the SOR does not include a preferred management alternative. The Columbia River Alliance, a coalition of utilities and navigation, irrigation, and reservoir recreation interests, have asked the federal dam operators to choose a management plan that would increase transportation of juvenile salmon and reduce the quantity of water dedicated to fish flows. See *Recover 1: An Option for Salmon and Us, Alliance Backgrounder* (Columbia River Alliance for Fish, Commerce, and Communities, Portland, OR, Sept. 1994). The management option selected

West & Northwest, Vol. 14, No. 1, Winter 2008

While acknowledging that adequate river velocity is an essential component of migratory salmon habitat, neither critical habitat designation includes designated flow levels.³³⁹ In addition, consultation should, but does not, address temperature changes and sediment deposits, which negatively affect salmon spawning and rearing habitat.³⁴⁰

Idaho Department of Fish & Game also reduces the Council's salmon restoration efforts to a less important status in the short term. The listing of salmon under the ESA empowered NMFS to require "reasonable and prudent alternatives" as a condition of a "no jeopardy" opinion. The agency's recovery plan is therefore likely to become the most significant region-wide effort for salmon recovery. However, it is not clear that the recovery plan binds the Corps, the Bureau, BPA and FERC anymore than does the Program.³⁴¹ However, these federal agencies are likely to

during the SOR process is likely, however, to be consistent with NMFS' recovery plan for listed salmon stocks. PNCA is a contract between the region's utilities and federal dam operators that governs the power production of the region's hydroelectric system. PNCA, signed in 1964, is due to expire in 1003. Negotiations to renew it commenced in 1991. CEAA, which is no longer in effect, was a U.S.-Canada agreement signed after ratification of the 1964 Columbia River Treaty that allowed a portion of hydropower generated by Canadian dams to be assigned to U.S. utilities. A new agreement is necessary to allocate responsibility for returning hydrosystem-generated power to Canada.

339. Blumm, *Columbia River Salmon*, *supra* note 35, at 118.

340. In an unrelated case, the Ninth Circuit enjoined ongoing Forest Service timber sale, range, and road-building activities in the Wallowa-Whitman and Umatilla National Forests until the Forest Service initiated consultation under ESA § 7 because such activity may adversely affect listed Snake River chinook. *Pacific Rivers Council v. Thomas*, 30 F.3d 1050 (9th Cir. 1994), *cert. denied*, 115 S. Ct. 1793 (1995).

341. NMFS is required by the ESA to develop plans for the "conservation and survival" of the listed salmon stocks. 16 U.S.C. § 1533(f)(1). The plan, prepared by a team of scientists employed by federal and state governments and private employers, must contain (1) site-specific management actions; (2) objective criteria against which progress towards recovery can be measured; and (3) estimates of the amount of time and resources needed to achieve plan goals. 16 U.S.C. § 1533(f)(1)(B). BPA, the Corps, and the Bureau may not be obligated to comply with the salmon recovery plan. *See Pyramid Lake Paiute Tribe of Indians v. United States Dep't of Navy*, 898 F.2d 1410, 1481 (9th Cir. 1990) (Department of Navy has discretion to decide whether to implement conservation measures recommended by U.S. Fish and Wildlife Service as part of a recovery plan for listed fish species); ROHLF, *ESA*, *supra* note 88, at 28 ("[T]he legal weight and enforceability of recovery plans are not well-defined."). *But see Resources Ltd., Inc. v. Robertson*, 35 F.3d 1300, 1304 n.3 (9th Cir. 1994) (finding Forest Service adoption of plan that failed to incorporate grizzly bear recovery guidelines arbitrary and capricious where Fish and Wildlife Service issued "no jeopardy" finding on condition that grizzly plan is followed). Of course, since a recovery plan is aimed at preventing jeopardy to a listed species, failure to abide by it could result in a violation of the ESA. *See* 16 U.S.C. § 1536(a)(1), (2). The Fish and Wildlife Service apparently believes that recovery plans serve as guidance to federal agencies. Robert Meltz, *Where the Wild Things Are: The Endangered Species Act and Private*

comply with the recovery plan because they have participated in its preparation, and the Clinton Administration has stated that federal agencies will speak with one voice on natural resource issues.³⁴² The Northwest Power Act does not permit the Council to focus exclusively on recovery, as that term is defined under the ESA. The Council must pursue harvestable runs, not simply the removal of endangered stocks from the endangered species list, and therefore the requirements of the Program exceed the requirements imposed by NMFS as part of the 1994-98 biological opinion and recovery plan.³⁴³

The Corps, BPA or the Bureau could conceivably seek an exemption from ESA section 7 requirements if the impact of salmon listings and NMFS' biological opinion and recovery plan are thought too damaging to the FCRPS.³⁴⁴ The Endangered Species Committee³⁴⁵ could grant an exemption for the FCRPS only if (1) there is no reasonable and prudent alternatives to continuing the status quo, (2) the benefits of the FCRPS clearly outweigh the benefits of agency actions taken pursuant to the ESA, and (3) unchanged operation of the FCRPS is of local or national importance.³⁴⁶ However, invocation of the ESA exemption process does not appear to be a likely outcome of the Columbia River Basin's salmon crisis. First, such exemptions are rarely

Property, 24 ENVTL. L. 369, 377 n.48 (1994) (citing U.S. Dept of Justice, Memorandum in Support of Federal Defendants' Motion to Dismiss, submitted in *Hawaii Audubon Soc'y v. Lujan*, No. 91-00191 (D. Haw., filed Apr. 4, 1991) ("FWS consistently has taken the position that recovery plans serve as guidance documents . . . , but are not in themselves specific proposals to undertake federal agency actions.") *See also* Endangered and Threatened Species Listing and Recovery Priority Guidelines, 48 Fed. Reg. 43,098, 43,103 (1983) (describing recovery plans as "guiding documents"). BPA, the Corps, the Bureau and FERC may also be able to avoid implementing the Program. *See supra* notes 265-266 and accompanying text.

342. *Remarks Announcing the Forest Conservation Plan*, WEEKLY COMP. OF PRES. DOC. 1211 (June 10-July 6, 1993) (explaining that government "owe[s] the people of the Pacific Northwest at least a unified Federal position that would break the logjam. . .").

343. *Compare* 16 U.S.C. §§ 839b(h)(1)(A) (requiring Program to "protect, mitigate, and enhance" fish and wildlife); 839b(h)(6)(E) (requiring increased flows to "improve" "survival," "protection" and "migration" of salmon) *with* 16 U.S.C. §§ 1533(f) (requiring recovery plan only to "promote the conservation and recovery" of listed species, 1532(3)) (defining "conserve" and "conservation" as "methods and procedures which are necessary to bring [listed] species to the point at which [the EPA's] protections are no longer necessary").

344. *See Noonan, Just Water Over the Dam?*, *supra* note 332, at 788; Blumm, *Columbia River Basin*, *supra* note 35, at 120-21.

345. The Endangered Species Committee is a seven-member, Cabinet-level committee empowered to determine that an agency action may go forward even if it could cause the extinction of a listed species. *See* 16 U.S.C. § 1536(e). The Committee must hold hearings on requested exemptions, and the exemption will not be granted if it finds that the exemption applicant or agency made any irretrievable commitment of resources before the exemption was granted. 16 U.S.C. § 1536(g)(4), (h)(1)(A)(iv).

346. *See* 16 U.S.C. § 1536(h)(1)(A).

West & Northwest, Vol. 14, No. 1, Winter 2008

granted;³⁴⁷ second, the criteria may prove difficult to meet, since drawdowns, increased flows and other salmon mitigation measures have either been attempted or are the subject of studies that show them to be economically feasible; and third, the region almost certainly lacks the degree of political consensus required to encourage the Committee to grant such an exemption.³⁴⁸

Nevertheless, NMFS and the federal dam operating agencies may not appropriately respond to Judge Marsh's warning that the imminent disappearance of the region's wild salmon runs requires more than tinkering with the current state of the river. Policy makers in Washington, D.C. may decide that the economic costs of rebuilding the stocks justify sacrificing the salmon.³⁴⁹ Even if Congress does not intervene, and the Clinton

347. Only two exceptions from a jeopardy finding have been granted since Congress created the Endangered Species Committee in 1978. See Blumm, *Columbia River Basin*, *supra* note 35, at 121 & n.510 (discussing exemption adopted for Nebraska whooping cranes, granted on condition that comprehensive mitigation plan be adopted, and exemption granted the U.S. Bureau of Land Management in 1992 for certain timber sales in northern spotted owl habitat). The exemption granted BLM never took effect. BLM withdrew its application to the Committee after the Ninth Circuit found reason to believe that the White House attempted to exert illegal influence over the Committee and the Clinton Administration too office. See *Portland Audubon Soc'y v. Endangered Species Comm.*, 984 F.2d 1534, 1540 (9th Cir. 1993).

348. Of course, such consensus is not necessary for the Endangered Species Committee to act. The fact that Oregon's representative on the Committee voted against the BLM exemption indicates that the citizens of the Pacific Northwest did not clearly support continued unsustainable timber harvesting in northern spotted owl habitat. In any event, however, the Clinton Administration is apparently committed to preventing the sort of interagency dispute that caused the spotted owl crisis to reach the Committee. See Spigal, *supra* note 186, at 413; Joan Laatz, *The New Order: The Endangered Species Act and Political Reality Clash as New Leaders Look to Save Salmon*, OREGONIAN, Nov. 29, 1994, at A1, A7. Moreover, these factors might make it difficult to convince Congress to grant the FCRPS a legislative exemption from the ESA, should the federal dam operating agencies or private utility, irrigation, navigation, or aluminum interests seek one. Of course, if BPA is successful in convincing Congress and the citizens of the region that the costs of recovering the salmon runs threaten its financial viability or the reliability of the hydropower system, then increased political consensus to avoid those costs could develop. See Spigal, *supra* note 186, at 414.

349. One prominent Pacific Northwest politician has indicated that he believes the costs of recovery salmon are high enough to justify allowing the listed runs to go extinct. See Scott Sonner, *Gorton: Salmon Might Have to Go*, SEATTLE TIMES, Jan. 20, 1995, at B1. Vice President Al Gore and NMFS' fisheries manager for the Pacific Northwest have publicly promised that the Clinton Administration will not adopt this attitude. See Jessica Maxwell, *How to Save a Salmon*, AUDUBON 28, 31, July-Aug. 1994 (quoting Vice President Gore's comments at the Northwest Watershed Restoration/Partnership Conference, Tacoma, WA, Feb. 16-17, 1994) (stating that Administration intends to "get the jump on restoring the great salmon runs that are the heart and soul of the Northwest."); Bill Mackenzie & Joan Laatz, *Planners Weigh Cheap Power, Salmon*, OREGONIAN, Dec. 7,

Administration maintains a public commitment to restoring the runs, BPA, the Corps or the Bureau may nevertheless delay or otherwise resist taking actions mandated by NMFS. Under such circumstances, Judge Marsh may find himself asked to become the Pacific Northwest's rivermaster.

Judge Marsh could find precedent for acting in such a capacity. In the past other federal judges in the region have been forced to exert substantial control over natural resource allocation where government agencies have refused to obey laws limiting their management discretion. During the 1970s, the federal courts began acting as regional fisheries manager after decades of state fish and wildlife agency interference with tribal treaty fishing rights.³⁵⁰ Similarly, during recent years federal judges in Oregon and Washington have sharply restricted timber harvesting on the region's national forests as a consequence of federal foresters' violations of laws protecting wildlife.³⁵¹

1994, at C1, C7 (quoting NMFS regional director Will Stelle) ("The administration is committed to . . . restoring the health of the entire basin and the financial health of the energy system itself."). Of course, the Republican takeover of Congress in January 1995 may result in increased pressure in the Administration to avoid expending significant federal resources on salmon restoration. Cf. Joan Laatz, *The New Order*, *supra* note 348, at A1, A7 (noting that NMFS and Fish and Wildlife Service are likely to experience budget cuts during 104th Congress and that Republican majority in Congress is likely to weaken the Endangered Species Act); Joan Laatz, *Natural Resources Face Cloudy Future in Congress*, OREGONIAN, Dec. 15, 1994, at A1, A16 (noting that region's industrial leaders are planning to ask Congress to force NMFS and federal dam operating agencies to weigh costs of salmon restoration measures against their benefits). Cf. John H. Cushman, Jr., *Timber! A New Idea is Crashing*, N.Y. Times, Jan. 22, 1995, at E5 (reporting congressional Republicans' hostility to ecosystem management approach for public natural resources). Moreover, the four-state Pacific Northwest region lost many Congressmen friendly to salmon restoration efforts in the 1994 elections. See Laatz, *The New Order*, *supra* at A7 (noting defeat of five Washington state incumbent Representatives considered "salmon-friendly"). Thus, political support within the region for costly restoration is now significantly weaker than it was when the Vice President committed the Administration to unified efforts to rebuild the runs.

350. See *United States v. Washington*, 506 F. Supp. 187 (W.D. Wash. 1980), *aff'd in part, rev'd in part*, 694 F.2d 1374 (9th Cir. 1982), *aff'd in part, vacated in part en banc*, 759 F.2d 1353 (9th Cir.), *cert. denied*, 474 U.S. 994 (1985); *United States v. Washington*, 459 F. Supp. 1020 (W.D. Wash. 1978), *aff'd sub nom.*, *Puget Sound Gillnetters Ass'n v. United States* Dist. Court, 573, F.2d 1123 (9th Cir. 1978), *aff'd in part, vacated in part, and remanded sub nom.*, *Washington v. Washington State Commercial Passenger Fishing Vessel Ass'n*, 443 U.S. 658 (1979); *United States v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974), *aff'd*, 520 F.2d 676 (9th Cir. 1975), *cert. denied*, 423 U.S. 1086 (1976); *Sohappy v. Smith*, 302 F. Supp. 899 (D. Or. 1969), *aff'd as modified sub nom.*, *United States v. Oregon*, 529 F.2d 570 (9th Cir. 1976).

351. See Allison C. Flournoy, *Beyond the "Spotted Owl Problem": Learning From the Old Growth Controversy*, 17 HARV. ENVTL. L. REV. 261, 284-300 (1993) (outlining history of ancient forest management in Pacific Northwest); Victor M. Sher, *Travels With Strix: The Spotted Owl's Journey Through the Federal Courts*, 14 PUB. LAND L. REV. 41 (1993).

West ◊ Northwest, Vol. 14, No. 1, Winter 2008

Nevertheless, those who seek judicial control of the river may be disappointed. The challenges to a judge who assumes the role of Columbia River system manager would be much greater than the problems confronted by the judges in the treaty fishing rights and forest management cases. In the treaty fishing and forest management cases the plaintiffs generally sought an order dividing the natural resources available or injunctions to maintain the status quo. A judge who chooses to manage the economic uses of the Columbia River system would face a much more difficult task, since the manipulation of a river to produce power, allow irrigation and navigation, and protect the fish and wildlife that depend on it, requires day-to-day, and sometimes even hour-to-hour, changes in dam operations.³⁵² Because judges are ordinarily reluctant to undertake tasks inconsistent with the traditional role of courts in our society, Judge Marsh may resist any invitations to become the judicial overseer of the river.³⁵³ Moreover, the public may suffer unfortunate consequences if Judge Marsh, in spite of the complexity of the task, eventually assumes a more significant role in controlling the operations of the hydropower system. Concerned citizens would no longer have the opportunity to influence decisions affecting a significant regional economic asset nor participate in the public dialogue about how best to save an important natural and cultural resource. Thus, neither a decision to incur the costs necessary to save the salmon runs, nor one that society's interests are best served by sacrificing them, would rest on a foundation of public awareness and support.

VII. Responses to Northwest Resource Information Center and Idaho Department of Fish & Game: Little Cause for Hope, Necessary Steps Towards Recovery Not Forthcoming

A. The Council's December 1994 Program Amendments and Their Aftermath

During the first decade of the Program, the Council often rejected, on the basis of its own scientific views and in the interests of consensus, recommendations

352. See Michael C. Blumm, *Columbia Basin Salmon and the Courts: Reviving the Parity Promise*, 25 *Env'tl. L.* 353, 362 (1995) ("Courts have neither the institutional competency nor the interest to manage this system that has become such a headache for so many.").

353. For this reason, Idaho did not seek an injunction in *Idaho Department of Fish & Game, Will Whelan, Idaho's Strategy in Idaho Department of Fish & Game v. National Marine Fisheries Serv.*, 25 *Env'tl. L.* 401, 404 (1995). Moreover, Judge Marsh himself has previously demonstrated an unwillingness to insert his court into controversies over the scientific merit of particular salmon conservation activities. See *Northwest Resource Info. Center, Inc., v. Nat'l Marine Fisheries Serv.*, No. 93-870-MA (slip op.) (D. Or. 1993) (denying plaintiff's request for injunction halting transportation of juvenile salmon), *aff'd in part and rev'd in part on other grounds*, 56 F.3d 1060 (9th Cir. 1995).

aimed at restoring sustainable and harvestable runs to the Basin's rivers and streams.³⁵⁴ But *Northwest Resource Information Center* ensured that the Council could not continue compromising the biological needs of the region's salmon. The Ninth Circuit emphasized that the region must begin the process of returning river conditions to the rivers. *Northwest Resource Information Center* therefore closed the door on the accommodation of the utilities' and DSIs' interests and delaying tactics the Council used for so long to avoid confronting the imminent disappearance of one of the Pacific Northwest's defining characteristics.³⁵⁵ The public waited only thirteen weeks for the Council's response to the Strategy for Salmon's demise.³⁵⁶ When it came, there could be no doubt that the Council heard the judges' message. On December 14, 1994, the Council approved bold new measures to restore the Columbia River Basin's disappearing salmon runs.³⁵⁷

In contrast to the Strategy for Salmon, the 1994 program amendments reflect the urgent necessity for prompt and aggressive actions to stave off the extinction of listed salmon stocks.³⁵⁸ Finally, the Council accepted that increased water velocity may be essential if mortality during passage is to be significantly decreased, and acted to assure adequate flows in the lower Columbia and Snake Rivers. Thus, the Council demonstrated that it takes seriously the Ninth Circuit's warnings that the judgments of fish and wildlife managers are entitled to significant deference and that sound biological objectives, based on knowledge existing today, must be established.

I. Written Explanation

The Council responded to numerous comments submitted when the draft 1994 amendments were released and included in the amended

354. See *supra* notes 61-62, 72-73, 82, 108-121 and accompanying text.

355. But Cf. Volkman, *supra* note 239 (comments on *Northwest Resource Information Center* by Council's general counsel) (stating belief that the Ninth Circuit's opinion precludes the Council from doubting the biological justifications for recommendations submitted by fish and wildlife agencies and tribes).

356. *Northwest Resource Information Center* was decided on September 9, 1994. The Council adopted amendments to the Program on December 15, 1994.

357. Press reaction to the Council's December 1994 Program amendments noted the unprecedented nature of the Council's actions. See, e.g., *Northwest Power Council Unveils Sweeping Strategy*, AMERICAN POLITICAL NETWORK: GREENWIRE, Dec. 15, 1994 (available on Westlaw, APN-GR Database) (characterizing 1994 Program amendments as the beginning of "the biggest endangered species bailout in history" and as a "bold plan"); Joan Laatz, *Power Council OK's Plan to Save Salmon*, OREGONIAN, Dec. 15, 1994, at A1 (labeling Program amendments "aggressive").

358. See NORTHWEST POWER PLANNING COUNCIL, 1994 COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM 1-1 (1994) [hereinafter 1994 PROGRAM] (acknowledging that previous efforts to restore salmon runs "have not been enough to rescue some species"); 1-2 (urging region to "redouble the efforts" to protect salmon).

West & Northwest, Vol. 14, No. 1, Winter 2008

Program itself a detailed discussion of the rationale supporting adopted measures. The Council provided a useful summary of the current state of the scientific inquiry into the controversial question whether juvenile salmon survival is directly related to high water velocity.³⁵⁹ Similarly, the Council treated the question of whether smolt mortality is significantly decreased through the use of barge and truck transportation with a broad overview of the current state of scientific support for that Program.³⁶⁰ The Council's findings on Program recommendations were extensive and reflect substantially more deference to the expertise of fish and wildlife agencies and tribes than was shown during the 1991-92 amendment process. On the central issues of flows, smolt travel times and hydroelectric project operations constraints, the Council largely adopted the recommendations of fish and wildlife agencies and tribes.³⁶¹

2. Biological Objectives

After providing a detailed analysis of the Northwest Power Act's biological objective requirements, the Council established biologically-based goals for the development and operation of the hydroelectric system. In determining the extent of the biological objectives required by the Act, the Council wisely dodged an attempt by power interests to slow the amendment process and force the Council to shift restoration responsibility away from the hydropower system. Several power interests argued that the Act required a comprehensive set of quantifiable objectives for the entire salmon life-cycle.³⁶² While disagreeing with the argument that biological objectives must relate to all actions that cause salmon to die, the Council acknowledged the central role of biological objectives in comparing the cost of alternative measures³⁶³ and emphasized that such objectives must be "sound," meaning "supported by data and information," and "reflect the best available scientific knowledge."³⁶⁴ The Council took pains to point out that Congress considered biological objectives especially important with respect to flows, specifically noting that the Act requires flow decisions to be "based on biology and not other considerations."³⁶⁵

The Council reaffirmed a short-term Program goal, set several years ago, of doubling the runs in the interim and a long-term focus on protecting, mitigating and enhancing fish and wildlife as much as possible while also

359. 1994 PROGRAM, *supra* note 358, at 5-9 to 5-12.

360. *Id.* at 5-12 to 5-13.

361. *See infra* notes 374-405 and accompanying text.

362. 1994 PROGRAM, *supra* note 358, at 15-16.

363. *Id.* at 15-18.

364. *Id.*

365. *Id.* at 15-19.

West & Northwest, Vol. 14, No. 1, Winter 2008

avoiding the loss of biological diversity.³⁶⁶ To accomplish these goals, the 1994 amendments establish four system-wide sub-goals: (1) halt declines in the runs and rebuild populations to sustainable levels by 2000;³⁶⁷ (2) halt declines in particular salmon runs and "rebuild [the] population by 2030 to a level that will support commercial and sports harvest" and contribute to the doubling of all salmon in the Basin;³⁶⁸ (3) rebuild by 2194 all populations to a level that goes beyond the first two sub-goals and allows the protection, mitigation and enhancement of all fish and wildlife affected by the hydropower system;³⁶⁹ and (4) accomplish the populations without loss of biological diversity.³⁷⁰

The Council further broke down the sub-goals into a series of planning principles aimed at restoring the long-term health of the runs. These include: (1) give priority to actions that aim to rebuild the weakest stocks, particularly the listed Snake River runs; (2) generally avoid Program activities that create an "appreciable risk" to biological diversity; (3) approach habitat and production activities "from a total-water-shed perspective," which means that such activities should include comprehensive actions and local involvement; (4) provide harvest opportunities in tributaries and weak-stock areas to meet treaty obligations; (5) give priority to actions that examine "critical uncertainties" or "test important hypotheses" about salmon; and (6) avoid construction of new hatcheries "unless it is clear that the need for fish cannot be met with existing facilities or a new facility would be a better way to achieve the [P]rogram's goals."³⁷¹

366. *Id.* at 4-4. The Council accepted with modifications CRITFC's recommendation that all salmon losses caused by the hydroelectric system be fully mitigated. The Council believed its mandate to maintain an "adequate, efficient, economical and reliable power supply" might be compromised if it established a focus solely on fish restoration. The Council believed this modification was not inconsistent with CRITFC's recommendations because its Program goals include a focus on avoiding any further loss of biological diversity. *Id.* at 15-42. The doubling goal applies to the whole Basin, not particular runs. *Id.* § 4.1A, at 4-5.

367. *Id.* at 4-4.

368. *Id.* at 4-4.

369. *Id.*

370. *Id.* The regulation goals are not set as numeric targets because the Council was concerned that doing so would lead to insufficient protection against adverse genetic impacts. *Id.* 4-4, 4-5.

371. *Id.* at 4-5 to 4-6. The Council noted that its focus on weak stocks should receive the bulk of the funds for the Program for at least five years, but also declared that listed runs are not the only stocks to be considered weak and therefore subject to priority rebuilding efforts. The Council acknowledged that many imperiled runs are not listed under the ESA and pointed out that failure to focus on them immediately would surely lead to more listed runs. *Id.* at 4-6. But the Council also emphasized the importance of investing toward the goal of restored tribal harvests: "Upriver fishers are entitled to salmon populations that are more than museum specimens." *Id.* at 4-6.

West v Northwest, Vol. 14, No. 1, Winter 2008

To achieve the Program goals and rebuilding targets, the Council set one central biological objective: increased water velocity.³⁷² After thirteen years of failing to confront or even frankly to acknowledge the conflict between adequate fish flows and power generation, the Council finally agreed with the opinion of fish and wildlife agencies and tribes that increased water velocity was the most reliable method for improving smolt survival.³⁷³

3. Other Provisions

The Council acknowledged that the Water Budget, as modified by the Strategy for Salmon, would fail to provide the flows needed to rebuild the Snake River stocks.³⁷⁴ The Council also admitted that it did not fully understand the exact relationship between flows, water velocity and salmon survival.³⁷⁵ But the Council recognized that the salmon runs are affected by numerous human and natural impacts and that the runs had thrived before large-scale hydroelectric development because they had not been subjected to the lethal impacts of dams and slackwater reservoirs.³⁷⁶ Therefore, the Council took seriously the Northwest Power Act's command *not* to wait for scientific certainty before acting.³⁷⁷ To achieve juvenile travel time objectives, the Council ordered three reservoirs to be lowered over the next five years and committed itself to decide whether to drawdown two others.³⁷⁸

372. *Id.* at 5-9 to 5-17.

373. *Id.* at 5-9 ("The Council accepts that there is a relationship between flow, water velocity, fish travel time and survival such that increasing water velocity increases the survival of salmon and steelhead from the onset of active downstream migration to adult spawner."); *id.* at 5-10 (The "biologically important" aspect of the relationship between flow, water velocity, and transportation "is water velocity.").

374. *Id.* at 5-2 ("Analyses conducted by the Council indicate that, absent additional action and a substantial change in ocean conditions, salmon populations in the Snake Basin will not rebuild and will, in all likelihood, go extinct.").

375. *Id.* at 5-3, 5-10.

376. *Id.* at 5-2 ("The salmon runs were able to survive poor natural conditions in the past and would be able to survive in today's conditions but for a wide variety of human-caused sources of mortality.").

377. *See id.* at 2-5 ("Congress directed the Council . . . not to await scientific certainty prior to action."). The Council also established a research agenda aimed at clarifying the effects of increased flows on smolt survival, announcing that the relationship requires "the highest priority in the region's research efforts." *Id.* at 5-13. To accomplish the needed research, the Council called for the establishment of a technical working group to be organized by an independent Scientific Group. *Id.* § 5.0F1, at 5-14.

378. *Id.* at 5-14 to 5-32. The affordable economic consequences of using drawdowns to increase water velocity in the lower Columbia and lower Snake Rivers apparently helped convince the Council to include a reservoir drawdown plan in the Program amendments issued in

West & Northwest, Vol. 14, No. 1, Winter 2008

On the lower Snake River, the amendments call for Lower Granite reservoir to be lowered to an elevation of 710 feet during the spring of 1995³⁷⁹ and an additional twenty feet commencing during the spring of 1996.³⁸⁰ Little Goose reservoir is to be drawn down to "near spillway crest" during the two spring months beginning in 1999.³⁸¹ Based on the results of the Lower Granite and Little Goose drawdowns, the Council will decide, before 2002, whether to draw down the reservoirs behind Lower Monumental and Ice Harbor Dams to spillway or natural river levels.³⁸²

The objective of the Snake River drawdowns is to achieve a water velocity of 140 kcfs.³⁸³ That velocity, which would be a substantial improvement over that achievable under the Strategy for Salmon, is to be attained by establishing a minimum monthly average flow of 85 kcfs.³⁸⁴ However, drawdowns do not make more water available for increased flows. Accordingly, the Council issued a number of directives aimed at acquiring additional water for Program implementation. First, the Council required BPA and the dam operating agencies to shift storage water between reservoirs in low-flow years.³⁸⁵ To make such shifts possible, the Council directed that Dworshak reservoir be raised as close to its power-production

December 1994. *See infra* notes 389-393, 403 and accompanying text. The Council decided to delay the planned drawdowns in order to allow adequate time for modifying salmon passage facilities at Lower Granite and Little Goose Dams and irrigation pumps at John Day reservoir, as well as to permit the study of how best to modify John Day Dam to allow continued irrigation and navigation and minimize drawdown impacts on power production and flood control. *Id.*

379. *Id.* § 5.3A.1, at 5-25.

380. *Id.* § 5.3B.2(1), at 5-26.

381. *Id.* § 5.3B.2(2), at 5-26.

382. *Id.* § 5.3B.9, at 5-27. To effectively monitor the effects of the Snake River drawdowns, the Council established an oversight committee that will include representatives of BPA, the dam operating agencies, federal and state fish and wildlife agencies and treaty tribes. The committee is also assigned responsibility for overseeing implementation of the drawdown program. *Id.* § 5.3B.14, at 5-27.

383. *Id.* at 5-24.

384. *Id.* at 5-20. The velocity target applies between April 10 and June 20 in *all* water years. *Id.* Thus, the 1994 amendments should avoid the risk that inadequate fish flows will be available in low water years. Between June 21 and July 31, dam operators are to maintain a monthly average flow equivalent to 50 kcfs. *Id.* These flow standards had been recommended by the Oregon Department of Fish and Wildlife. *Id.* at 15-29. Interestingly, CRITFC did not recommend Snake River flow targets. Instead, it sought "flow augmentation volume objectives" that would apply between April 15 and September 30 and which would have maintained the underlying methodology of the Water Budget. *See* NORTHWEST PACIFIC POWER PLANNING COUNCIL, 1 RECOMMENDATIONS TO AMEND THE ANADROMOUS FISH SECTIONS OF THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM, § 5-2, at 2-3 (1994).

385. *Id.*, § 5.2A.1, at 5-20.

West & Northwest, Vol. 14, No. 1, Winter 2008

role curve as possible by April 10 each year³⁸⁶ and that 1 million acre-feet of water be made available for flows from Dworshak during the spring and summer migration season.³⁸⁷ In addition, the Council asked BPA, the Bureau, and the states of Washington, Idaho and Montana to allocate 90 kaf of storage toward spring migration flows,³⁸⁸ and to increase that annual dedication by 500 kaf in 1996 and 1998.³⁸⁹ The Council also requested state water agencies to facilitate water transactions³⁹⁰ and directed that Brownlee Reservoir be operated to achieve spring flow targets and release substantial storage between the spring and September of each year.³⁹¹

Flows must also be improved on the lower Columbia River. Accordingly, the Council established a series of flow equivalents at The Dalles Dam ranging between 300 kcfs between April 15 and June 15 in 1995; 200 kcfs between June 16 and July 31 in 1995; and 160 kcfs between August 1-31, 1995.³⁹² In 1996, and in the second years of future biannual "critical periods," the spring flow equivalents are lower: 260 kcfs between April 15-June 15; 200 kcfs between June 16-July 31; and 160 kcfs between August 1-31. During 1997 and the third and fourth years of a "critical period," the

386. *Id.* at 5-21.

387. *Id.* To achieve the Dworshak targets during summer migration season, the Corps must draft the reservoir to an elevation of 1520 feet by July. *Id.* § 5.2B.2, at 5-23.

388. *Id.*, § 5.2A.2, at 5-21.

389. *Id.*, § 5.2A.3, at 5-21. The additional 1.09 maf thus allocated would be in addition to the 427 kaf provided for by the Strategy for Salmon. *Id.* However, the Council's directive may not be implemented because the needed water must be acquired through voluntary sales transactions, "non-structural approaches," new storage, or a combination of these possibilities. *Id.* Early indications are that Idaho farmers may be unwilling to sell *any* water for fish recovery efforts. See Rocky Barker, NMFS Plan Lets Farmers Control Tap., IDAHO FALLS POST-REGISTER, Mar. 2, 1995, at A-1 (noting that Bureau is offering \$150 per acre-foot for water purchased by irrigation districts from federal government for \$2.50 per acre-foot and is experiencing difficulty finding willing sellers).

390. 1994 PROGRAM, *supra* note 358, § 5.2A.5, at 5-22.

391. *Id.*, §§ 5.2A.9-5.2A.10. To comply with the Council's request, Idaho Power Company, the Corps, the Bureau, and FERC must guarantee that 110 kaf of water could be made available if needed during the spring migration season and avoid refilling in June, provide a maximum of 137 kaf of storage for summer migration in July, pass through 50-140 kaf in August, and allocate 100 kaf for fall flows in September. *Id.*, § 5.2A.10. In addition, Idaho Power Company is directed to modify operations at its Hells Canyon complex to achieve coordinated fall and spring flows and maintain chinook spawning, incubation, and emergence. Idaho Power Company must also examine how Hells Canyon can provide more water downstream to assist migration at Brownlee Reservoir, *Id.*, § 5.2a.11.

392. *Id.* at 5-29.

West & Northwest, Vol. 14, No. 1, Winter 2008

spring flow equivalent is set at 220 kcfs.³⁹³ Thus, the Council has not wholly retreated from its paradoxical approach to fish flows during drought years: when less rainfall creates more adverse river conditions for fish, less water is provided. That method of allocating the Columbia River system's waters was a flaw in the Water Budget of the 1980s,³⁹⁴ and will continue to be an unjustified and counter-intuitive barrier to effective salmon recovery efforts in the future.

The Council's lower Columbia River goal is 3.45 maf for the Water Budget's fish flow allocation, to be supplemented by a firm allocation of 4 maf during spring migration.³⁹⁵ The Council directed that adequate water, beyond the Water Budget volume, be available to assist summer migration behind The Dalles Dam by April 30.³⁹⁶ To achieve its lower Columbia River velocity goals, the Council decided to lower John Day reservoir to a minimum irrigation pool between May 1-August 31 starting in 1996 and to require an evaluation of whether to require an additional thirty-seven foot drawdown, to spillway crest, before April 30, 1996.³⁹⁷

As an additional device to reduce juvenile mortality, the Council commanded the Corps to spill enough water over dam spillways to allow eighty percent of the smolts migrating between April 15 and July 31 on the Snake and between May 1 and August 31 on the Columbia to avoid encountering hydroelectric turbines during their voyage to the sea.³⁹⁸ The Council mandated additional improvements in facilities allowing adult salmon to bypass the dams and intensified efforts to control predation of juveniles in hydropower system reservoirs.³⁹⁹

393. *Id.*

394. *See* notes 62-63 and accompanying text.

395. The Water Budget allocation of 3.45 maf is the aggregate of a monthly *minimum* velocity standard of 58 kcfs/month. *Id.*, § 5.4A, at 5-29.

396. *Id.*, § 5.4A.3, at 5-29 to 5-30. Other measures to assist summer migration include directives to BPA to allocate non-Treaty Dam storage during July and August of low-water years; seek energy exchanges to facilitate greater summer flows; and allow the reservoir behind Grand Coulee Dam to draft to an elevation of 1,280 feet if necessary to achieve flow targets. *Id.*, § 5.4B, at 5-31.

397. *Id.*, § 5.4C, at 5-32.

398. *Id.*, § 5.6A, at 5-36. To reduce the likelihood that increased spills will cause juveniles to contract nitrogen supersaturation disease, the amendments require the Corps to conduct the spills in compliance with Washington and Oregon laws limiting dissolved gases in reservoir waters. *Id.*, § 5.6C.1, at 5-40. Accordingly, the 1994 Program amendments also ask the Corps to accelerate dams' modifications that reduce gas supersaturation. *Id.*, § 5.6E.2, at 5-41. The Council also required the Corps to install slotted spillway gates at all FCRPS dams and to continue improving hydropower turbine screens. *Id.*

399. *Id.*, §§ 5.6A-5.6B, 5.7, at 5-36 to 5-40, 5-42 to 5-47.

West & Northwest, Vol. 14, No. 1, Winter 2008

Of course, the 1994 amendments do not focus exclusively on flows and the means necessary to achieve them. The Council also directed that a number of steps be taken to improve adult salmon survival during up-river migration, including: (1) initiating upgrades to existing passage facilities at the Basin's dams;⁴⁰⁰ (2) performing evaluations of the necessity for new passage facilities, more effective attraction flows and corrected fishery hydraulics;⁴⁰¹ and (3) retaining fish screens in place after the juvenile migration season ends where adult fallback is a documented problem.⁴⁰² Moreover, the Council recommended that additional water be allowed to flow into the lower Snake to reduce water temperatures.⁴⁰³ To improve the Basin's efforts to protect spawning habitat, the Council mandated immediate efforts to gather data on wild stocks, review the impacts of the hatchery system, and coordinate all supplementation activities.⁴⁰⁴ In addition, the Council called for changes in land and water management, water diversion screening, habitat priorities, and an expedited funding process.⁴⁰⁵

The Council's adoption of velocity goals, greater flows and increased allocation of storage to assist migration is consistent with recommendations long advanced by fish and wildlife agencies and tribes and indicates that the Council took its statutory obligation to afford deference on scientific issues seriously. Those

400. The Council directed the Corps to automate all control systems; place measuring devices in accessible areas; place velocity meters in low velocity areas of collection channels; construct additional ladders at Lower Granite and Little Goose Dams by 1999; provide increased attraction water for all ladder collection channels and entrances by 1997; modify the collection channel at McNary Dam by 1996; construct collection channel extensions at Lower Granite and Little Goose Dams by 1998; complete fishway modifications and improvements at Bonneville Dam by 1997; and determine whether to cover existing ladders. *Id.*, § 6.1A.4, at 6-2. The Council also mandated compliance with existing fishway operating and passage centers, including, among other things, minimization of power peaking; establishment of ramping rates; elimination of zero-flow operations; and reduction of ladder water temperatures. *Id.*, at 6-1, 6-2. The owners of the mid-Columbia's dams were ordered to determine whether adult losses are occurring between those hydroelectric projects and to evaluate whether establishment of optimum flows and spill configurations is necessary. *Id.*, § 6.1E.1, at 6-5. Douglas County Public Utility District (PUD), Chelan County PUD, and Grant County PUD were directed to rectify and correct fishery problems at Wells, Rocky Reach, Priest Rapids and Wanapum Dams. *Id.*, §§ 6.1E2-6.1E.4, at 6-5.

401. *Id.*, § 6.1A.2, at 6-2. The Corps is commanded to install backup parts, attraction water pumps, or fish turbines as necessary. *Id.*

402. *Id.*, § 6.1A.3, at 6-2.

403. *Id.*, § 6.1D.3, at 6-4 (requiring releases of 100 kaf of storage from Brownlee Dam and Hells Canyon complex, reduction of water temperatures at Ice Harbor Dam, and studies of whether cool water releases from Dworshak Dam and Hells Canyon complex in August and September improves adult fall chinook survival).

404. *Id.*, §§ 7.0-7.5.

405. *Id.*, § 7.6-7.8. The 1994 amendments also focus on resident fish and wildlife, however, detailed discussion of those aspects of the Program are beyond the scope of this Article.

measures will, if implemented, be a positive step toward salmon recovery, and the Council accordingly deserves credit for committing the region to them. Unfortunately, for all of the Council's willingness to accept that restored runs require healthy river conditions, the Council failed to take the one step that could have, more than any other, left no doubt that the Basin is willing to invest in a renewed fishery: making plain its commitment to ending transportation as a means of assisting smolt migration.

The Council remains convinced that barge and truck transportation may, under some circumstances, improve salmon survival.⁴⁰⁶ Thus, the Council concluded that it could achieve its objective of "an effective fish and wildlife rebuilding effort"⁴⁰⁷ that "meets the needs of salmon with a level of certainty comparable to that accorded other operational purposes" by continuing the region's reliance on the transportation program. But transportation, as a tool for improving smolt survival, has never been assessed in terms of its performance relative to allowing juvenile salmon to pass over dam spillways.⁴⁰⁸ Moreover, transportation actually harms wild fish.⁴⁰⁹ In fact, studies of the effects of transportation on salmon have been performed on all species.⁴¹⁰ Some of these studies show that transportation increases the number of smolts that successfully pass Bonneville Dam, but there is also evidence that *fewer* transported fish return from the ocean.⁴¹¹ Thus, the biological merits of transportation are at least debatable and

406. See *id.* at 5-12 ("The Council accepts that under some passage conditions, transportation can increase the survival of salmon and steelhead from the onset of active downstream migration to their return as adult spawners relative to survival experienced by fish migrating in the river.").

407. *Id.* at 1-3.

408. The Council acknowledges this. See *id.* at 5-12 n.6.

409. Some studies show that smolts of some species lose some of their ability to survive in saltwater after undergoing barge transportation. See Carl B. Schreck & James L. Congleton, EVALUATION OF FACILITIES FOR COLLECTION, BYPASS, AND TRANSPORTATION OF OUTMIGRATING CHINOOK SALMON (abstract) (Oct. 1993).

410. NMFS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, ENDANGERED SPECIES ACT SECTION 7 BIOLOGICAL OPINION OF THE REINITIATION OF CONSULTATION AND 1994-98 OPERATION OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM AND JUVENILE TRANSPORTATION PROGRAM (Mar. 1995) [hereinafter 1994-98 BIOLOGICAL OPINION] (discussing several scientific studies).

411. See Ad Hoc Transportation Review Group, *Review of Salmon and Steelhead Transportation Studies with Columbia and Snake Rivers* (1984-89) (Dec. 31, 1992); P.R. MUNDY ET AL., TRANSPORTATION OF JUVENILE SALMONIDS FROM HYDROELECTRIC PROJECTS IN THE COLUMBIA RIVER BASIN (FINAL REPORT) 116 (U.S. Fish & Wildlife Service, 1994) (concluding that available evidence indicates that transportation can improve adult survival under some adverse river conditions, but also declaring that the evidence also indicates that transportation cannot ensure reconstruction of Snake River and upper Columbia River runs). The Council acknowledged these studies. 1994 PROGRAM, *supra* note 358, at 5-12 n.7.

West & Northwest, Vol. 14, No. 1, Winter 2008

possibly entirely absent.⁴¹² The most likely result of continued reliance on transportation of migrating smolts will not be restored runs, but the perpetuation of collective indecision. Transportation is an anesthetic that dulls the region's awareness of the choice that must be made: manage the Columbia River system in a manner likely to afford adequate habitat for salmon, or allow that resource to disappear in the interests of continued dependence on the cheapest electric power in the nation, subsidized navigation and irrigated agriculture.

Aside from the Council's commitment to transportation in the face of increased concern among scientists that this form of passage harms salmon,⁴¹³ the Program also continues to depend on hatcheries as a means for sustaining the Pacific Northwest's fishing industry and satisfying treaty obligations to Indian tribes.⁴¹⁴ This is equally unlikely to advance the Council's restoration goals. Hatchery production damages the adaptive capability of wild stocks,⁴¹⁵ which are ecologically unique as a result of genetic differences fostered by the isolation of one stock from another.⁴¹⁶ Hatchery production also tends to reduce genetic

412. 1994 PROGRAM, *supra* note 358, § 5.0F, at 5-13. The Council wisely requested that research on the effects of transportation be afforded the "highest priority" and appropriately labeled the barging program an "experiment."

413. The transportation program may violate the ESA. Many critics, including state fish and wildlife agencies, the U.S. Fish and Wildlife Service, the region's tribes, and other fishery advocates, believe that transportation has not increased smolt survival. They argue that transportation may actually increase juvenile mortality by contributing to increased stress levels, disease transmission, and disorientation created by the process. *See* Blumm, *Parity V*, *supra* note 8, at 693; note 410, *supra* (discussing recent scientific studies). Because the transportation program requires the capture of endangered juvenile salmon, the ESA requires the Corps to obtain an "incidental take permit" for the program. *See* 16 U.S.C. § 1539(d). Environmentalists have challenged the program on grounds that NMFS should not have granted such a permit when alternative methods for improving in-river conditions for juvenile migration exist. The district court rejected this argument. *See* Northwest Resource Info. Center, Inc., v. Nat'l Marine Fisheries Serv., Civ. No. 93-870-MA (slip op.) (D. Or., Dec. 22, 1993), *aff'd in part and rev'd in part on other grounds*, 56 F.3d 1060 (9th Cir. 1995). The issue is again before Judge Marsh in *American Rivers, et al. v. Nat'l Marine Fisheries Serv., et al.*, Civ. No. 94-940-MA (D. Or., filed August 4, 1994).

414. The region's fishers and tribes generally support reliance on hatchery supplementation of wild runs. Jessica Maxwell, *How to Save a Salmon*, AUDUBON 28, 30-31, July-Aug. 1994; Rob Taylor, *Hatcheries That Once Aided Coho Salmon Are Now Potential Foes*, HOUSTON CHRONICLE, Nov. 13, 1994, at A10.

415. Michael Blumm, *Parity V*, *supra* note 8, at 695.

416. Michael L. Goodman, *Preserving the Genetic Diversity of Salmonid Stocks: A Call for Federal Regulation of Hatchery Programs*, 20 ENVTL. L. 111, 116, 119 (1990) (citing Bevan, *Problems of Managing Mixed-Stock Salmon Fisheries*, in SALMON PRODUCTION, MANAGEMENT AND ALLOCATION: BIOLOGICAL, ECONOMIC, AND POLICY ISSUES 103, 104 (W. McNeil ed. 1988)). This point was made recently, somewhat more colorfully by biologist Jim Lichatowich. "A hatchery is like a Ford assembly plant.

diversity, impair natural reproduction⁴¹⁷ and harm wild fish by transmitting disease and increasing competition for available food and habitat.⁴¹⁸ But the risks to existing populations of wild fish are not the only reasons that hatcheries should be used sparingly, if at all. Artificially produced fish do not adapt well to life in the wild.⁴¹⁹ Continued reliance on hatcheries therefore will not prove to be an efficient mechanism for sustaining the region's fish harvests.

4. Aftermath of the 1994 Program Amendments

Recent political developments in the Basin and in Washington, D.C. may render the Council's actions temporary. Seven of the region's eight United States Senators, all but one a member of the Senate's new Republican majority, have expressed opposition to the December 1994 Program amendments.⁴²⁰ At least one, Slade Gorton of Washington, has indicated a willingness to push a legislative cancellation of the Council's actions.⁴²¹ Impacts on Idaho's agriculture also underlies Idaho Governor Phil

It functions best when the product you're working on is all uniform." Sandy Daughton, *Hatcheries on the Hot Seat*, [TACOMA] NEWS TRIBUNE, Dec. 27, 1994, at A1.

417. Goodman, *supra* note 416, at 123-31. 164 (citing Reisenbichler & McIntyre, *Requirements for Integrating Natural and Artificial Production of Anadromous Salmonids in the Pacific Northwest*, in FISH CULTURE IN FISHERIES MANAGEMENT 372 (R. Stroud ed. 1986) [hereinafter FISH CULTURE]; Blumm, *Parity V*, *supra* note 8, at 695 (citing Fish Culture and William Bakke, Review of Scientific Literature on the Supplementation of Anadromous Fish from Hatcheries with Comments for the Northwest Power Planning Council (Nov. 1987) (unpublished manuscript)).

418. Blumm, *Saving Idaho's Salmon*, *supra* note 2, at 680; Blumm, *Columbia River Basin*, *supra* note 35, at 89-90.

419. One study found that wild salmon spawn nine times as successively as hatchery fish. See Paul Koberstein, *Are Hatcheries Producing Salmon "Wimps"?*, HIGH COUNTRY NEWS, Apr. 27, 1991, at 27 (citing NMFS study of Kalama River steelhead).

420. See Letter from Senators Larry E. Craig, Conrad Burns, Max Baucus, Mark O. Hatfield, Dirk Kempthorne, and Slade Gorton to Angus Duncan, Chairman, Northwest Power Planning Council (Dec. 13, 1994) (on file with author); Joan Laatz, *Delay Decision, Senators Urge*, OREGONIAN, Dec. 14, 1994, at E1. Senators Craig and Kempthorne oppose the 1994 amendments because they call for reservoir drawdowns. Bill Loftus, *Flushing Fish: Craig Demands Justification for Plan*, LEWISTON MORNING TRIBUNE, Mar. 13, 1994, at 1C.

421. See Al Biggs, *Gorton Suggests Federal Law to Solve Region's Salmon Crisis*, [TACOMA] NEWS TRIBUNE, Oct. 13, 1994, at B6. Any such attempt will apparently draw strong opposition from Washington Senator Patty Murray and Oregon Congresswoman Elizabeth Furse. See Laatz, *Power Council OK's Plan to Save Salmon*, *supra* note 21, at A1, A26; Laatz, *Power Council's Plan Makes Waves in NW, Elsewhere*, at B6. There is some question as to the ability of these legislators to prevent such congressional meddling, however. Both are Democrats and are therefore in the minority of both Houses of Congress. Senator Gorton's plans may nevertheless fail in the face of Oregon Senator Mark O. Hatfield's opposition. Hatfield, Chairman of the Senate Appropriations Committee, has indicated that he will support legislation to fund actions required under the 1994 amendments.

West & Northwest, Vol. 14, No. 1, Winter 2008

Batt's opposition. Batt does not believe that the water supplies currently used by his state's farmers are adequate to allow the Council to acquire additional water supplies for increased fish flows and is concerned that the revised Program will unnecessarily harm navigation interests based at Lewiston, Idaho.⁴²² Governor Batt's hostility to the 1994 amendments has already affected their continuing viability. Idaho's new representatives on the Council are Mike Field, a former aide to anti-salmon recovery Senator Larry Craig, and Todd Maddock, a former timber industry lobbyist. Both oppose large portions of the Program, including drawdowns.⁴²³ In Oregon, Governor John Kitzhaber has succumbed to pressure from conservative Republicans to seat an eastern Oregonian on the Council.⁴²⁴

The effects of the recent political changes in the Pacific Northwest have already been felt. Less than a month after adopting the 1994 amendments, the Council agreed to "reconsider" the "scientific justification" for them.⁴²⁵ Of course, the region's industrial power consumers, irrigators and navigation interests, as well as BPA, have signaled their opposition to the recent amendments and have encouraged politicians to conclude that they are unaffordable.⁴²⁶ The basis for the opposition to the Program is the

Laatz, *Power Council OK's Plan to Save Salmon*, *supra* at A26. The Republican 104th Congress may also attempt to weaken the ESA, which might reduce pressure on the region to restore the salmon runs. Joan Laatz, *The New Order: The Endangered Species Act and Political Reality Clash as New Leaders Look to Save Salmon*, OREGONIAN, Nov. 29, 1994, at A1, A7; Cf. *Foley' Loss, GOP Gains Stire the Pot*, AMERICAN POLITICAL NETWORK: GREENWIRE, Nov. 15, 1994, (available on Westlaw, APN-GR Database) (noting that Washington Republican Senator Slade Gorton and Idaho Republican Senator Larry Craig will "have more clout to oppose costly efforts at salmon protection and perhaps [to] dilute the Endangered Species Act"). By March 1995, both Houses of Congress passed bills forbidding further ESA listings in 1995, and the House of Representatives has passed a retroactive regulatory moratorium that would invalidate nearly all rulemakings, including those under the Northwest Power Act and the ESA, since November 20, 1994.

422. See *Idaho's Governor-Elect Asks Power Council to Delay Salmon Vote*, OREGONIAN, Dec. 13, 1994, at C6; Dan Gallagher, *Idaho Governor Rips Salmon Recovery Plan*, SEATTLE POST-INTELLIGENCER, Jan. 15, 1995, at B1.

423. *Id.*

424. Governor Kitzhaber recently appointed eastern Oregon rancher John Brogoitti to replace pro-salmon chairman Angus Duncan in September 1995, which means the Council will lose one of its most persistent advocates for bold restoration measures. See Jeff Mapes, *Power Council Action Solves Problem*, OREGONIAN, Mar. 17, 1995, at C6.

425. See *First Step to Reconsider Plan to Protect Salmon Taken by Northwest Power Council*, BNA NATIONAL ENVIRONMENT DAILY, Feb. 14, 1995 (available on WESTLAW, BNA-NED database).

426. Litigation challenging the 1994 amendments has already commenced. See *Idaho Power Co. v. Northwest Power Planning Council*, No. 95-70205 (9th Cir., petition for review filed Feb. 24, 1995). See Laatz, *Power Council OK's Plan to Save Salmon*, *supra* note 21, at A26 (quoting Bruce Lovellin, spokesman for Columbia River Alliance, which represents aluminum

increased costs that it measures will impose on BPA, utilities and the DSIs. The Council estimates that the 1994 amendments will cost approximately \$177 million,⁴²⁷ resulting in an estimated average residential electricity bill increase of \$2 per month by 1996, with an additional \$1 per month by 2015, and a projected wholesale electricity rate increase of 7%.⁴²⁸

However, it is difficult to summon sympathy. BPA's 1994 revenues exceeded \$2 billion, and residential electricity rates in the region are significantly lower than elsewhere in the United States.⁴²⁹ Meanwhile, the DSIs and irrigators benefit from huge energy subsidies,⁴³⁰ and BPA has not attempted to convince Congress to reduce or eliminate them.⁴³¹ The subsidies continue

companies, irrigators, utilities, and navigation interests, arguing that costs of Program are "beyond the region's ability to pay"); Mackenzie & Laatz, *Planners Weigh Cheap Power, Salmon*, *supra* note 349, at C1, C7 (quoting BPA Administrator Randy Hardy's warnings that amended Program will adversely affect power system "reliability" and increase BPA's "financial" risks). The Columbia River Alliance has couched its opposition in terms of a warning that greater flows and water velocity will "destroy" the Basin's economy. Thus, opponents of a credible recovery effort continue to confuse the debate with questionable invocation of science to defend a status quo that the courts have warned is legally inadequate.

427. Laatz, *Power Council OK's Plan to Save Salmon*, *supra* note 21, at A1; Northwest Power Planning Council, News Release, *supra* note 21, at 3. The costs of the 1994 amendments are in addition to the \$250 million cost of preexisting Program measures. *Northwest Power Council Unveils Sweeping Strategy*, *supra* note 357, at 2. The Council counts in the cost of the 1994 amendments losses of income suffered by BPA and the additional expense of acquiring necessary supplemental electric power supplies. Such costs total \$57 million, while the remainder of the newly-modified Program measures - mainly structural modifications to FCRPS dams - account for the remainder of the \$177 million increase. Laatz, *Power Council OK's Plan to Save Salmon*, *supra* note 21, at A1, A26.

428. Laatz, *Power Council OK's Plan to Save Salmon*, *supra* note 21, at A1, A26.

429. BPA 1994 Report, *supra* note 249, at 26. The average residential electricity bill in the Pacific Northwest is 40% lower than in other states. Timothy Egan, *Fight to Save Salmon Starts Fight Over Water*, N.Y. Times, Apr. 1, 1991, at A1; Hathorn, *Save our Salmon, Save our Soul*, *supra* note 10, at 14.

430. Subsidies that reduce electricity prices paid by the DSIs, primarily aluminum companies, and the region's users of irrigation water total approximately \$230 million per year. See Natural Resources Defense Council, Sierra Club, and American Rivers, *Changing the Current: Affordable Salmon Strategies for Salmon Restoration in the Columbia River Basin* (1994) (copy on file with author); Joan Laatz, *Report: BPA Off on Claims*, OREGONIAN, Dec. 8, 1994, at C1, C9. But cf. Ellie Winninghoff, *Where Have all the Salmon Gone?*, FORBES, Nov. 21, 1994, at 104 (noting that federal government spends more than \$1 billion per year to subsidize power consumption by Pacific Northwest residential and industrial energy users and that BPA's aluminum industry customers pay 2 cents per kilowatt hour for federal hydropower, or one-third the average industrial electricity rate nationwide).

431. Interview with K.C. Golden, Northwest Conservation Act Coalition (Feb. 25, 1995). Other significant adverse impacts to BPA's financial health are drought and the increasing

West v Northwest, Vol. 14, No. 1, Winter 2008

because BPA is insulated from the electricity market. BPA is required by public preference clauses contained in the Bonneville Project Act and incorporated into the Northwest Power Act to sell the region's hydroelectric power at cost and to offer it first to public-sector agencies, such as public utility districts.⁴³² Only if power remains available for sale after fulfilling public-sector demand may BPA sell electricity to private-sector customers at cost.⁴³³ Under this system, the inflation-adjusted price of BPA power fell from 2.74 cents per kilowatt-hour in 1940 to 2.28 cents per kilowatt-hour in 1990.⁴³⁴

Accordingly, one way to remedy BPA's concern that salmon conservation costs will result in the loss of its customers may be to force the agency to compete in the wholesale electric power market.⁴³⁵ Although Congress fleetingly attempted to bring market forces to bear on BPA in the 1960s, when it authorized construction of an interstate power intertie,⁴³⁶ the bills that authorized funding for intertie construction continued to constrain BPA's ability to sell power outside the region by granting a preference to Pacific Northwest electricity consumers.⁴³⁷ Thus, BPA cannot sell federal hydroelectricity to the buyers who are willing to pay the most for it, even though doing so may increase the amount of income produced by the

availability of low cost natural gas. *Hearing Focuses on BPA Financial Problems*, AMERICAN POLITICAL NETWORK: GREENWIRE, Mar. 17, 1995 (available on WESTLAW, APN-GR database).

432. Northwest Power Act, 16 U.S.C. §§ 839c(a), 839g(c); Bonneville Project Act of 1937, 16 U.S.C. § 832c. See generally Joseph P. Merton, Jr. & David C. Jory, *The Preference Clause Revisited: Central Lincoln Peoples' Utility District v. Johnson and the Pacific Northwest Electric Power Plan and Conservation Act*, 58 WASH. L. REV. 413 (1983).

433. Aluminum Co. of Am. v. Central Lincoln People's Util. Dist., 467 U.S. 380, 384 (1984). See generally Jeffrey C. Fereday, Comment, *The Meaning of the Preference Clause in Hydroelectric Power Allocation Under the Federal Reclamation Statutes*, 9 ENVTL. L. 601 (1979).

434. Winninghoff, *supra* note 430, at 104. Not surprisingly, one consequence of the artificially low price created by the public preference clause is a reduced incentive to conserve electricity. The Pacific Northwest consumes 61% more electricity, per capita, than any other region in the country. *Id.*

435. BPA remains bound by preference requirements notwithstanding Congress' recent decision to permit private utilities to engage in interstate wholesale "wheeling" of electricity. See Energy Policy Act of 1992, Pub. L. No. 102-486, § 723, 106 Stat. 2782, 2919 (codified as amended at 16 U.S.C. § 824L).

436. See Act of Aug. 31, 1964, Pub. L. No. 88-552, § 8, 78 Stat. 758 (1964). BPA may sell power to non-Pacific Northwest consumers and transmit it to them by way of the intertie only if such regional power purchasers do not desire to purchase the electricity. See 16 U.S.C. §§ 824(i)(5), 837a-e. See generally California Energy Resources Conservation & Dev. Comm'n v. Bonneville Power Admin., 831 F.2d 1467, 1470-71 (9th Cir. 1987).

437. See *infra* notes 438-39 and accompanying text.

region's hydroelectric system.⁴³⁸ The net result is that BPA must *increase* its wholesale electric rates to compensate for the preference discount.

BPA's concerns about the financial impacts of intensified salmon recovery efforts also rest on warnings by some of its customers that they may buy electricity elsewhere.⁴³⁹ However, BPA is not facing the imminent loss of customers because most existing power contracts bind purchasers to BPA electricity purchases until 2001.⁴⁴⁰ The agency could reduce the financial risks created by the loss of a part of its market by imposing exit fees to compensate for the federal investment in the power system's infrastructure.⁴⁴¹ An

438. One promising market for BPA hydropower is the southwestern United States. Changes in the power production operations at Glen Canyon Dam, a significant hydroelectricity producer in the Colorado River Basin, to protect the ecosystem of Grand Canyon National Park will force energy purchasers in that region to seek alternative supplies during the month of the year when electricity demand is highest. Since those peak demands occur in the desert southwest in spring and summer, BPA could sell power to interested utilities at the same time the water used to generate it could benefit migrating smolts. One recent estimate indicates that BPA could increase its revenues \$30 million per year by taking advantage of the southwest market. Salem Electric Cooperative, BPA's *Competitiveness: Steps BPA Can Take to Avoid Shifting Costs to Treasury* 6 (no date) (unpublished report on file with author) [hereinafter BPA's *Competitiveness*] (noting that changes in Glen Canyon Dam operations are likely to cause loss of 450-800 megawatts of firm peaking capacity during months when increased flows are needed on Columbia Basin rivers to assist smolts; cost to replace lost Glen Canyon power is estimated at \$28 per kilowatt-month, while BPA currently sells power at approximately \$5 per kilowatt-month). Of course, the preference clause would have to be modified in order to allow BPA to enter into long-term contracts with southwest utilities. Unfortunately, the current Administration apparently opposes any such change. See *Interview: Hazel R. O'Leary*, 8 NAT. RES. & ENV'T 32, 60 (1994) (interview with Secretary of Energy).

439. Les Blumenthal, *Agencies at Odds Over Salmon Runs: Policymakers Debate Who's to Pay for Habitat*, [TACOMA] NEWS TRIBUNE, Mar. 2, 1995, at A1; *BPA May Face Spate of Defections*, OREGONIAN, Jan. 13, 1995, at C2. If BPA's expenses remain high enough that the agency has difficulty holding onto customers, then BPA may experience difficulty in repaying the federal treasury for the Basin's hydroelectric infrastructures. But BPA's \$16.3 billion debt could be reallocated to the taxpayers, or BPA could seek to recoup from fleeing customers the investment in the hydroelectric system.

440. Interview with K.C. Golden, Northwest Conservation Act Coalition (Feb. 25, 1995).

441. Some states are considering allowing utilities facing retail competition to impose a transmission charge, which would allow recovery of a portion of the "stranded" investment in the physical facilities needed to generate and deliver energy. See, e.g., California Public Utilities Comm'n, Order Instituting Rulemaking and Order Instituting Investigation: On the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry (Docket No. R94-04-031) (Apr. 20, 1994). It is not clear, however, whether recovery of a stranded investment may proceed unrestricted. See *Cajun Elec. Power Coop v. Fed. Energy Reg. Comm'n*, 28 F.3d 173 (D.C. Cir. 1994). FERC recently announced a rule that would permit BPA to impose an exit fee during a three-year experimental window. See *Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, 59 Fed. Reg. 35,274 (1994).

West & Northwest, Vol. 14, No. 1, Winter 2008

exit fee would not need to be particularly high. One recent study indicates that BPA could impose a charge of 7.4 mills per kilowatt hour to cover all of the federal investment in the Washington Public Power Supply System (WPPSS) plants, physical facilities needed for salmon passage and conservation programs mandated by the Northwest Power Act. A fee of that amount would also allow BPA to reduce electricity rates charged to its preferred customers by 25% and maintain a price advantage over competing regional power providers.⁴⁴² And an exit fee would be equitable, because the harm to the Basin's fisheries has primarily benefited BPA's customers, not caused by the FCRPS taxpayers.⁴⁴³ Unfortunately, the Clinton Administration, faced with opposition from BPA and Pacific Northwest utility interests, recently killed a proposal to require exit fees.⁴⁴⁴ But an exit fee is not BPA's only available avenue for recovering its investments on behalf of customers. BPA could impose a contract charge, which would require any customer purchasing a service from BPA to pay a share of the WPPSS debt. Importantly, BPA lawyers apparently believe a contract charge could be assessed without amending federal law or the Federal Energy Regulatory Commission rules.⁴⁴⁵

Salmon recovery costs are not even the most significant cause of BPA's precarious fiscal position. There is little doubt that BPA's resources are stretched,⁴⁴⁶ but that is mostly the result of the debt accrued when the region launched its effort to build nuclear power plants during the 1970s.⁴⁴⁷ Nor has BPA seriously pursued an effort to force the region's utilities to bear a portion of the costs of the WPPSS

442. See BPA's *Competitiveness*, *supra* note 438, at 7.

443. The aluminum industry receives approximately \$180 billion in subsidies from FCRPS each year, while Pacific Northwest irrigators receive an annual federal water subsidy of \$50 million, and the region's navigation interests benefit from federally subsidized sonar on the Columbia and Snake Rivers to the tune of approximately \$30 million each year. See *Cost the \$64 Million Question for Salmon*, 14 NORTHWEST CONSERVATION ACT REPORT 3, 6 (Jan. 13, 1995). The irrigation subsidy figure does not include approximately \$300 million in power revenues lost when water stored in federal reservoirs is diverted to farms. *Id.*

444. Michael C. Blumm & Eric Lemelson, *BPA Plight Exaggerated by Industry* (editorial opinion), OREGONIAN, Mar. 6, 1995, at B9. Congress is also apparently unwilling to sanction exit fees. See Bill Mackenzie, *Power Players Mull Fees For Those Leaving BPA*, OREGONIAN, Mar. 31, 1995, at B1.

445. See *Nuke Debt: Hole That May Become A Grave*, *supra* note 249, at 1.3.

446. See ASSURING POWER SUPPLY, *supra* note 256, at 17. BPA does not, however, appear to face imminent financial failure. See BPA 1994 REPORT, *supra* note 249, at 26 (noting 1994 net operating revenue of \$315,614,000).

447. See BPA 1994 REPORT, *supra* note 249, at 25 (listing net non-federal projects debt of \$7,141,126); ASSURING POWER SUPPLY, *supra* note 256, at 27 (WPPSS debt accounts for approximately 45% of BPA's total debt and interest costs and for about one-fifth of its net revenue requirement).

fiasco.⁴⁴⁸ In any event, much of the Program's financial impact on BPA is in the form of lost revenues, not increased outlays.⁴⁴⁹ BPA's zeal to contain its expenses is also not aimed at all the sources of its financial stress, as it has not publicly expressed similar concerns about the loss of hydropower generating capacity created when irrigators divest large quantities of Snake River Basin waters at very low prices.⁴⁵⁰ BPA has been content to continue the region's traditional approach of forcing the fishery to bear the costs of the region's energy choices and water allocation decisions; its complaints that increased costs caused by the 1994 amendments threaten it with financial doom are not matched by a willingness to confront more significant threats to the health and role in the region's economy. Nevertheless, whether credible or not, BPA's complaints about the costs of restoring the Basin's salmon runs have received the sympathetic attention of the Clinton Administration. The President has agreed to provide \$100 million during FY 1996 and 1997 to implement NMFS' recovery plan for the listed runs.⁴⁵¹

448. Interview with K.C. Golden, Northwest Conservation Act Coalition (Feb. 25, 1995). The financial disaster spawned by the WPPSS has a long and tortured history. During the 1970's, utility planners and BPA determined that the Pacific Northwest faced an imminent power shortage and backed the construction of five nuclear power plants to produce additional electricity. BPA provided crucial assistance in launching the projects by issuing net billing agreements, under which participating utilities could trade their share of nuclear plant output for a credit toward their purchase of energy from BPA. Eventually, nearly 100 of the region's utilities agreed to finance the WPPSS nuclear plants. However, construction of the fourth and fifth nuclear plants was accompanied by a variety of financial and technical problems, including spectacular cost overruns and a failure of the expected power demand to materialize. In January 1982, WPPSS defaulted on repayment of \$2.25 billion in construction bonds. Lengthy litigation over the question of liability on the bonds followed the default, with BPA eventually agreeing to assume most of the region's nuclear power plant debt. *See generally* WAYNE H. SUGAI, NUCLEAR POWER SUPPLY SYSTEM CRISIS 22-92 (1987); Benjamin E. Walters & David F. Sugarman, WPPSS and the Pacific Northwest: A Mere Possibility of Unraveling a Hopelessly Twisted Debt, 16 ENVTL. L. 91, 93-104 (1985). As of the summer of 1995, BPA's WPPSS-related debt exceeds \$7 billion. BONNEVILLE POWER ADMINISTRATION, QUARTERLY REPORT FOR THE NINE MONTHS ENDED JUNE 30, 1995 (1995). Other financial consequences of the region's experiment with nuclear power are also not in the past. WPPSS plant number 2 remains in operation, and during fiscal year 1993-94 the cost to BPA to operate and maintain it was 39 mills per kilowatt-hour (m/kh). Unfortunately, BPA sells the power generated by the plant to its utility customers for 27 m/kh. *Utilities Rain on BPA's Funeral Parade*, 14 NORTHWEST CONSERVATION ACT REPORT 1, 2 (Feb. 10, 1995).

449. *Id.*

450. *Id.* See *supra* note 443.

451. See *Salmon Cost Shift to Taxpayers OK'd*, 14 NORTHWEST CONSERVATION ACT REPORT 4 (Mar. 17, 1995). The agreement will enable BPA to shift \$60-70 million per year in salmon costs to the treasury, depending on water conditions. After two years, the shift will be \$30-40 million per year. In return, BPA must reduce its operating expenses by \$30-40 million, but may reduce its required cash reserves and therefore make less probable the payment on its debt to the treasury. *Id.* In committing the federal treasury to pay a portion of BPA's salmon costs, the Administration

West v Northwest, Vol. 14, No. 1, Winter 2008

BPA's financial condition aside, it is not likely that the 1994 amendments violate the Northwest Power Act's requirement that an adequate, efficient, reliable and economical power supply be maintained.⁴⁵² Increased hydroelectricity generation costs do not transgress this constraint,⁴⁵³ and the Program does not threaten the region's ability to meet energy demands.⁴⁵⁴ Congress recognized that the region's economy would see electricity costs rise since salmon recovery efforts began, and the Council has concluded that significant adverse financial consequences for some economic interests, such as the aluminum industry and public utility districts, does not render the power supply as a whole uneconomic.⁴⁵⁵ BPA can protect its financial viability by forcing its customers to bear a more equitable proportion of the region's hydroelectricity investment, and therefore the Northwest Power Act's implicit mandate to preserve BPA as the region's predominant electricity wholesaler is not violated by the 1994 amendments.⁴⁵⁶

B. The Revised 1994-98 Biological Opinion and the Proposed Recovery Plan

In March 1995, NMFS issued a revised 1994-98 biological opinion on the FCRPS and a proposed recovery plan. The agency responded to Judge Marsh's criticism in *Idaho Department of Fish & Game* and concluded that status quo

invoked section 4(h)(10)(C) of the Northwest Power Act, 16 U.S.C. § 839b(h)(10)(C). Section 4(h)(10)(C) authorizes BPA to allocate the costs of Program activities "as appropriate" to "various project purposes." The Administration apparently believes that a substantial portion of the responsibility for the salmon runs should be absorbed by parties that receive benefits other than energy from the FCRPS, but there is not an available mechanism for taxing all users other than energy consumers. Salmon costs can be recovered only from federal taxpayers or regional ratepayers. Some of the Northwest's representatives in Congress also apparently believe that salmon recovery costs are the most significant threat to BPA's financial health. Congress is considering bills that would cap BPA's salmon-related expenditures at percentage of its gross power revenues. S.481, 104th Cong. 1st Sess. 91995); H.R. 1905, § 509, 104th Cong., 1st Sess. (1995). The bills' definition of cost include foregone power revenues and the cost of power needed to replace generating capacity lost when stored water is released for increased flows. The bills also forbid the use of transmission rate increases to pay salmon costs. *Id.*

452. See 16 U.S.C. § 839b(h)(5).

453. See *Northwest Resource Info. Center*, 35 F.3d at 1371 n.13 (noting that requirement applies to "power supply," not hydroelectric system).

454. See ASSURING POWER SUPPLY, *supra* note 256, at 11. The Program allows system operators to draft reservoirs below elevations needed for fish purposes to meet firm loads.

455. ASSURING POWER SUPPLY, *supra* note 256, at 3, 13-16.

456. The Council has interpreted the "economical" power supply constraint as a requirement that BPA be maintained as an entity that can offer energy for sale at prices more economical than those offered by alternative suppliers. ASSURING POWER SUPPLY, *supra* note 256, at 1, 3.

operations of the hydroelectric system would jeopardize the listed stocks.⁴⁵⁷ Nevertheless, the measures contained in the revised 1994-98 biological opinion and the recovery plan can be considered, at best, small steps toward salmon recovery. After *Idaho Department of Fish & Game* and *Northwest Resource Information Center* were decided, the Clinton Administration repeatedly promised the region that it would require recovery efforts similar to those mandated by the Council's 1994 Program amendments. Unfortunately, NMFS produced an array of restoration measures substantially weaker than those required by the 1994 Program amendments. NMFS' approach is therefore also less likely to prevent further declines in the endangered runs. While the revised 1994-98 FCRPS biological opinion and the recovery plan, if finished in its current form, may survive a future challenge based on arguments that the agency failed to consider all available information, NMFS has not adequately responded to Judge Marsh's warning that aggressive action is needed to save the Basin's salmon runs.

1. Compliance with Idaho Department of Fish & Game

In the aftermath of *Idaho Department of Fish & Game*, NMFS opted to reconsider the 1994-98 biological opinion on FCRPS operations that it had issued soon before Judge Marsh's decision.⁴⁵⁸ NMFS also decided to include the states and treaty tribes in the ESA section 7 consultation process.⁴⁵⁹ Accordingly, NMFS held discussions with these interested parties throughout much of 1994. These meetings were intended to achieve a consensus on the scientific evidence that should be obtained and considered during the consultation process and the alternatives to current FCRPS operations that should be considered.⁴⁶⁰ The Corps, the Bureau and BPA reinitiated consultation on the FCRPS in December 1994.⁴⁶¹ The final FCRPS 1994-98 biological opinion was issued on March 2, 1995.

457. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 88 (Snake River spring/summer chinook), 89 (Snake River fall chinook), 91 (Snake River sockeye). Because NMFS' proposed recovery plan includes essentially the same measures for mitigating hydropower system impacts on listed stocks, it will not be discussed in detail. *See* NMFS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, PROPOSED RECOVERY PLAN FOR SNAKE RIVER SALMON, V.2.10-V.2.90 (Mar. 1995).

458. *See* Letter from Fred. R. Disheroon, Esq., Special Litigation Counsel, U.S. Department of Justice, to Hon. Malcolm F. Marsh (Apr. 7, 1994) (copy on file with author).

459. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 8-9 (citing Federal Defendants' Report on Compliance with the Judgment, *Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv.*, 850 F. Supp. 886 (D. Or. 1994) (June 28, 1994)).

460. *Id.* at 9.

461. *See* Letter from Maj. Gen. Ernest J. Harrell, U.S. Army Corp of Engineers, to William W. Stelle, Jr., National Marine Fisheries Service, and Michael Spear, U.S. Fish and Wildlife Service (Dec. 15, 1994) (transmitting U.S. ARMY CORPS OF ENGINEERS,

West & Northwest, Vol. 14, No. 1, Winter 2008

The revised 1994-98 biological opinion addressed each of the holdings of *Idaho Department of Fish & Game*.⁴⁶² NMFS considered the "low case" test results and the demographic risks associated with low populations that it had previously ignored.⁴⁶³ NMFS also repeated its 1993 finding that the existence of the hydroelectric dams must be considered a part of the "environmental baseline"⁴⁶⁴ against which the effects of the proposed operation of the hydroelectric system must be measured. In addition, NMFS considered population levels during high and low water years, rather than population levels only during high water years, as it did in the 1992 and 1993 consultation processes.

ET AL., SUPPLEMENTAL BIOLOGICAL ASSESSMENT ON FEDERAL COLUMBIA RIVER POWER OPERATIONS) (copy on file with author).

462. Because the proposed recovery plan duplicates the measure contained in the revised biological opinion in its section dealing with hydropower impact on the listed runs, it will not be discussed separately. See PROPOSED RECOVERY PLAN FOR SNAKE RIVER SALMON, *supra* note 457, at V.2.10-V.2.90.

463. 1994-98 BIOLOGICAL OPINION, *supra* 410, at 68-69 (Snake River sockeye test results); 69-71 (Snake River spring/summer chinook test results); 71-73 (Snake River fall chinook results). The three tests for juvenile mortality, which are performed as a computer simulation on the effects of passage through the hydroelectric system, are (1) the Columbia River Salmon Passage (CRISP) model; (2) the Passage Analysis Model (PAM); and (3) the Fish Leaving under Several Hypotheses (FLUSH) model. *Id.* at 66-67. The three models "characterize juvenile passage in a similar fashion when input is standardized and results are presented on a relative scale," but reflect different hypothesis. *Id.* at 67. These are: (1) the distribution of survival over the lifespan of the fish; (2) the effect of flow on survival; and (3) the benefit, in terms of reduced mortality, of juvenile transportation. *Id.* (citing L. BARNTHOUSE, ET AL., COLUMBIA BASIN SALMONID MODEL REVIEW (Interim Report, Oct. 1994) (available from Oak Ridge National Laboratory, Oak Ridge, TN)).

464. *Id.* at 12. The environmental baseline "includes the past and present impacts of all Federal, State, or private activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early [ESA] section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process." 50 C.F.R. § 402.02 (definition of "effects of the action"). Thus, the environmental baseline describes the current status of the listed species "in relation to the risks presented by the continuing effects of all previous actions and resource commitments that are not now subject to further exercise of federal discretion." 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 12. In *Idaho Department of Fish & Game*, Judge Marsh rejected arguments that the existence of the FCRPS dams could not be considered part of the environmental baseline. See *supra* notes 317-319 and accompanying text.

2. Reasonable and Prudent Alternatives

NMFS acknowledged that adult returns among each of the listed stocks are expected to be very low in the next few years.⁴⁶⁵ Nevertheless, the agency set low survival and recovery targets. For Snake River spring and summer chinook, NMFS expects survival to be assured if 11,000-22,000 natural spawners are counted at Lower Granite Dam.⁴⁶⁶ For fall chinook, the survival threshold is 300 spawners, while for Snake River sockeye it is 150-300 returning fish.⁴⁶⁷ Recovery targets are set substantially higher. For Snake River sockeye, the goal is 1000 naturally-produced salmon in one lake and at least 500 in each of two other lakes in the Stanley River Basin, Idaho.⁴⁶⁸ For fall chinook, the recovery objective is 2,500 naturally-produced fish in the lower Snake River and its tributaries.⁴⁶⁹ For spring and summer chinook, the target is 31,440 wild salmon at Lower Granite Dam.⁴⁷⁰

To achieve these targets, NMFS mandated four basic objectives for FCRPS management during 1994-98. First, the agency recognized that juvenile salmon need more water to assist their migration, and therefore included a variety of measures aimed at augmenting flows in the biological opinion. Second, NMFS acknowledged that releases of stored water over dams allow smolts to avoid passage through hydroelectric turbines and established criteria for such spills at several lower Snake and lower Columbia dams. The objective of the flow and spill criteria is the achievement of an 80% juvenile fish passage efficiency (FPE). Third, NMFS required changes to the physical structures of the dams to improve adult migration. Finally, the agency made clear that an "improved" transportation program is essential to allow juveniles to reach the sea.

Although NMFS committed the federal government to the drawdown of John Day reservoir and the four lower Snake River dams to minimum operating pool by 1996, the agency postponed until 1999 any decision on whether to lower the Snake River reservoirs below that elevation in an effort to further enhance water velocity.⁴⁷¹ Thus, even if NMFS eventually concludes that drawdowns below minimum operating pool are necessary, none will occur before the twenty-first

465. Only two Snake River sockeye, 500 Snake River fall chinook, and less than 2,000 Snake River spring and summer chinook are expected to reach the mouth of the Columbia River in 1995 under the current method of operating the federal hydroelectric power system. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 33-37.

466. *Id.* at 27.

467. *Id.* at 30, 32.

468. *Id.* at 32.

469. *Id.* The lower Clearwater River is excluded.

470. *Id.*

471. *Id.* at 92-94.

West & Northwest, Vol. 14, No. 1, Winter 2008

century.⁴⁷² Although recent tests have demonstrated that drawdowns are beneficial to juveniles and economically feasible,⁴⁷³ the agency asked the Corps to perform another complete feasibility study before 1996.⁴⁷⁴

3. Flow Augmentation Measures

NMFS recognized the value of greater flows for juvenile salmon.⁴⁷⁵ But the agency failed to require the biologically optimum flow targets long advocated by state fish and wildlife agencies and treaty tribes.⁴⁷⁶ To provide maximum benefit to smolts, flows on the lower Snake River should average 140 kcfs.⁴⁷⁷ On the lower Columbia, flows should average 300-350 kcfs.⁴⁷⁸ Under the revised 1994-98 biological opinion, the spring freshet on the lower Snake River is to be maintained at 85-100 kcfs, while the average spring flow objective on the lower Columbia River is set at 220-260 kcfs.⁴⁷⁹ During the summer, the flow requirements are respectively 50-55 kcfs and 200 kcfs.⁴⁸⁰ If flows on the lower Snake River are permitted only at the mandated minimum levels, then the region will continue to find it necessary to remove most juvenile salmon from the river.⁴⁸¹

NMFS also suggested reasonable and prudent alternatives that are unlikely to achieve the recommended minimum flows. Although the agency allocates 11.5 maf more water toward flows than does the Council's 1994 Program amendments, the biological opinion actually provides 1 maf *less* water for flows in the lower Snake River than the Council called for.⁴⁸² The only definite source of the water needed to provide increased flows is the

472. *Id.* at 92 ("[I]mplementation of drawdown . . . in the Snake River may begin by 2000.")

473. *See supra* note 332 and accompanying text.

474. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 92-94.

475. *Id.* at 95-104.

476. *See supra* notes 57-59 and accompanying text.

477. THE WATER BUDGET, *supra* note 58.

478. 1981 COALITION RECOMMENDATIONS, *supra* note 57, at 167-69.1.

479. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 104.

480. *Id.*

481. When flows on the lower Snake average 85 kcfs, approximately 74% of migrating spring and summer chinook juveniles must be transported; at flows of 100 kcfs, the proportion is 56%. *Id.* at 112.

482. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 99-100. This is because NMFS calls for the purchase of less than 500 kaf of water from upper Snake River basin users each year between 1995-97. Moreover, the Bureau is not actually obligated to acquire that much water. NMFS directed the Bureau only to "tak[e] such actions as are necessary to ensure a high probability of providing provision of that volume by 1998." *Id.* at 99.

drawdown of Dworshak Reservoir by 80 feet during the summer.⁴⁸³ The success of other methods for acquiring the needed water depends on whether the federal government can persuade private parties to provide the volume needed. NMFS reiterated its earlier recommendation that the Corps and the Bureau obtain 427 kaf from the upper Snake River from willing sellers, but thus far it appears that the government is experiencing difficulty finding sellers even at a very high price.⁴⁸⁴ NMFS also commanded the federal government to negotiate the acquisition of an additional volume of storage from the Canadian treaty projects to enhance spring and summer flows.⁴⁸⁵ Releases from Brownlee Reservoir are also made voluntary because NMFS has no authority over the Idaho Power Company through the ESA section 7 consultation process.

To compound the revised biological opinion's lower water acquisition target, NMFS required the dam operating agencies to obtain additional water only when it proves convenient for third parties to provide it.⁴⁸⁶ This approach will not guarantee the achievement of flow targets. NMFS further undercut its own emphasis on flows by including in the biological opinion numerous constraints that may make achievement of the flow levels impossible. Lake Roosevelt (behind Grand Coulee Dam), Hungry Horse Reservoir, and Libby Reservoir must be filled by April 20 each year and are to remain that way until releases for other project purposes draw down the elevations.⁴⁸⁷ That requirement eliminates the prospect of flow enhancement from upstream project storage during the fall. Minimum reservoir elevations are also established for Lake Roosevelt and Dworshak Reservoir.⁴⁸⁸

4. Spills

The biological opinion recognizes that hydroelectric turbines have a catastrophic impact on migrating juveniles and relies on spills at all of the

483. Stephen Steubner, *NMFS Decision Leaves Industry Intact, Fish Little Hope*, IDAHO FALLS POST-REGISTER, Mar. 2, 1995, at A1.

484. Rocky Barker, *NMFS Plan Lets Farmer Control Tap*, IDAHO FALLS POST-REGISTER, Mar. 2, 1995, at A1.

485. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 100-101. However, the agreement must be "revenue neutral," which means it probably cannot result in any lost power revenues for either BPA or Canadian power sellers or increased energy costs associated with power generated at the Canadian plants. *Id.*

486. *Id.* at 99 ("[T]he [Bureau] shall secure water for flow augmentation . . . from willing sellers."). The Bureau is also forbidden to invoke the federal government's condemnation power. NMFS directed it to obtain water "in a manner that is consistent with applicable state law." *Id.*

487. *Id.* at 95. The practical consequence of this provision will be to encourage flood control releases in March, before migration season begins.

488. *Id.*

West v Northwest, Vol. 14, No. 1, Winter 2008

federal dams in order to avoid forcing the young fish through them.⁴⁸⁹ Spill requirements are established for each hydroelectric project where transportation collection does not occur.⁴⁹⁰ At Little Goose and Lower Monumental Dams, however, spill is only required when flows exceed 85 kcfs in the Snake River, while spills are mandatory at Lower Granite Dam only when flows on the Snake exceed 100 kcfs.⁴⁹¹ Similarly, at McNary Dam no spills are mandated when flows on the Columbia fall below 220 kcfs.⁴⁹²

These spill thresholds are not reinforced by NMFS' decision to allow FPE goals to be achieved by exceeding gas supersaturation limits imposed by the four Pacific Northwest states.⁴⁹³ The biological opinion specifies that flows should not allow juveniles to be exposed, over the long term, to more than 115% or, in the short run, to more than 120% of the gas saturation levels mandated by the respective state water quality agencies.⁴⁹⁴ By contrast, the Council established the same FPE target but required the Corps to stay generally within state-mandated gas supersaturation limits between April 15-July 31 on the Snake River and between May 1-August 31 on the Columbia River.⁴⁹⁵

5. Changes to Dam Structures to Assist Adult Passage

NMFS established a fish guidance efficiency (FGE) target of 80% of adults on the way to upriver spawning beds.⁴⁹⁶ To achieve that goal, the biological opinion requires the Corps to improve adult routing and bypass systems and calls for improvement in spill efficiency through modifications to dam baffles, flip-lips and stilling basins.⁴⁹⁷

6. Transportation

NMFS decided to reduce the number of juvenile salmon transported to the base of Bonneville Dam below the levels currently subject to such

489. *Id.* at 45 (recognizing that mortality associated with passage through turbines exceeds mortality caused by spillways and bypasses).

490. *Id.* at 105.

491. *Id.*

492. *Id.* at 104.

493. *Id.* at 107-08. Fish passage efficiency refers to the proportion of fish passing the dams without moving through turbines. *Id.* at 45.

494. *Id.* at 107.

495. 1994 PROGRAM, *supra* note 358, § 5.6C.1, at 5-40.

496. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 105. Fish guidance efficiency refers to the proportion of fish passing the dams through juvenile bypass systems. *Id.* at 45.

497. *Id.* at 114-15, 125.

handling when conditions permitting the achievement of flows above 100 kcfs in the lower Snake River exist.⁴⁹⁸ The agency also recognized that improvements in the methods of transporting fish are necessary to reduce the stress inflicted on smolts, as well as the occurrence of predation and disease.⁴⁹⁹ The problem with these "improvements" is that they fail to address the basic flaw in the plan. The state fish and wildlife agencies and tribes believe that transportation will not assist the endangered runs to recover so long as in-river conditions are not improved.⁵⁰⁰ Moreover, NMFS decided to disregard test results that indicate that transportation may actually decrease the likelihood of salmon recovery.⁵⁰¹ The agency compounded this mistake by establishing procedures for tests to be conducted over the next several years that are unlikely to provide an accurate assessment of the impacts of the barging and trucking programs on wild juveniles.⁵⁰²

7. Putting it All Together: Will the 1994-98 Biological Opinion and Proposed Recovery Plan Restore Wild Salmon to the Pacific Northwest?

The 1994-98 biological opinion on FCRPS operations recommends recovery measures that are likely to be less effective than those mandated by the Council in the 1994 Program amendments. Nevertheless, the cost of NMFS' plan is not substantially lower than that of the Program.⁵⁰³ Nor does NMFS' plan reflect the urgency so clearly demanded by the plight of the

498. *Id.* at 112. However, NMFS sanctioned nearly exclusive reliance on transportation to assist migrating Snake River fall chinook, since the biological opinion failed to require full flows adequate to permit in-river migration. *Id.* Moreover, nearly all migrating spring/summer chinook would be transported. NMFS estimated that 74% would have to be barged when flow levels are between 85-100 kcfs, with 56% taken out of the river when flows exceed 100 kcfs. *Id.*

499. *Id.* at 111.

500. *See* 1994 PROGRAM, *supra* note 358, at 15-116 to 15-123 (discussing various studies of transportation program effects on salmon).

501. 1994-98 BIOLOGICAL OPINION, *supra* note 410, at 111 ("NMFS recognizes the validity of the concerns raised by the states, tribes, and others both about the absolute benefits of transportation and of its ultimate efficacy as a recovery tool.").

502. *Id.* at 111. NMFS proposes to compare adult returns from transported smolts to survivals in the same river. However, this methodology entirely fails to take account of survival rates on rivers with adequate flows and therefore cannot accurately assess the efficacy of transportation as a recovery tool.

503. NMFS' recommendations, if fully implemented, may actually cost the region more than the Council's Fish and Wildlife Program. *See* letter from F. Lorraine Bodi, American Rivers to William Stelle, National Marine Fisheries Service, and Michael Speer, U.S. Fish and Wildlife Service (Feb. 9, 1995) at 2 (copy on file with author).

West ◊ Northwest, Vol. 14, No. 1, Winter 2008

Basin's salmon and which both the Ninth Circuit and Judge Marsh thought necessary. NMFS failed to provide adequate flows or to mandate spills at all of the projects where they would be most helpful to migrating juveniles. The agency has not summoned the courage to re-orient river management toward a velocity-based scheme or acknowledged that lasting improvement in the health of the runs can be achieved only if the federal dam operators let the Columbia and Snake Rivers be rivers again. Despite convincing evidence of their value,⁵⁰⁴ NMFS punted into the next century a decision on whether to drawdown Snake River reservoirs in order to improve smolt travel time. Most damningly of all, the 1994-98 biological opinion steadfastly upholds a fifteen-year experiment in transporting juveniles that offers little evidence that human technological fixes can do better by the salmon than can the river.⁵⁰⁵

NMFS should have required much bolder efforts. To give the rapidly disappearing salmon runs their best chance to survive into the next century, NMFS should put into practice the tenets of adaptive management. Fifteen years of experience has taught the region that barges and trucks are not an adequate substitute for rapids and fast water. The Corps, the Bureau and BPA should be forced to end the transportation program. Much higher flow levels on the Columbia and Snake Rivers during the spring and summer migration seasons should also be mandated. Minimum average flows should be maintained much closer to the biologically optimum beneficial levels.⁵⁰⁶ To avoid the huge mortality rates created by hydroelectric turbines, spills should be mandatory at all of the hydroelectric projects. Finally, NMFS should accept that juvenile mortality can be reduced most substantially if the speed of the river's flow is increased. NMFS should pursue quickened recovery by implementing reservoir drawdowns while enough fish to rebuild the remaining tiny wild populations can benefit from them.

VIII. Conclusion

The 1994 Program amendments responded admirably to the court's holdings and expression of impatience in *Northwest Resource Information Center*. They briefly promised some hope that the region's leaders recognize that aggressive actions are needed if healthy wild salmon runs are to be returned to the Pacific Northwest. Nevertheless, the Council's new-found willingness to lead the recovery effort may prove fleeting. The new Republican majority in Congress and the changed political leadership in Idaho have already

504. See *supra* note 332.

505. See 1994 Program, *supra* note 358, at 15-116 to 15-118 (discussing state fish and wildlife agency and tribal criticisms of transportation program and noting that "[T]he Council agrees that transportation is not a substitute for changes in the river.").

506. See *supra* notes 57-59 and accompanying text for a discussion of biologically optimum flows.

indicated strong sympathy toward the economic interests that may have to sacrifice subsidies if the salmon are to be saved. The loss of Idaho as an advocate of bold efforts to stave off the extinction of salmon may further facilitate the breakdown of the fragile consensus behind the 1994 Program amendments. Thus, the Ninth Circuit's decision in *Northwest Resource Information Center*, while a useful and unprecedented interpretation of the Northwest Power Act, may ultimately prove insignificant.

NMFS unfortunately failed to produce a blueprint for salmon recovery that responds to Judge Marsh's warning that the salmon cannot, for much longer, survive the entrenched resistance to fundamental change. Although *Idaho Department of Fish & Game* forced NMFS to include all relevant scientific information in the revised 1994-98 biological opinion on FCRPS operations, NMFS avoided the hard choices that must be made. The 1994-98 biological opinion appropriately calls for increased flows in the lower Columbia and lower Snake Rivers during smolt migration seasons, but fails to provide the means to achieve them. NMFS also unwisely postponed the measures essential to achieve improved water velocity. Reservoir drawdowns are put off until the next century at the earliest, and NMFS again failed to urge a step away from continued reliance on barge and truck transportation as a means for helping juvenile salmon reach the ocean. NMFS may have complied with the ESA, but not with Judge Marsh's warning that the region's river managers, fish and wildlife agencies, electricity consumers and concerned fish advocates must quickly reconcile the needs of salmon to the energy demands of the Pacific Northwest.

Northwest Resources Information Center and *Idaho Department of Fish & Game* could have prompted the end of "business as usual" in the Columbia River Basin. The Ninth Circuit and Judge Marsh clearly warned of their impatience with the status quo and of their skepticism toward any approach that continues to place the economic considerations of power consumers before the urgent priority of returning thriving wild salmon runs to the region. For all of that, however, the decisions have failed to convince the region's entrenched economic powers that the Pacific Northwest's hydroelectric system should not be maintained without changes at the expense of the Columbia River Basin's most significant cultural and biological resource.

IX. Afterword

Developments over the summer have cast further doubt on the region's willingness to change the status quo in the Columbia River Basin. NMFS has sought to avoid implementing measures included in its proposed recovery plan and in the 1994-98 biological opinion on the FCRPS that might antagonize upper Basin irrigators. In August 1995 the agency agreed to scale back plans to increase flows during the final weeks of the Snake River fall chinook smolt migration. NMFS caved in to pressure from Montana Governor Marc Racicot and irrigation and flatwater recreation interests

West • Northwest, Vol. 14, No. 1, Winter 2008

opposed to an increase in releases from Libby Dam of 4000 cfs.⁵⁰⁷ Meanwhile, the Corps allowed only 360,000 of 1.8 million wild Snake River spring and summer chinook smolts to migrate in the river.⁵⁰⁸ The Corps also failed to implement the spills mandated by the 1994-98 biological opinion on the FCRPS until May, with the result that 16% of spring migrants were killed in turbines or while in the reservoirs.⁵⁰⁹ The Corps also cut back required spills later in the summer, which caused the FCRPS to fall below the 80% fish passage efficiency mandated by the biological opinion.⁵¹⁰

BPA's behavior has been even more troubling. Instead of taking Judge Marsh's warning that the status quo is unacceptable to heart, BPA has continued to focus almost exclusively on salmon recovery as the cause of its financial woes.⁵¹¹ The agency has unilaterally imposed an \$83 million cost cap on direct fish and wildlife costs, including habitat restoration, systems improvement programs, and the cost of BPA and Council management operations related to fish.⁵¹² BPA has also aggressively pushed legislation that would exempt operation of the hydroelectric system from virtually every environmental law, including the ESA and the Northwest Power Act.⁵¹³ The proposed legislation would also place a cap on BPA's annual salmon recovery-related expenses.⁵¹⁴ The cost cap would count power revenues foregone as a result of

507. See Bob Baum, U.S. Action Draws Fire of Salmon Advocates, OREGONIAN, Aug. 10, 1995, at C-1, C-3.

508. Notice of Suit Against NMFS BiOp Filed, 14 NORTHWEST CONSERVATION ACT REPORT 2 (July 24, 1995). The Corps transported 13 million smolts this year. *Id.*

509. *Id.*

510. *Id.* The reductions in spills were apparently deemed necessary because the turbines at Ice Harbor Dam malfunctioned.

511. As discussed earlier, see *supra* notes 446-456 and accompanying text, BPA's financial condition cannot be said to be the result of salmon recovery costs.

512. *Shareholders Have Practical Solutions*, 14 NORTHWEST CONSERVATION ACT REPORT 1 (May 12, 1995). Thus, BPA has shown an unwillingness to spend the amount of money required to implement the provisions of the 1994 Fish and Wildlife Program intended to benefit salmon. *Id.*

513. Joan Laatz, *BPA May Get a Break From Environmental Laws*, OREGONIAN, Sept. 12, 1995, at A1, A7. There are several bills pending before Congress that would grant BPA the cost cap and exemptions. One, introduced by Sen. Mark O. Hatfield (R-Oregon), is expected to be included as an amendment to a fiscal year 1996 appropriations bill. The others, introduced by Senators Slade Gorton (R-Washington) and Larry Craig (R-Idaho), would also exempt other hydroelectric dam operators in the region, including the Idaho Power Company and the mid-Columbia PUDs, from environmental laws. As of the date this was written, the Clinton Administration has not yet agreed to so-called "sufficiency" language that would declare expenditure of costs up to the annual limit adequate to comply with federal environmental laws. *Id.*

514. Senator Hatfield's bill would set up cap as a percentage of BPA's revenues. By contrast, the Gorton and Craig bills would establish a Fish and Wildlife Enhancement

West & Northwest, Vol. 14, No. 1, Winter 2008

spills or flows as costs.⁵¹⁵ Congress is likely to decide whether to impose a limit on BPA's salmon recovery costs and exempt the agency from environmental laws during the debate over federal spending for fiscal year 1996.⁵¹⁶

BPA has also decided that it is appropriate to continue the rate system that has foreclosed any serious effort to fix the agency's financial problems. Instead of moving toward a rate scheme that more equitably allocates BPA's WPPSS-related debt to those who benefited from the region's investment in it, BPA has decided to cut electricity rates for the DSIs for at least the next five years.⁵¹⁷ BPA has also allowed some of the DSIs to purchase power from

Fund to which BPA would contribute and which would serve as a sort of "checking account" that imposes a limit on annual spending for salmon recovery. *Shareholders Have Practical Solutions*, 14 NORTHWEST CONSERVATION ACT REPORT 1 (May 12, 1995).

515. In whatever form adopted, salmon cost cap legislation is likely to require that BPA's costs be determined from a baseline assumption as to the amount of power that could be generated if the Columbia River system were dedicated to maximum energy production. The bills would also mandate use of the market value of the power that could have been generated but for increased spills or flows as the measure for BPA's foregone power revenues. *Id.* The Gorton bill would also require that BPA *and the utilities that buy power from the federal government* be compensated for foregone power revenues that result from reservoir and flow modifications. Thus, Senator Gorton proposes to mandate taxpayer compensation to users of a publicly-owned resource if the government decides to redirect use of that resource. *Gorton Bill Draft: Write a Check, and that's "Sufficient."* 14 NORTHWEST CONSERVATION ACT REPORT 4 (Aug. 28, 1995).

516. The BPA cost cap apparently does not yet have unanimous support from the Pacific Northwest congressional delegation. Idaho Senators Craig and Dirk Kempthorne (R.) have indicated that they oppose Senator Hatfield's proposal because it "does not adequately address the problem of Dworshak Reservoir drawdowns, rate increases to [Idaho] Power Company customers and the creation of a regional authority to oversee salmon restoration." *Salmon: Dems Urge Emergency Fund; ID Sens Oppose GOP Plan*, AMERICAN POLITICAL NETWORK: GREENWIRE, Sept. 25, 1995 (available on Westlaw, APN-GR database). Senator Kempthorne also opposes exempting BPA from the ESA. *Id.* Meanwhile, Senators Patty Murray (D.-Washington) and Max Baucus (D.-Montana) have announced that they will support cost cap legislation only if Congress creates an additional \$500 million "emergency fund." The fund would cover salmon recovery expenses in years when water flows in the Basin are inadequate to provide for all existing uses of the river system. *Id.*

517. Joan Laatz, *BPA Generates Static Over Power Deals*, OREGONIAN, Sept. 14, 1995, at A1. BPA defends its desire to cut the DSI's power rates as a "pragmatic business decision" intended to secure a reliable customer base for federal power. *Id.* However, the effect of the DSI rate cut is to repudiate every other obligation of the agency except providing power to the aluminum smelters, since BPA has attempted to make up for the lost revenues concessions to the DSIs create by reducing expenditures on salmon recovery and energy conservation. *Special Report: BPA Competitiveness Bill a Crossroads*, 14 NORTHWEST CONSERVATION ACT REPORT 1, 2 (June 26, 1995). Nevertheless, after initially opposing the DSI rate cuts, the Clinton Administration - pressured by

West & Northwest, Vol. 14, No. 1, Winter 2008

competing generators before their existing contracts with BPA expire.⁵¹⁸ Thus, BPA is willingly allowing its revenues to be reduced at a time when the agency loudly complains that the costs of salmon recovery are placing a potentially fatal drain on its resources.⁵¹⁹

Nor is the outlook for one of the legal foundations supporting efforts to recover Pacific Salmon bright. The House Resources Committee recently approved an ESA "reform" bill that would de-list Columbia River Basin Salmon stocks and forbid future listings of individual ones without Congressional approval.⁵²⁰

Resource Guide: Columbia River and Endangered Salmon Issues

Michael C. Blumm, *Saving Idaho's Salmon: A History of Failure and a Dubious Future*, 28 IDAHO L. REV. 667 (1991-92).

Blumm's article examines the reasons behind the decline of Idaho's salmon and options for preventing extinction of the state's salmon population. Focuses on the effects of Columbia Basin water projects on salmon spawning grounds, briefly exploring the history of eight major federal dam systems on the lower Snake and Columbia rivers and their particular impact on juvenile salmon. After discussing past efforts to save the landlocked state's salmon, including the Northwest Power Act's Columbia Basin Fish and Wildlife Program, the author concludes that salmon advocates must adopt a broad-based strategy to contend with both state water laws and federal hydropower laws and press for greater accommodations to salmon in the operation of Columbia Basin dams.

several of the DSI subsidies - signed several power contracts. The new DSI contracts will allow several aluminum companies to avoid any liability for BPA's salmon recovery costs or WPPSS debt. Bill Mackenzie, *BPA Zigzags, Then Signs Contracts*, OREGONIAN, Sept. 29, 1995, at A14.

518. *The BPA Ratecase: Background and Outline of Issues*, 14 NORTHWEST CONSERVATION ACT REPORT 1, 2 (Aug. 28, 1995). The DSI rate cut would lower per unit electricity costs for aluminum and other intensive energy-using industries from 26 mills to 22.6 mills per kilowatt hour. Robert T. Nelson, *BPA Called on Carpet Over Rate Plan*, SEATTLE TIMES, Sept. 19, 1995, at B1.

519. BPA's willingness to waive DSI contract provisions could cost the agency as much as \$30 million. *See Enviro's Seek to Void BPA Biz Concessions*, GREENWIRE, Apr. 27, 1995 (available on Westlaw, APN-GR database). Moreover, BPA has offered to allow the DSIs continued free access to the federal transmission system for twenty years, even if a contractee decides to purchase power from another generator. *BPA Generates Static*, *supra* note 509, at A1. Thus, BPA is unwilling to force the DSIs to contribute to the costs of salmon recovery or to defray part of BPA's WPPSS debt through an access charge, even though the DSIs have benefitted greatly from the FCRPS and encouraged construction of the ill-fated WPPSS plants.

520. *See* H.R. 2275, 104th Cong., 1st sess. (1995): *Young - Pombo ESA Reauthorization Bill Approved by House Committee*, BNA NATIONAL ENVIRONMENT DAILY, Oct. 16, 1995 (available on LEXIS, BNA Library).

Michael C. Blumm & Andy Simrin, *The Unraveling of the Parity Promise: Hydropower, Salmon, and Endangered Species in the Columbia Basin*, 21 ENVTL. L. 657 (1991).

One in a series on the Columbia Basin Fish and Wildlife Program: analyzes the effects of the Program since its adoption in the Northwest Power Act of 1980. Blumm and Simrin criticize the Northwest Power Planning Council as the agency responsible for implementing the program, blaming the Council for a failure to fulfill the Program's promise of placing salmon on "equal footing" with the hydroelectric power system, while crediting the agency with preventing further developments in the Columbia Basin hydroelectric system. Tracks the various amendments to the Act, and proposes pressuring the Council to fulfill its mandate or parity between salmon and hydroelectricity.

Michael C. Blumm, *Reexamining the Parity Promise: More Challenges Than Successes to the Implementation of the Columbia Basin Fish and Wildlife Program*, 16 ENVTL. L. 461 (1986).

Evaluates the first three-and-a-half years of the Columbia Basin Fish and Wildlife Program, from 1982 to 1986. Outlines amendments adopted by the Northwest Power Planning Council in 1984, 1985 and 1986. In the heart of the article, Blumm discusses the various legal challenges to the Program's implementation and the outcomes of those cases, concluding that the "jury is still out" on the Program's legal status.

Michael C. Blumm, *Implementing the Parity Promise: An Evaluation of the Columbia Basin Fish and Wildlife Program*, 14 ENVTL. L. 277 (1984).

Reviews the goals of the Columbia Basin Fish and Wildlife Program as adopted in 1982. Blumm provides the details of the Program's mandates, focusing on the precedent setting provisions to (1) change water project operations to benefit fish and wildlife; (2) give priority to rehabilitation of fish stocks and their natural habitat; (3) adopt a series of conditions for future hydroelectric projects in order to avoid problems created by systems built prior to 1982.

Michael C. Blumm, *Fulfilling the Parity Promise: A Perspective on Scientific Proof, Economic Cost and Indian Treaty Rights in the Approval of the Columbia Basin Fish and Wildlife Program*, 13 ENVTL. L. 103 (1982).

Blumm begins with an analysis of the Pacific Northwest Electric Power Planning and Conservation Act, hailing the Act as Congress' recognition of the debt owed by society to the fish and wildlife of the Columbia Basin, whose habitat has been sacrificed for energy consumption. This article explores possible definitions of approval standards listed in the Act, advocating a biological feasibility v. cost-benefit standard where biological concerns override economics, giving deference to the biological judgment of the region's fish and wildlife agencies and Indian tribes.

Michael C. Blumm, *Hydropower vs. Salmon: The Struggle of the Pacific Northwest's Anadromous Fish Resources for a Peaceful Coexistence with the Federal Columbia River Power System*, 11 ENVTL. L. 211 (1981).

Examines the evolution of the conflict between hydroelectric power and anadromous fish protection in the Columbia basin. Explores the reasons behind the development of a vast hydroelectric power system to supply most of the region's energy needs at the expense of the world's largest runs of chinook salmon and steelhead trout. The author also describes the role the Indian treaty rights, the National Environmental Policy Act and other federal acts in protecting the region's fish population, calling for an overhaul of the decision-

West & Northwest, Vol. 14, No. 1, Winter 2008

making structure regarding the region's hydroelectric power system and fish population to minimize conflicts between the various entities involved.

Kelly R. Bryan, Note, *Swimming Upstream: Trying to Enforce the 1992 North Pacific Salmon Treaty*, 28 CORNELL INT'L. L.J. 241 (1995).

Examines the 1992 North Pacific Salmon Treaty beginning with a recounting of the history of the fishing industry and past fishing treaties of North America-Japanese and Russ-Japanese relations. After discussing the provisions of the new Treaty and problems of illegal salmon fishing, the note concludes with an assessment of the Treaty's enforcement provisions at land and sea.

ROBERT CLARK, *RIVER OF THE WEST: STORIES FROM THE COLUMBIA* (1995).

Chronicles the uneasy history of natives and settlers along the Columbia River. Clark reconstructs for his readers how settlers, naturalists, historians and politicians all impacted the river's destiny.

JOSEPH CONE, *A COMMON FATE: ENDANGERED SALMON AND THE PEOPLE OF THE PACIFIC NORTHWEST* (1995).

Traces the history of the plight of the Pacific salmon and the Americans fighting against the salmon's extinction. Cone reconstructs the factors which caused the rapid depletion of salmon stocks and traces the parallel growth in concern over the problem. *A Common Fate* is ultimately about creating a viable future for salmon and people. The book provides a framework for understanding what solutions will be genuine and which ones will save the Northwest Salmon.

WILLIAM DIETRICH, *NORTHWEST PASSAGE: THE GREAT COLUMBIA RIVER* (1995).

Beginning with an extensive history of the Columbia River, this book then focuses on the total transformation of the river to provide electricity and reliable navigation. Dietrich claims not to make a judgment on whether the transformation from river to energy source was a good thing, with his main concern being the lack of argument and debate over the transformation, and the possibility the other side was simply not heard.

Michael B. Early & Egil Krogh, *Balancing Power Costs and Fisheries Values Under the Northwest Power Act*, 13 U. PUGET SOUND L. REV. 281 (1990).

The central thesis of this article is that the Northwest Power Act requires that appropriate mitigation measures for the fisheries must be determined by balancing the fisheries values against the costs incurred by electric power consumers. Early and Krogh contend that the Act has been misinterpreted and discuss whether the Council's actions have been consistent with the Act, concluding that balancing power cost and fisheries values is not an easy balance to strike.

JEFFREY P. FOOTE ET AL., *BONNEVILLE POWER ADMINISTRATION, POWER AND THE PACIFIC NORTHWEST: A HISTORY OF THE BONNEVILLE POWER ADMINISTRATION* (1976).

Traces the development of the Bonneville Power Administration from an obscure federal agency to an agency that has a dominant role in power planning for the Pacific Northwest. The arena of judicial activity is explored as it has forced the BPA into the area of long-term environmental planning. The article concludes with a discussion of then current planning efforts to bridge the gap between energy supply and demand and the various legislative proposals then being advanced.

Dale D. Goble, *The Council and the Constitution: An Article on the Constitutionality of the Northwest Power Planning Council*, 1 J. ENVTL. L. & LITIG. 11 (1986).

Discussed constitutional challenges to Congress' authority in creating the Northwest Power Planning Council as a state-appointed body authorized to guide the actions of a federal agency. Provides a history of legislation which lead to the Council's creation and focuses on the impact of the Council on the Appointments Clause of the U.S. Constitution. This author ultimately concludes that the challengers' arguments are flawed and serve only as a "red herring" in the environmental battle over water rights.

Thomas C. Jensen, *The United States-Canada Pacific Salmon Interception Treaty: An Historical and Legal Overview*, 16 ENVTL. L. 363 (1986).

Provides an overview of the United States-Canada Salmon Treaty beginning with the political, legal and resource management problems stemming from United States and Canadian interception of each other's Pacific salmon, and the interception of each nation's salmon by third-party fishing nations. The article then discusses other events leading up to the treaty such as the cultural and economic significance of the Pacific salmon, the Fraser River Convention, and the last minute maneuvering in the three years leading up to the final agreement. After an overview of the treaty's text, the author speculates on the treaty's probable future.

Judith A. Johansen, *Is Hydropower an Endangered Species?*, 8 NAT. RESOURCES & ENV'T 13 (1994).

Considers critical questions about the future of hydropower. Delves into the historical development of hydropower, the role of hydropower in the development of the electric utility industry and how society's attitude toward hydropower has changed. Presents the issues of environmental protection that impact hydroelectric plants and whether such plants will be able to continue operating within the bounds of environmental regulations.

Kai N. Lee, *Rebuilding Confidence: Salmon, Science, and the Law in the Columbia Basin*, 21 ENVTL. L. 745 (1991).

Discusses various approaches advocated by academics and activists to the threat of extinction of salmon populations. Describes the effect of human intervention in the Columbia River Basin's ecosystem and explores various bases for protecting salmonids. Advocates utilizing the Endangered Species Act in conjunction with the authority of the Northwest Power Planning Council and other relevant government agencies as a viable method of saving the salmonids from extinction.

Michael V. McGinnis, *On the Verge of Collapse: The Columbia River System, Wild Salmon and the Northwest Power Planning Council*, 35 NAT. RESOURCES J. 63 (1995).

Describes the various fish species threatened with extinction in the Columbia River Basin. Discusses the scope of authority vested in the Northwestern Power Planning Council in determining the future of the Columbia River fish stocks. Concludes that efforts to save the Columbia River fish population depend on the development of a non-conquering approach to nature on the part of the government and private agencies utilizing the resources of the area.

Andrew S. Noonan, *Just Water Over the Dam? A Look at the Endangered Species Act and the Impact of Hydroelectric Facilities on the Anadromous Fish Runs of the Northwest*, 28 IDAHO L. REV. 781 (1992).

Noonan examines the environmental impact of the Northwest's dependence on inexpensive electricity produced by hydroelectric dams, concluding that hydropower dams account for more than ninety-five percent of the human impact causing a decline

West ◊ Northwest, Vol. 14, No. 1, Winter 2008

in the salmon population. His article explores the ESA's impact on the Northwest rivers' salmon, focusing on the no-jeopardy and takings clauses of the ESA.

Panel, *Issues Under the Northwest Power Planning Act*, 2 J. ENVTL. L. & LITIG. 153 (1987).

A panel with separate presentations by Michael C. Blumm, John M. Volkman, Terence Thatcher and Bill Kloos on a variety of issues affecting the Act. Blumm evaluates the innovative measures and unfulfilled promises contained within the Act, while Volkman focuses on Indian treaty fishing rights. Thatcher discusses the proposed expansion of electrical lines in the Northwest and the Federal Energy Regulatory Commission's handling of fishery issues in its hydroelectric licensing process. Kloos provides a brief overview of litigation before the Federal Regulatory Commission.

Michael T. Pyle, *Beyond Fish Ladders: Dam Removal as a Strategy for Restoring America's Rivers*, 14 STAN. ENVTL. L.J. 97 (1995).

Provides a rationale for removing dams from American rivers in order to restore the wildlife and fish populations dependent on affected rivers. Discusses the social and economic effects of removing the dams, and tackles the political question of succeeding in such a strategy through the Federal Power Act and license expirations. Concludes that dams can and should be removed.

Colloquium, *Who Runs the River?*, 25 ENVTL. L. (1995).

Includes articles by Lorraine Bodi, Michael C. Blumm and Adam Berger. Bodi provides the history and legislative background of the Northwest Power Act, while Blumm discusses two recent judicial decisions: *Idaho Department of Fish & Game v. National Marine Fisheries Service* and *Northwest Resource Information Center v. Northwest Power Planning Council*. Berger also analyzes the Northwest Resource Information Center's challenge to the Council, but as an insider working for the Center.

Symposium, *Seattle Master Builders and Creative Cooperative Federalism*, 17 ENVTL. L. (1987).

Symposium issue covering the effects of the Ninth Circuit's decision in *Seattle Master Builders Ass'n v. Pacific Northwest Electric Power & Conservation Planning Council*. Author Dave Frohnmayer reviews the court's ruling that the Council was not subject to the Appointments Clause and saved what Frohnmayer called an "imaginative, complex and very important experiment in regional federalism." The case tested the authority of the Northwest Power Planning Council as a multistate agency setting energy conservation guidelines for the region. Other symposium articles examine federal acts affecting conservation efforts in the Columbia River gorge and the potential for new forms of governing decisions affecting river basins.

John M. Volkman, *Making Room in the Ark: The Endangered Species Act and the Columbia River Basin*, 34 ENVIRONMENT 18 (1992).

One of three articles on regional efforts in the Northwest to protect fish stocks of the Columbia River using the ESA. Volkman discusses efforts to list various salmon species as endangered and the reasons behind the region's failure to gain protection of the river basin's fish population through the Act's listing procedures. Concludes that the Act, combined with regional political efforts, can still save the dwindling salmon populations.

RICHARD WHITE, *THE ORGANIC MACHINE: THE REMAKING OF THE COLUMBIA RIVER* (1995).

Chronicles the history of the Columbia River. Throughout his narrative White takes what he calls an unromantic and dogma free approach. White argues that

the effort to transform nature is not a defiling of nature. Rather, the combined efforts of groups who push for transformation purify society by freeing both human labor and nature.

CHARLES F. WILKINSON, *CROSSING THE NEXT MERIDIAN: LAND, WATER AND THE FUTURE OF THE WEST* (1992).

Provides a broad overview of environmental issues facing the Western states, covering mining rights, ranchers, and forest preservation. Wilkinson dedicates several chapters to the fish of Western river systems, including the once-bountiful salmon. Advocates the adoption of a sustainable yield in order to preserve the West's delicate eco-system.

Charles F. Wilkinson & Daniel K. Conner, *The Law of the Pacific Salmon Fishery: Conservation and Allocation of a Transbounding Common Property Resource*, 32 U. KAN. L. REV. 17 (1983-84).

Authors Wilkinson and Conner begin with the premise that salmon and steelhead trout are among the most intensively exploited resources, leading into a discussion on why these fish are vulnerable to such exploitation. The article also traces the history of fisheries in the Pacific Northwest, starting with the practices of Indian tribes in the area, followed by destructive methods of the new settlers, culminating in a free-for-all era of the early 1900's. The authors end with modern-day attempts at restoration and the difficulties of balancing the competing interests of hydroelectric dams, conservationists and Indian treaty rights.

West & Northwest, Vol. 14, No. 1, Winter 2008

* * *