CHAPTERS

WATER, WATER, EVERYWHERE, AND AT LAST A DROP FOR SALMON? *NRDC V. HOUSTON* HERALDS NEW PROSPECTS UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT

BY
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Section 7 of the Endangered Species Act requires federal agencies proposing an action that may affect an endangered or threatened species to consult with the appropriate federal fish or wildlife agency in order to ensure that the action will not jeopardize a protected species. The Ninth Circuit Court of Appeals recently held in Natural Resources Defense Council v. Houston (NRDC v. Houston) *that routine renewals of federal water delivery contracts constitute "agency actions" under the ESA, thereby triggering the procedural and substantive obligations of section 7. This Chapter discusses* NRDC v. Houston's *potential to revolutionize federal water delivery programs in the Pacific Northwest. The Chapter concludes that* NRDC v. Houston *will lead to greater protection of imperiled salmon and other listed species in the Pacific Northwest, because the Bureau of Reclamation will be required to increase consultation with the fish and wildlife agencies on the effects of its various projects in the region.*

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There is a river in Macedon, and there is also moreover a river at Monmouth: it is called Wye at Monmouth; but it is out of my prains what is the name of the other river; but 'tis all one, 'tis alike as my fingers is to my fingers, and there is salmons in both.[1]

I. INTRODUCTION

In the spring of 1868, John Muir, future founder of the Sierra Club, crossed California's San Joaquin Valley on his way to Yosemite.[2] He gazed out over the immense valley and declared that "never were mortal eyes more thronged with beauty."[3] Wildflowers bejeweled the valley in every direction as far as he could see. The San Joaquin River and its surrounding wetlands supported a copious amount of wildlife. While traveling northwest on the San Joaquin from its confluence with the Merced River nearly ten years later, Muir marveled at the "[s]almon in great numbers . . . making their way up the river."[4]

Today in the San Joaquin Valley, agribusiness is the star,[5] with environmental considerations playing a barely audible second fiddle.[6] Were Muir still available for comment, he would surely speak with disapprobation of what has become of the relatively untrammeled paradise he encountered in the San Joaquin Valley.[7] This valley is now the richest agricultural region in the world,[8] but the cost of its opulence is startling.

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[1] WILLIAM SHAKESPEARE, KING HENRY THE FIFTH act 4, sc. 7.

[2] *See* GENE ROSE, SAN JOAQUIN: A RIVER BETRAYED 69 (1992).

[3] WILLIAM F. KIMES & MAMIE B. KIMES, JOHN MUIR: A READING BIBLIOGRAPHY 4 (1986).

[4] JOHN MUIR, JOHN OF THE MOUNTAINS: THE UNPUBLISHED JOURNALS OF JOHN MUIR 244 (Linnie Marsh Wolfe ed., 1979).

[5] The vast majority of irrigated water in this region is delivered to large corporate farms and ranchers. *See* MARC REISNER, CADILLAC DESERT 349–53 (1986).

[6] *See infra* notes 10–17, 122–25 and accompanying text.

[7] Muir made clear his biocentric opposition to development of the San Joaquin Valley in 1868: "all this beauty of life is fast fading year by year,—foundering in the grossness of modern refinement." KIMES & KIMES, *supra* note 3, at 4; *see also* ROSE, *supra* note 2, at 77 ("[I]t seems somewhat ironic that the San Joaquin River and its larger watershed—a water basin that nourished much of the American [preservation] movement, as well as the concept of a National Park Service—now stands as one of the most exploited rivers in the nation.").

[8] In 1995, Fresno County, which depends on water diverted from the San Joaquin, enjoyed an annual farm income of $3 billion, making it the richest agricultural county in the United States. Robert H. Boyle, *A Hydro-History of the Bay-Delta*, AMICUS JOURNAL, Fall

For over fifty years, the Bureau of Reclamation (Bureau) has diverted most of the San Joaquin's water to agribusiness in the surrounding Central Valley.[9] This diversion has left the San Joaquin, once lush with salmon and surrounded by wetlands, "bone dry" for two stretches totaling over fifty miles and little more than a trickle in others.[10] Relentless irrigation of San Joaquin Valley cropland has led to a buildup of salts and other minerals toxic to plants in the soil and drainage basins, turning once-productive land into barren wastelands and killing wildlife.[11] The area's wetlands are all but destroyed.[12]

And then there are the salmon. The San Joaquin hosts the remnants of the southernmost natural salmon run in the world, today only a small fraction of its original size.[13] Native populations of spring-run and winter-run chinook in the San Joaquin River disappeared almost fifty years ago.[14] In the Sacramento River Basin to the north, salmon are injured by the diversion of Sacramento water southward through facilities in the San Joa-

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1998, at 18, 22. Four counties in the San Joaquin Valley—Fresno, Kings, Kern, and Madera—are consistently among the six wealthiest agricultural counties in the nation. REISNER, *supra* note 5, at 354.

[9] The Central Valley encompasses both the Sacramento Valley in the north and the San Joaquin Valley in the south. The San Joaquin Valley makes up two-thirds of the land yet contributes only one-third of the water. NORRIS HUNDLEY, JR., THE GREAT THIRST: CALIFORNIANS AND WATER, 1770s–1990s 232–33 (1992).

[10] Boyle, *supra* note 8, at 20. The first dry portion of the San Joaquin is a 22-mile stretch between Gravelly Ford and Mendota Pool. The second portion, over 30 miles long, stretches between the San Joaquin's confluence with the Fresno River and its confluence with the Merced River. ROSE, *supra* note 2, at xiii-xiv, 128; *see also* Natural Resources Defense Council v. Houston (*NRDC v. Houston*), 146 F.3d 1118, 1123 (9th Cir. 1998), *cert. denied*, 119 S. Ct. 1754 (1999).

[11] The drainage of irrigation water in the San Joaquin Valley has caused headaches for farmers and environmentalists alike. Salts and trace elements from spent irrigation water have permanently removed from production thousands of acres of cropland in the southern end of the valley. This led to the infamous crisis at the Kesterson Reservoir in the San Joaquin Valley, which made national headlines in 1983. Selenium-laden irrigation runoff accumulated in the artificial reservoir and took heavy tolls on fish and waterfowl. The Kesterson National Wildlife Area was closed to the public, and the California State Department of Food and Game issued press releases warning pregnant women and children not to eat ducks from the area. *See generally* TOM HARRIS, DEATH IN THE MARSH (1991).

[12] Over 90% of the Central Valley's original four million acres of wetlands no longer exist. Wendy Pulling, *Central Valley Project, California, reprinted in* NATURAL RESOURCES LAW CENTER, UNIVERSITY OF COLORADO SCHOOL OF LAW, RESTORING THE WATERS 38, 38 (1997).

[13] Boyle, *supra* note 8, at 19. This southernmost run is the San Joaquin fall-run population. Water Quality Standards for Surface Waters of the Sacramento River, San Joaquin River, and San Francisco Bay and Delta of the State of California, 59 Fed. Reg. 810, 822 (Jan. 6, 1994).

[14] Proposed Endangered Status for Two Chinook Salmon ESUs and Proposed Threatened Status for Five Chinook Salmon ESUs; Proposed Redefinition, Threatened Status, and Revision of Critical Habitat for One Chinook Salmon ESU; Proposed Designation of Chinook Salmon Critical Habitat in California, Oregon, Washington, Idaho, 63 Fed. Reg. 11,482, 11,487 (Mar. 9, 1998) (stating that construction of Bureau dams has "led to the extirpation" of winter-run chinook populations in the San Joaquin River Basin and that spring-run chinook, once the dominant run, have also "apparently been extirpated").

quin delta.[15] In one telling instance, the winter-run chinook population in the Sacramento River plummeted from more than 100,000 individuals in 1969[16] to 189 in 1994.[17]

But the tide is turning. Finally, the salmon are being given a fighting chance. This shift is evident in a recent Ninth Circuit case, *Natural Resources Defense Council v. Houston (NRDC v. Houston)*,[18] which sounds a clarion call of protection not just for salmon in the San Joaquin, but for imperiled salmon throughout the West. The principal instrument of relief in *NRDC v. Houston* is section 7 of the Endangered Species Act of 1973 (ESA or Act),[19] which imposes strict directives on federal agencies to ensure that their actions do not jeopardize protected species.[20]

At first, this may not sound like surprising news. After all, the United States Supreme Court caught the attention of the world over twenty years ago when it held that section 7 required the termination of a $100 million dam in order to preserve a three-inch fish called the snail darter.[21] But in that case, *Tennessee Valley Authority v. Hill (TVA v. Hill)*, the dam was still under construction when the snail darter was listed as endangered.[22] Large federal dams in the West, on the other hand, were not subject to section 7 during construction, because most of them were built before enactment of the ESA[23] and before salmon species in the region were

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15 *See* Status of Sacramento River Winter-run Chinook Salmon, 59 Fed. Reg. 440, 447–48 (Jan. 4, 1994). The Sacramento once ranked second only to the Columbia worldwide in terms of salmon numbers. Boyle, *supra* note 8, at 19.

16 59 Fed. Reg. at 440–41.

17 Ocean Salmon Fisheries off the Coasts of Washington, Oregon, and California; 1995 Management Measures, 60 Fed. Reg. 21,746, 21,747 (May 3, 1995).

18 146 F.3d 1118 (9th Cir. 1998), *cert. denied*, 119 S. Ct. 1754 (1999).

19 16 U.S.C. §§ 1531–1544 (1994). Section 7 is at *id.* § 1536.

20 As one commentator has noted, "Section 7 departs from prior ESA legislation in that it no longer [allows] the federal government the luxury of protecting endangered species only 'insofar as [is] practicable and consistent with the primary purposes' of its agencies." Albert Gidari, *The Endangered Species Act: Impact of Section 9 on Private Landowners*, 24 ENVTL. L. 419, 451 (1994) (quoting Endangered Species Protection Act of 1966, Pub. L. No. 89-669, § 1(b), 80 Stat. 926, 1095 (repealed 1973)); *see also infra* notes 45–75 and accompanying text.

21 Tennessee Valley Auth. v. Hill, 437 U.S. 153 (1978) (injunction granted where construction of dam, if completed, would have either eradicated snail darter population or destroyed its critical habitat). For an entertaining account of the many twists and turns of the snail darter saga, see REISNER, *supra* note 5, at 335–41.

22 437 U.S. at 161; *see also* Amendment Listing the Snail Darter as an Endangered Species, 40 Fed. Reg. 47,505, 47,505–06 (Oct. 8, 1975).

23 The period from the 1930s to the 1970s is known as the "dam building era" in the Northwest. KEITH C. PETERSEN, RIVER OF LIFE, CHANNEL OF DEATH: FISH AND DAMS ON THE LOWER SNAKE 11 (1995). No mainstem dams in the Columbia/Snake River system have been constructed since 1975. *See* Michael C. Blumm, *Columbia Basin Salmon and the Courts: Reviving the Parity Promise*, 25 ENVTL. L. 351, 352 (1995); Michael C. Blumm, *Saving Idaho's Salmon: A History of Failure and a Dubious Future*, 28 IDAHO L. REV 667, 673 (1992). The ESA exempts from the consultation process construction projects that predate November 10, 1978 as part of the "environmental baseline" of a newly proposed project. Idaho Dep't of Fish & Game v. National Marine Fisheries Serv., 850 F. Supp. 886, 894 (D. Or. 1994), *vacated as moot*, 56 F.3d 1071 (9th Cir. 1995); *see also* 16 U.S.C. § 1536(c)(1) (1994);

listed.[24] But *NRDC v. Houston* and other recent cases indicate that section 7 may soon be applied to the status quo operation of many of these dams.

The ESA's procedural requirements serve the Act's substantive goals and are therefore crucial to its strength.[25] Chief among the ESA's procedural requirements are those in section 7, which requires any federal agency proposing an action that "may affect"[26] an endangered or threatened species to consult with the appropriate federal fish or wildlife agency (the Service).[27] The Service must in turn determine whether the proposed action is likely to jeopardize any protected species or adversely modify any designated critical habitat.[28] In the meantime, the "action agency"[29] is prohibited from making "irretrievable or irreversible commitment[s] of resources."[30]

NRDC v. Houston further strengthens the ESA's protections by holding that routine renewals of federal water delivery contracts constitute "agency actions," thereby triggering the procedural and substantive requirements of section 7.[31] The Ninth Circuit held that section 7 obligated

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50 C.F.R. § 402.02 (1998). Of course, changes in the dams' *operations* may properly be held to trigger consultation. *See Idaho Dep't of Fish & Game*, 850 F. Supp. at 894.

24 *See infra* notes 77–79 and accompanying text.

25 Congress's overarching purpose in enacting the ESA was to prohibit actions likely to lead to the extinction of listed species. To ensure compliance with this mandate, Congress has included within the Act a number of strict procedures. DANIEL J. ROHLF, THE ENDANGERED SPECIES ACT: A GUIDE TO ITS PROTECTIONS AND IMPLEMENTATION 105 (1989). *See generally* Sierra Club v. Marsh, 816 F.2d 1376, 1384 (9th Cir. 1987) ("Only by requiring substantial compliance with the [ESA's] procedures can we effectuate the intent of the legislature."); Thomas v. Peterson, 753 F.2d 754, 764 (9th Cir. 1985) ("If a project is allowed to proceed without substantial compliance with [the ESA's] procedural requirements, there can be no assurance that a violation of the ESA's substantive provisions will not result.").

26 50 C.F.R. § 402.14(a) (1998).

27 The appropriate fish or wildlife agency will be one or both of the following two federal agencies: the Fish and Wildlife Service (FWS), a subordinate agency of the United States Department of Interior; or the National Marine Fisheries Service (NMFS), a subordinate agency of the United States Department of Commerce. RICHARD LITTELL, ENDANGERED AND OTHER PROTECTED SPECIES: FEDERAL LAW AND LEGISLATION 15 (1992). Generally, FWS has jurisdiction over terrestrial and freshwater aquatic species, while NMFS has jurisdiction over marine mammals, anadromous fish, and other living marine resources. UNITED STATES FISH AND WILDLIFE SERVICE & NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION PLANNING HANDBOOK 1-3 (1996). The Services derive their respective jurisdictional authorities from a 1974 memorandum of understanding between the Secretaries of Interior and Commerce. LITTELL, *supra*, at 15 n.5. The term "Secretary," used throughout the ESA, signifies the Secretaries of Interior and Commerce and their subordinate agencies, as well as the Secretary of Agriculture, who has responsibilities pertaining to the export and import of protected terrestrial plants. 16 U.S.C. § 1532(15) (1994). The term "Service," which will be used throughout this Chapter, means "the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, as appropriate." 50 C.F.R. § 402.02 (1998).

28 16 U.S.C. § 1536(a)(2) (1994).

29 Neither the ESA nor its implementing regulations use the term "action agency," but it is widely used by commentators and courts alike in reference to federal agencies proposing or authorizing federal actions. The term appears to have first been used by the courts in the ESA context in North Slope Borough v. Andrus, 486 F. Supp. 332, 351 (D.D.C.), *aff'd in part and rev'd in part*, 642 F.2d 589 (D.C. Cir. 1980).

30 16 U.S.C. § 1536(d) (1994).

31 146 F.3d 1118, 1125–26 (9th Cir. 1998), *cert. denied*, 119 S. Ct. 1754 (1999).

the Bureau to request formal consultation with the National Marine Fisheries Service (NMFS) on potential adverse impacts to the endangered Sacramento winter-run chinook salmon before the Bureau could renew several long-term water service contracts.[32] The court also held that the Bureau had made irreversible and irretrievable commitments of resources in violation of the ESA by renewing the contracts without first completing the consultation process, and that under the circumstances, contract rescission was an appropriate remedy.[33]

The *NRDC v. Houston* holding sets the stage for a change in water law in the West in favor of protected species, because it calls for an absolute consultation duty whenever a water delivery contract is up for renewal in an area containing a protected species, so long as the federal agency possesses discretionary authority to alter the contract terms in making the renewal.[34] This duty arises regardless of agency opinion on the necessity of the consultation.[35] Moreover, *NRDC v. Houston*'s firm stance in favor of consultation may inspire similar holdings on other practices for which the Bureau has historically failed to consult, such as illegal water spreading[36] and delivery of water under existing contracts.[37] The impact of *NRDC v. Houston* is likely to be felt most acutely in the Pacific Northwest region,[38] where conflicts between water development and endangered salmon are escalating at an unprecedented rate.[39]

This Chapter examines the implications of *NRDC v. Houston* for federal water delivery programs in the Pacific Northwest. Part II outlines the consultation requirements of section 7. Part III discusses the role that irrigation has played in the decline of salmon species in the Columbia and Snake River Basins. Part IV sets out the chain of events that led up to the *NRDC v. Houston* case and discusses the Ninth Circuit's holding. Part V forecasts the effects of *NRDC v. Houston* on Bureau of Reclamation activities in the Northwest. The Chapter concludes that the Ninth Circuit's strict adherence to the ESA's procedural safeguards in *NRDC v. Houston* will trigger an appreciable increase in consultations by the Bureau on the effects of its various operations in the Pacific Northwest, in turn leading to

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[32] *Id.* at 1126–27.

[33] *Id.* at 1126–29.

[34] *Id.* 1125–27. When a federal agency lacks discretion to alter the conditions of the agency action in question, there is no consultation duty. *See* 50 C.F.R. § 402.03 (1998); Sierra Club v. Babbitt, 65 F.3d 1502, 1509 (9th Cir. 1995); *see also infra* note 156 and accompanying text.

[35] 146 F.3d at 1127.

[36] *See infra* notes 93–101, 197–206 and accompanying text.

[37] *See infra* notes 207–26 and accompanying text.

[38] In a watershed-based map drawn by Cynthia Thomas on the inside front cover of ALAN THEIN DURNING, THE CAR AND THE CITY (1996), Northwest Environmental Watch defines the Pacific Northwest as "the watersheds of rivers that flow into the Pacific Ocean through North America's temperate rain forest zone." The map depicts these watersheds as extending into parts of Alaska, the Yukon Territory, British Columbia, Alberta, Washington, Idaho, Montana, Oregon, Utah, Wyoming, and northern California. For purposes of this Chapter, however, the term "Pacific Northwest" is synonymous only with the Snake and Columbia River Basins.

[39] *See infra* notes 76–101 and accompanying text.

greater protection of imperiled salmon and other listed species in the region.

II. CONSULTATION REQUIREMENTS UNDER THE ESA

For a quarter of a century, courts and administrative agencies have been interpreting the ESA.[40] Although the statute is constantly the target of proposed revision by the contentious forces of partisan politics, it survives as one of the toughest environmental laws on the books.[41] Interior Secretary Bruce Babbitt has described the ESA as "undeniably the most innovative, wide-reaching, and successful environmental law which has been enacted in the last quarter century."[42] Donald Barry, Assistant Secretary for Fish, Wildlife, and Parks of the Interior Department, formerly of the World Wildlife Fund, has dubbed the ESA "the pit bull of environmental laws."[43] Barry's graphic analogy illustrates the Act's harsh inflexibility.[44]

Section 7 has played a significant role in the ESA's far-reaching impact.[45] "[A]t the heart" of section 7 are its consultation requirements, which, substantively, are designed to prevent the federal government from

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[40] December 28, 1998 marked the 25th anniversary of President Nixon signing the Endangered Species Act into law. *See* Presidential Statement on Signing S. 1983 into Law, 1973 PUB. PAPERS 1027 (Dec. 28, 1973). For a discussion of the shortcomings and strengths of the ESA's short-lived statutory predecessors, see Davina Kari Kaile, *Evolution of Wildlife Legislation in the United States: An Analysis of the Legal Efforts to Protect Endangered Species and the Prospects for the Future*, 5 GEO. INT'L ENVTL. L. REV. 441, 448–54 (1993).

[41] The ESA has been amended several times (in 1978, 1979, 1982, and 1988, *see* LITTELL, *supra* note 27, at 10–13), and invariably, each session of Congress offers additional proposed amendments. *See generally* Dave Hogan, *Endangered Species Law Needs Aid Itself*, THE OREGONIAN, Dec. 28, 1998, at A6 (discussing principal arguments offered in the "long-running and increasingly multifaceted debate" over the fate of the ESA); Zygmunt J.B. Plater, *The Embattled Social Utilities of the Endangered Species Act—A Noah Presumption and Caution Against Putting Gasmasks on the Canaries in the Coalmine*, 27 ENVTL. L. 845, 845–46 n.3 (1997) (discussing developments in the 105th Congress relating to ESA reform, reauthorization, and appropriations); Nancy Perry, *The Fruits of Our Labor: Results from the First Session of the 105th Congress—1997 Federal Legislative Summary*, 4 ANIMAL L. 137, 142–43 (1998) (criticizing the proposed Endangered Species Recovery Act of 1997, S. 1180, 105th Cong. (1997), a reauthorization bill that became the most discussed ESA-related offering of the 105th Congress).

[42] Bruce Babbitt, *The Endangered Species Act and "Takings": A Call for Innovation Within the Terms of the Act*, 24 ENVTL. L. 355, 356 (1994).

[43] Timothy Egan, *Strongest U.S. Environmental Law May Become Endangered Species*, N.Y. TIMES, May 26, 1992, at A1, A11 (quoting Donald Barry); *see also* Steven P. Quarles, *The Pit Bull Goes to School*, ENVTL. FORUM, Sept.–Oct. 1998, at 55.

[44] For a view that the ESA is moving away from its "roadblock status" and its "stark, strict standards toward more qualified, subjectively articulated, compromising standards," see Plater, *supra* note 41, at 867.

[45] Section 7 has been dubbed the "workhorse" of the ESA. Jimmie Powell, *Section 7 Consultations Save Critters*, ENVTL. FORUM, Sept.–Oct. 1998, at 54. According to Powell, Staff Director of the Senate Committee on Environment and Public Works, "[w]hen compared to all other activities under [the ESA], it is clear that Section 7 consultations have to date been the major factor in modifying human actions for the benefit of threatened and endangered species." *Id.*

jeopardizing protected species and their critical habitat.[46] Procedurally,[47] consultation usually begins with an optional process called "informal consultation."[48] Action agencies must first request information from the Service about the possible presence of protected species or critical habitat in the vicinity of a proposed action.[49] If the Service determines that a protected species or critical habitat "may be present," the action agency must conduct a biological assessment.[50]

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[46] Oliver A. Houck, *The 'Institutionalization of Caution' Under § 7 of the Endangered Species Act: What Do You Do when You Don't Know?*, 12 ENVTL. L. REP. 15,001, 15,001 (1982); *see also* 16 U.S.C. § 1536(a)(2) (1994).

[47] For an explication of the procedural aspects of consultation, see generally UNITED STATES FISH AND WILDLIFE SERVICE & NATIONAL MARINE FISHERIES SERVICE, ENDANGERED SPECIES ACT CONSULTATION HANDBOOK (1998) [hereinafter CONSULTATION HANDBOOK]; ROHLF, *supra* note 25, at 105–36.

[48] The term "informal consultation," though not specifically mentioned in the ESA, is used in the Service's implementing regulations to denote optional discussions and correspondence between wildlife and action agencies to determine whether formal consultation is necessary. *See* 50 C.F.R. § 402.13 (1998). The hallmark of informal consultation is whether the agencies concur in a "not likely to adversely affect" determination. *See infra* note 54 and accompanying text. The underlying impetus of both informal and formal consultation is compliance with ESA section 7(a)'s substantive standards. For a number of years, the Service has favored the informal consultation process. UNITED STATES GENERAL ACCOUNTING OFFICE, ENDANGERED SPECIES: LIMITED EFFECT OF CONSULTATION REQUIREMENTS ON WESTERN WATER PROJECTS 36–37 (1987) [hereinafter LIMITED EFFECT OF CONSULTATION]. Of 5849 recorded water-related consultations in the 17 western United States between October 1977 and March 1985, 88% consisted solely of informal consultations. *Id.* at 16, 37.

[49] *See* 16 U.S.C. § 1536(c) (1994); 50 C.F.R. § 402.12(c) (1998). In the alternative, the action agency may prepare this information independently. *See* CONSULTATION HANDBOOK, *supra* note 47, at 3-3. Either way, the information is referred to as a "species list." *Id.*

[50] 16 U.S.C. § 1536(c)(1) (1994). In 1978 Congress added the ESA's biological assessment requirement in order to promote agency compliance with the substantive standards of section 7. *See generally* Pub. L. No. 95-632, § 7(c), 92 Stat. 3751, 3753 (1978); H.R. REP. NO. 95-1625, at 20 (1978), *reprinted in* 1978 U.S.C.C.A.N. 9453, 9470. The agencies' regulations require a biological assessment only for "major construction activities," which are construction projects (or other undertakings having similar physical impacts) requiring an environmental impact statement under the National Environmental Policy Act of 1969, 42 U.S.C. 4321–4370d (1994 & Supp. III 1997). 50 C.F.R. §§ 402.02, 402.12(b)(1) (1998); *see also* CONSULTATION HANDBOOK, *supra* note 47, at 3-10. For a criticism of the often-overlooked limitation to major construction activities, see ROHLF, *supra* note 25, at 105–10 (arguing that the Act itself mandates the preparation of biological assessments for *any* agency action, that no limiting meaning attaches to the word "construction," that the regulations allow action agencies to avert the consultation process by deciding that their actions do not constitute major construction activities, and that failure to prepare biological assessments may deprive agencies and other interested parties of timely, relevant data). *See also* LITTELL, *supra* note 27, at 53 n.42 (pointing out discrepancies between the major construction activity requirements and the broad definition of "agency action" found in both the Act and in the Service's regulations). For an example of the absurd results that can stem from the major construction activity limitation, see *Newton County Wildlife Ass'n v. Rogers*, 141 F.3d 803 (8th Cir. 1998), *reh'g and suggestion for reh'g en banc denied*, No. 97-1852 (8th Cir. July 7, 1998). In that case, four timber sales entailing the harvest of over 3000 acres of forest and almost 20 miles of road construction and reconstruction were held not to constitute major construction activities and therefore not to trigger the preparation of a biological assessment. *Id.* at 811.

A biological assessment must identify all species "likely to be affected" by the action.[51] The biological assessment should also include information about the scope of the project, critical habitat for any listed species in the area, and potential adverse effects of the project.[52] The action agency must present the biological assessment to the Service, which has thirty days to respond as to whether or not it concurs with the action agency's findings.[53] If the Service concurs with a determination by the action agency that the action is "not likely to adversely affect" listed species or critical habitat, the consultation process is complete.[54] On the other hand, if either agency determines that an action "may affect" listed species or critical habitat, formal consultation is triggered.[55]

Formal consultation begins with a written request by the action agency that the Service prepare a biological opinion.[56] The biological opinion must include information on whether the action is likely to "jeopardize the continued existence" of any protected species or result in the destruc-

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[51] 16 U.S.C. § 1536(c)(1) (1994); *cf.* 50 C.F.R. § 402.12(a) (1998) ("likely to be adversely affected").

[52] 50 C.F.R. § 402.12(f) (1998) provides a list of items that may be included in the biological assessment at the discretion of the action agency. *See also* Powell, *supra* note 45, at 54.

[53] 50 C.F.R. § 402.12(j) (1998).

[54] 50 C.F.R. §§ 402.13(a), 402.14(b)(1) (1998); *see also* 50 C.F.R. § 402.12(k) (1998); Powell, *supra* note 45, at 54. Often a "not likely to adversely affect" determination is earned only after the action agency modifies its project plans in response to Service concerns. *See* 50 C.F.R. § 402.13(b) (1998); Powell, *supra* note 45, at 54. "Although informal consultation is not required a Federal agency may use that process and/or the biological assessment process to remove an action that 'is not likely to adversely affect' listed species or critical habitat from the formal consultation process." Interagency Cooperation—Endangered Species Act of 1973, as Amended; Final Rule, 51 Fed. Reg. 19,926, 19,950 (June 3, 1986).

[55] 50 C.F.R. § 402.14(a) (1998); *cf.* 16 U.S.C. § 1536(c)(1) (1994) (biological assessment must identify protected species "likely to be affected"); 50 C.F.R. § 402.12(a) (1998) (biological assessment must identify protected species and critical habitat "likely to be adversely affected"); CONSULTATION HANDBOOK, *supra* note 47, at 3-12 to 3-19 (discussing four categories of possible determinations by the Service during informal consultation: "[n]o effect," "[i]s not likely to adversely effect," "[n]onconcurrence," and "[i]s likely to adversely affect"); 51 Fed. Reg. at 19,949–50 ("Any possible effect, whether beneficial, benign, adverse, or of an undetermined character, triggers the formal consultation requirement . . . .").

[56] Technically, only the action agency may launch the formal consultation process. The action agency does so by requesting in writing that the Service initiate formal consultation (*i.e.*, begin preparing a biological opinion). The Service may speed up the process by preparing a biological opinion in advance or by asking the action agency to enter into formal consultation. 50 C.F.R. §§ 402.12(k), 402.14(a), 402.14(c) (1998). The action agency always retains discretion whether to initiate consultation; the Service has no power to compel the action agency to do so. *See* James C. Kilbourne, *The Endangered Species Act Under the Microscope: A Closeup Look From a Litigator's Perspective*, 21 ENVTL. L. 499, 539 n.188 (1991). The action agency's decisions, however, must not be arbitrary and capricious in light of the Service's views and are subject to challenge on that basis. *See id.*

The action agency's request to initiate formal consultation must be accompanied by a preliminary determination of whether its proposed actions may affect protected species, as well as descriptions of the action, the affected areas, the protected species or critical habitat that may be affected, the expected effects of the action, and relevant reports and information. 50 C.F.R. § 402.14(a), (c) (1998). A biological assessment typically satisfies these requirements. *See supra* notes 51–52 and accompanying text.

tion or adverse modification of any "critical habitat."[57] In the event that the Service finds that jeopardy is likely to occur, it must also include within the biological opinion "reasonable and prudent alternatives" that would avoid jeopardy.[58] The Service may also offer discretionary conservation recommendations when preparing a biological opinion.[59] The duty to prepare a biological opinion should not be taken lightly.[60] The ESA imposes substantive obligations to use the "best scientific and commercial data available."[61]

The decision whether to proceed with a proposed action ultimately lies with the action agency, as do decisions about the exact course and manner of proceeding.[62] Nevertheless, courts have historically deferred to the Service's opinions in reviewing the action agencies' decisions.[63] An

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[57] 16 U.S.C. § 1536(b)(3)(A) (1994); 50 C.F.R. § 402.14(g)(4), (h) (1998). "Jeopardize the continued existence" means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02 (1998). "Critical habitat" means areas designated as critical by the Service. *Id.*

[58] 16 U.S.C. § 1536(b)(3)(A) (1994); 50 C.F.R. §§ 402.02, 402.14(h) (1998).

[59] 50 C.F.R. § 402.14(j) (1998). "Conservation recommendations are advisory and are not intended to carry any binding force." *Id.*

[60] The conclusions in a biological opinion "are the pivots around which ESA analysis must turn." North Slope Borough v. Andrus, 642 F.2d 589, 609 (D.C. Cir. 1980). The United States Supreme Court has recently held that biological opinions may constitute "'final agency action[s]'" for purposes of the Administrative Procedure Act and that they may confer standing on parties with "'fairly traceable'" economic injuries to challenge their validity. Bennett v. Spear, 520 U.S. 154, 168–71, 177–78 (1997) (quoting section 704 of the Administrative Procedure Act, 5 U.S.C. § 704 (1994), and Lujan v. Defenders of Wildlife, 504 U.S. 555, 590 (1992)).

[61] 16 U.S.C. § 1536(a)(2) (1994); 50 C.F.R. § 402.14(d) (1998). *See generally* Conner v. Burford, 848 F.2d 1441, 1454 (9th Cir. 1988) (requiring the Service to use the "best information" to prepare a "comprehensive" biological opinion that considers "all stages" of the agency action); Roosevelt Campobello Int'l Park Comm'n v. Environmental Protection Agency, 684 F.2d 1041, 1055 (1st Cir. 1982) (requiring agencies to do all that is practicable to obtain the best scientific data available when preparing biological opinions); Idaho Dep't of Fish & Game v. National Marine Fisheries Serv., 850 F. Supp. 886, 898 (D. Or. 1994) (requiring Service to use "well-reasoned analysis" and consider the "full range of risk assumptions" when preparing biological opinions), *vacated as moot*, 56 F.3d 1071 (9th Cir. 1995); Conservation Law Found. v. Watt, 560 F. Supp. 561, 572 (D. Mass.) (finding that agencies have an ongoing obligation to consider new information even after the completion of a biological opinion), *aff'd on other grounds sub nom.*, Massachusetts v. Watt, 716 F.2d 946 (1st Cir. 1983).

[62] *See generally* Sierra Club v. Froehlke, 534 F.2d 1289, 1303 (8th Cir. 1976) (finding that the consultation requirement does not require acquiescence to the Service's opinion, and that responsibility for the decision after consultation is vested in the action agency); National Wildlife Fed. v. Coleman, 529 F.2d 359, 371 (5th Cir. 1976) (noting that the decision whether or not to proceed with the action lies with the action agency).

[63] FAVRE, WILDLIFE LAW 7-30 (2d ed. 1991). *See generally* Bennett v. Spear, 520 U.S. at 169–70 (finding that the action agency runs a substantial risk of violating the takings prohibitions of section 9 of the ESA when it deviates from the Service's recommendations in a biological opinion); Romero-Barcelo v. Brown, 643 F.2d 835, 857 (1st Cir. 1981) ("[C]ourts have accorded substantial weight to a sound biological opinion in determining an agency's compliance with [section 7]."), *rev'd on other grounds sub nom.*, Weinberger v. Romero-Barcelo, 456 U.S. 305 (1982); H.R. CONF. REP. No. 96-697, at 12 (1979), *reprinted in* 1979

action agency may deviate from the recommendations of the Service only when it is able to show that it took "alternative, reasonably adequate steps to insure the continued existence of [protected species]."[64]

In numerous instances, action agencies and the Service alike have resisted section 7 consultation by denying that the duty to consult has been triggered.[65] There are several reasons for this administrative reluctance. For one, the Service is perpetually overtaxed.[66] Second, consultations take time; they have the potential to slow projects down considerably.[67] Third, there is always a possibility that the issuance of a jeopardy opinion might call for substantial revision, or in exceptional cases, complete abandonment, of the action agency's plans.[68] Although jeopardy opinions are

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U.S.C.C.A.N. 2557, 2576 ("Courts have given substantial weight to . . . biological opinions as evidence of an agency's compliance [with the ESA]."). *But cf. Idaho Dep't of Fish & Game*, 850 F. Supp. at 898 (NMFS's "no jeopardy" biological opinion found arbitrary and capricious for failure to fully consider relevant scientific evidence).

64 Tribal Village of Akutan v. Hodel, 859 F.2d 651, 660 (9th Cir.), *superseded by* 869 F.2d 1185 (9th Cir. 1988); *see also* Michael C. Blumn, et al., *Saving Snake River Water and Salmon Simultaneously: The Biological, Economic, and Legal Case for Breaching the Lower Snake River Dams, Lowering John Day Reservoir, and Restoring Natural River Flows*, 28 ENVTL. L. 947, 1035 n. 243 (emphasizing the narrow nature of the *Tribal Village of Akutan* holding).

65 *See, e.g.*, Natural Resources Defense Council v. Houston (*NRDC v. Houston*), 146 F.3d 1118, 1126–27 (9th Cir. 1998) (finding that NMFS and the Bureau both improperly concluded that consultation was not necessary on renewal of long-term water service contracts), *cert. denied*, 119 S. Ct. 1754 (1999); Sierra Club v. Babbitt, 65 F.3d 1502, 1506–08 (9th Cir. 1995) (finding that FWS and the Bureau of Land Management both properly concluded that consultation was not necessary on private construction under preexisting right-of-way agreement); Sierra Club v. Marsh, 816 F.2d 1376, 1386–89 (9th Cir. 1987) (finding that the Corps of Engineers improperly declined FWS's request to reinitiate consultation on highway and flood control project); Environmental Protection Info. Ctr. v. Simpson Timber Co., No. C98-3740, 1999 WL 183606, at *1 (N.D. Cal. 1999) (finding that FWS properly concluded that reinitiation of internal consultation was not necessary on private logging activities).

66 Section 7 consultations are conducted in ever-increasing numbers. In the five-year period from 1973 to 1978, only 4500 consultations, or 900 per year, are estimated to have occurred. F. Lorraine Bodi, *Protecting Columbia River Salmon Under the Endangered Species Act*, 10 ENVTL. L. 349, 384 n.138 (1980). By contrast, in the five-year period from 1987 to 1991, FWS alone conducted 73,560 consultations, both informal and formal, or roughly 14,700 per year. *See* Oliver A. Houck, *The Endangered Species Act and its Implementations by the U.S. Departments of Interior and Commerce*, 64 U. COLO. L. REV. 277, 317–19 (1993).

67 Informal consultation is expected to last a maximum of 240 days, and formal consultation is expected to last a maximum of 135 days. CONSULTATION HANDBOOK, *supra* note 47, at 3-1 to 3-3, 4-3, 4-5 to 4-7. The agencies often miss their deadlines, adding to these time frames. LIMITED EFFECT OF CONSULTATION, *supra* note 48, at 4, 19–22. The time frames generally do not add significant delays to the projects, which are often experiencing other obstacles simultaneously, but in extreme cases, consultation requirements have extended project timelines by up to two years. *Id.* A procedure for streamlined consultation, recently developed jointly by FWS, NMFS, the Bureau of Land Management, and the Forest Service, appreciably shortens the timeframes for both informal and formal consultation for forest-related projects in the Pacific Northwest. *See* CONSULTATION HANDBOOK, supra note 47, at 5-6.

68 The ESA resulted in termination of only 18 of the 73,560 consultations conducted from 1987 to 1991, or roughly 1 in 4000. Houck, *supra* note 66, at 318.

rare,[69] they are often regarded as the "kiss of death."[70] Finally, and most importantly, project plans must often be modified, during both informal and formal consultation, in order to effect compliance with section 7.[71]

Section 7 places some additional limitations on agency action. First, when a biological assessment is required under section 7(c), the action agency is prohibited from proceeding with the proposed action or entering into any contracts until the assessment is complete.[72] Second, whenever the preparation of a biological opinion is required, section 7(d) prohibits "irreversible or irretrievable commitment[s] of resources [that foreclose] the formulation or implementation of any reasonable and prudent alternative measures" until the consultation process is complete.[73] Congress enacted section 7(d) in order to prevent predicaments like the *TVA v. Hill* controversy, where the ESA violation was discovered only after a substantial amount of money had been spent on the dam, and Congress continued to appropriate money for the project in the belief that the ESA did not prohibit its completion.[74] The purpose of section 7(d) is to maintain the status quo, which "necessarily contemplates the absence of action" by the action agency.[75]

III. SALMON VS. IRRIGATION IN THE PACIFIC NORTHWEST

A. Water Diversions in the Columbia/Snake System and Their Effects on Salmonid Species

Nationwide, fish species account for less than ten percent of all species presently listed as endangered or threatened under the ESA, but this percentage is steadily increasing.[76] Presently in the Pacific Northwest, the listing of fish under the ESA is of preeminent importance. The region is experiencing a "salmon crisis."[77] In the Snake River, the Columbia's largest tributary, all native salmonid populations are already extinct or are

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[69] Jeopardy opinions were issued in only 352 of the 73,560 consultations, or roughly 1 in 200. *Id.*

[70] FAVRE, *supra* note 63, at 7-30.

[71] *See* Powell, *supra* note 45, at 54.

[72] 16 U.S.C. § 1536(c)(1) (1994); 50 C.F.R. § 402.12(b)(2) (1998); *see also* ROHLF, *supra* note 25, at 106, 109.

[73] 16 U.S.C. § 1536(d) (1994). *See generally* ROHLF, *supra* note 25, at 138–48.

[74] 437 U.S. 153, 172, 197–200 (1978). By the time the Supreme Court reviewed the case, over $110 million had been spent. *Id.* at 200 n.6; *see also* Oliver A. Houck, *The Secret Opinions of the United States Supreme Court on Leading Cases in Environmental Law, Never Before Published!*, 65 U. COLO. L. REV. 459, 487–89 (1994) (noting that the project was 90% complete at the time the Supreme Court upheld the injunction).

[75] Pacific Rivers Council v. Thomas, 936 F. Supp. 738, 745 (D. Idaho 1996).

[76] As of November 30, 1998, 107 of the 1177 species of animals and plants listed under the ESA were fish species. Hogan, *supra* note 41, at A6. NMFS increased this ratio slightly on March 16, 1999 when it announced the listing of nine salmonid populations in California and the Pacific Northwest. Jonathan Brinckman, *The Listings: Big Implications Expected for Construction Work, Average Residents*, THE OREGONIAN, Mar. 17, 1999, at A1.

[77] *See generally* THE NORTHWEST SALMON CRISIS: A DOCUMENTARY HISTORY (Joseph Cone & Sandy Ridlington eds., 1996).

presently facing extinction.[78] Only within the last decade has NMFS taken action to list salmonid populations in the region.[79] The salmon crisis has the potential to shake law, policy, and commerce in the Pacific Northwest to the core.[80]

Irrigation diversions have played a role in the salmon crisis by substantially interfering with salmonid migration in the Columbia River Basin since the nineteenth century.[81] Today, salmon in the Basin are fighting for their lives against more than seven million acres of irrigated farmland, three million of which is watered by Bureau of Reclamation projects.[82] In 1995 economists with the United States Department of Agriculture issued a study analyzing the relationship between endangered species and irrigated agriculture throughout the seventeen Western states. The study contains three notable findings:

> (1) 235 counties, representing 22 percent of the West's counties, contain irrigated production that relies on water from rivers with [endangered or threatened] fish, (2) areas generating the highest revenues per acre from crop

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[78] Blumm et al., *supra* note 64, at 1006–09.

[79] As of March 1999, NMFS has listed 24 evolutionarily significant units (ESUs) of salmonid species in the Pacific Northwest and California. The six ESUs listed as endangered are the Sacramento River winter chinook, upper Columbia River spring chinook, Snake River sockeye, southern California steelhead, upper Columbia River steelhead, and Umpqua River cutthroat. The 18 ESUs listed as threatened are the Snake River spring/summer chinook, Snake River fall chinook, lower Columbia River chinook, upper Willamette River chinook, Puget Sound chinook, central California coho, southern Oregon/northern California coho, Oregon coastal coho, Ozette Lake sockeye, Columbia River chum, Hood Canal summer chum, Central Valley steelhead, south-central California coastal steelhead, central California coastal steelhead, upper Willamette River steelhead, middle Columbia River steelhead, lower Columbia River steelhead, and Snake River Basin steelhead. PACIFIC FISHERY MANAGEMENT COUNCIL, PRESEASON REPORT II: ANALYSIS OF PROPOSED REGULATORY OPTIONS FOR 1999 OCEAN SALMON FISHERIES 4 (1999). NMFS has deferred until September 9, 1999 its decision on listing the following four additional chinook stocks: California Central Valley fall, Central Valley spring, southern Oregon/California coastal, and Snake River fall. Endangered and Threatened Species: Notice of Partial 6-Month Extension on Final Listing Determinations for Four Evolutionarily Significant Units (ESUs) of West Coast Chinook Salmon, 64 Fed. Reg. 14,329, 14,329 (Mar. 24, 1999).

[80] "[Recent salmon listings] have the potential to make the spotted owl crises . . . 'look like a pillow fight.' Never has there been an environmental issue in Northwest history more widely discussed and reported, and never has there been one with the potential to [affect] so many people." PETERSEN, *supra* note 23, at 9 (quoting Steve Pettit, Fish Passage Specialist, Idaho Dep't of Fish and Game).

[81] JOHN M. VOLKMAN, A RIVER IN COMMON: THE COLUMBIA RIVER, THE SALMON ECOSYSTEM, AND WATER POLICY 55 (1997).

[82] *Id.* Crops that rely heavily on irrigated water from the Columbia River Basin include potatoes, sugar beets, hops, mint, corn, wheat, hay, alfalfa, and fruits. ECONORTHWEST, THE COLUMBIA RIVER AND THE ECONOMY OF THE PACIFIC NORTHWEST 48 (1995). Irrigation for industrial and municipal purposes has relatively little impact compared to that for agricultural purposes. For example, the Bureau estimates that only 2.5% of total water withdrawals in the Snake River Basin go to industrial and municipal uses. UNITED STATES BUREAU OF RECLAMATION, BIOLOGICAL ASSESSMENT: BUREAU OF RECLAMATION OPERATIONS AND MAINTENANCE IN THE SNAKE RIVER BASIN ABOVE LOWER GRANITE RESERVOIR IV-3 (1998) [hereinafter SNAKE RIVER BASIN BA]. In Idaho, 99% of surface water withdrawals are used for irrigation of agriculture. MICHAEL MOORE ET AL., ENDANGERED SPECIES AND IRRIGATED AGRICULTURE: WATER RESOURCE COMPETITION IN WESTERN RIVER SYSTEMS 9 (1995).

> production are those most dependent on surface water irrigation, and (3) these same areas are also most likely to be drawing water from rivers that contain at least one [endangered or threatened] species.[83]

These findings illustrate the inherent conflict between irrigated agriculture and endangered salmon. The findings' significance will grow as the Service continues to list western fish species under the ESA. Agriculture, a sacred cow of the West, is finally being forced to make room at the trough for other interests.

While water withdrawal and storage are not the only factors presently threatening Columbia Basin salmon,[84] their effects are substantial. The Bureau and other entities have built a complex management system in order to divert water for irrigation, control floods, and store water in hundreds of reservoirs throughout the Basin.[85] The Columbia Basin Project (CBP), the Bureau's largest project in the region,[86] contains almost six thousand miles of artificial canals, drains, and wasteways.[87] Development of the Basin has drastically altered its hydrology, resulting in much lower flows in the spring and summer than under natural conditions.[88] Forty percent of all water diverted for agricultural purposes never finds its way back into the rivers and streams of the Basin,[89] leaving many of them "too dry for salmon to reproduce in."[90] Many salmonid individuals perish when

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83 MOORE ET AL., *supra* note 82, at 1.

84 Other factors include obstruction and alteration of river conditions by dams, overharvest, water pollution, persistent drought, habitat destruction and fragmentation, timber management, grazing, mining, road construction and maintenance, residential development, introduction of nonnative species, predation, hatchery impacts, the self-perpetuating effects of small population size on genetic and demographic viability, and institutional inadequacies in ensuring effective protection. NATIONAL MARINE FISHERIES SERVICE, U.S. DEP'T OF THE INTERIOR, PROPOSED RECOVERY PLAN FOR SNAKE RIVER SALMON 3-6 (1995) [hereinafter 1995 PROPOSED RECOVERY PLAN]; Blumm et al., *supra* note 78, at 999 n.4. Throughout the western states, water diversions have been a factor in the decline of over 70% of listed river fish species. MOORE ET AL., *supra* note 82, at 6.

85 1995 PROPOSED RECOVERY PLAN, *supra* note 84, at 5.

86 Shauna Marie Whidden, *The Hanford Reach: Protecting the Columbia's Last Safe Haven for Salmon*, 26 ENVTL. L. 265, 279–80 (1996). While the Central Valley Project in California may be the largest federal reclamation project in existence, *see infra* note 110 and accompanying text, the Columbia Basin Project was the nation's largest federal reclamation project *ever planned*. PAUL CURTIS PITZER, VISIONS, PLANS, AND REALITIES: A HISTORY OF THE COLUMBIA BASIN PROJECT 3 (1990). The CBP was originally authorized to irrigate 1,095,400 acres, 50% of which has yet to be—and likely will not be—developed. Continued Development of the Columbia Basin Project, 56 Fed. Reg. 1540, 1540 (Jan. 15, 1991) (notice of intent to prepare supplemental draft environmental impact statement). The original authorizing legislation of the Columbia Basin Project, formerly called the Grand Coulee Dam Project, was the Columbia Basin Project Act, 57 Stat. 14 (1943) (codified as amended at 16 U.S.C. §§ 835–835c (1994)).

87 56 Fed. Reg. at 1540.

88 Michael C. Blumm et al., *Beyond the Parity Promise: Struggling to Save Columbia River Basin Salmon in the Mid-1990s*, 27 ENVTL. L. 21, 33 (1997).

89 ECONORTHWEST, *supra* note 82, at 48.

90 NORTHWEST POWER PLANNING COUNCIL, STRATEGY FOR SALMON 10 (1992). Irrigation diversions have periodically dried up the Umatilla, Yakima, and Walla Walla Rivers, and have come close to drying up the Snake River below Milner Dam. WILLIAM DIETRICH, NORTHWEST PASSAGE: THE GREAT COLUMBIA RIVER 358 (1995).

they are trapped in unscreened diversion channels at water diversion facilities.[91] Finally, out-of-stream diversions degrade the fresh, cool, running water required by salmon for spawning habitat.[92]

Compounding the effects of irrigation is the problem of water spreading. Water spreading can be generally defined as diversion of water for the irrigation of lands that have no legal right to receive the water.[93] When this illegal practice occurs, flows that are intended for fish and wildlife are instead illegally devoted to irrigation.[94] Water spreading can occur in a variety of ways. First, project water can be used to irrigate lands that lie outside official district or project boundaries. Second, project water can be applied to lands within official boundaries that are classified as nonirrigable or as ineligible to receive the water. Third, the nature or place of project water use can be changed illegally. Fourth, users can receive project water without first obtaining the appropriate state water right where such right is necessary. Finally, the number of acres irrigated at a particular location can simply exceed the number authorized for service.[95]

It is estimated that in 1993, up to 131,000 acres of ineligible land in eighteen districts in the Columbia and Snake River Basins illegally received Bureau water,[96] and it is unlikely that the extent of water spreading has declined in subsequent years, because the Bureau has done little to curb water spreading since the agency first documented its occurrence in the early 1980s.[97] In fact, water spreading is often tolerated by Bureau officials who simply look the other way.[98] So far, the Bureau's track record on curbing water spreading has been as hollow as its one-sentence statement submitted to Congress five years ago on its *modus operandi* for addressing the problem: "We are currently formulating policy to eliminate Water Spreading practices."[99] That policy has never seen the light of

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91 BONNEVILLE POWER ADMINISTRATION, U.S. DEP'T OF ENERGY ET AL., COLUMBIA RIVER SYSTEM OPERATIONS REVIEW, THE COLUMBIA RIVER SYSTEM: THE INSIDE STORY 39 (1991).

92 Joy Ellis, *Drafting from an Overdrawn Account: Continuing Water Diversions from the Mainstem Columbia and Snake Rivers*, 26 ENVTL. L. 299, 304 n.37 (1996).

93 Reed D. Benson & Kimberley J. Priestley, *Making a Wrong Thing Right: Ending the "Spread" of Reclamation Project Water*, 9 J. ENVTL. L. & LITIG. 89, 89–90 (1994).

94 *See id.* at 99–101; JOSEPH CONE, A COMMON FATE: ENDANGERED SALMON AND THE PEOPLE OF THE PACIFIC NORTHWEST 233 (Oregon State University Press 1996) (1995).

95 *Water Use Practices on Bureau of Reclamation Projects: Oversight Hearing Before the Subcomm. on Oversight and Investigations of the House Comm. on Natural Resources*, 103d Cong. 365 (1994) [hereinafter *Water Spreading Oversight Hearing*] (material submitted by the Bureau of Reclamation, dated June 1994).

96 *Id.*

97 Benson & Priestley, *supra* note 93, at 90, 103.

98 *See generally id.* at 96; *Water Spreading Oversight Hearing*, *supra* note 95, at 41 (witness statement of Daniel P. Beard, Commissioner, United States Bureau of Reclamation).

99 *Water Spreading Oversight Hearing*, *supra* note 95, at 365 (1994) (material submitted by the Bureau of Reclamation, dated June 1994).

day,[100] and efforts by the Bureau to stop water spreading still proceed on a case by case basis as part of a "slow process."[101]

B. Federal Agency Response

The interplay between salmon and irrigation practices in the Pacific Northwest has historically received relatively little attention and even less active response by federal agencies.[102] Federal agencies are also only now beginning to use the section 7 consultation process to consider the effects of irrigation on salmon. In a recent biological assessment, the Bureau listed forty-nine major consultations conducted since the enactment of the ESA on its operations in the Snake River Basin.[103] Only two of the forty-nine consultations dealt specifically with water delivery contracts.[104] Similarly, a biological opinion prepared by NMFS in 1992 on the operations of the Federal Columbia River Power System barely mentioned irrigation[105] and contained conservation recommendations that are at best described as aspirational.[106]

The agencies' historic failure to address irrigation's effects on salmon is slowly changing. NMFS has recently stated that increases in flow in the Columbia and Snake Rivers are "essential" to maintain the survival of protected salmon.[107] Additionally, the Bureau has announced a moratorium on the issuance of new water rights in the upper Columbia and Snake mainstems.[108]

The Bureau's approach of consulting on irrigation by looking at the Columbia and Snake River Basins in their entireties, rather than by looking at the effects of individual water delivery actions, allows real problems to slip through the cracks and perpetuates the status quo of wasteful water practices. The Bureau has announced that in the future it "may" consult on the resolution of water spreading, amendments to existing

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[100] *See* Reed D. Benson, *Maintaining the Status Quo: Protecting Established Water Uses in the Pacific Northwest, Despite the Rules of Prior Appropriation*, 28 ENVTL. L. 881, 894–95 (1999).

[101] Telephone Interview with Rich Rigby, Project Manager, Water Rights and Acquisition, United States Bureau of Reclamation, Pacific Northwest Region (Jan. 22, 1999).

[102] *See generally* Reed D. Benson, *Whose Water Is It? Private Rights and Public Authority over Reclamation Project Water*, 16 VA. ENVTL. L.J. 363, 420–26 (1997).

[103] *See* SNAKE RIVER BASIN BA, *supra* note 82, at III-1 to III-6.

[104] *Id.* at III-4. The two consultations that specifically addressed water delivery contracts were the sale of storage water in Anderson Ranch Reservoir for municipal and industrial purposes and the contracting of Cascade Reservoir Storage Space for irrigation and limited municipal and industrial purposes. *Id.* The latter project was never implemented. *Id.*

[105] *See* UNITED STATES NATIONAL MARINE FISHERIES SERVICE, ENDANGERED SPECIES ACT SECTION 7 CONSULTATION/CONFERENCE BIOLOGICAL OPINION: 1992 OPERATION OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM 49 (1992).

[106] *See id.* at 52–53. For example, the biological opinion states that the relevant federal agencies "should encourage the development of plans to conserve water." *Id.* at 53.

[107] NATIONAL MARINE FISHERIES SERVICE, NORTHWEST REGION, BIOLOGICAL OPINION: REINITIATION OF CONSULTATION ON 1994–1998 OPERATION OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM AND JUVENILE TRANSPORTATION PROGRAM IN 1995 AND FUTURE YEARS 99 (1995) [hereinafter 1995 BIOP].

[108] Ellis, *supra* note 92, at 310 n.98. This moratorium was announced in June 1993. *Id.*

water storage contracts, and amendments or renewals of water service contracts in the Pacific Northwest,[109] but to date such consultation remains unrealized. For instance, never has the Bureau consulted with the Service on the effects of water spreading, either in the aggregate, or on a project-by-project basis.

IV. ENTER *NRDC v. HOUSTON*

A. The Central Valley Project

The Bureau of Reclamation is the largest water provider in the West, and its Central Valley Project (CVP) in California is the country's largest federal water reclamation project.[110] The CVP is the product of a time when development ruled and very little consideration was given to environmental impacts.[111] The CVP was authorized by the California legislature in 1933 to export water from the Sacramento and San Joaquin Rivers to arid Southern California.[112] In December 1933 the people of California approved the project by a slim margin in a special election.[113] Hard pressed to finance the project during the Depression, California soon asked the federal government to take over.[114] On August 30, 1935, Congress authorized federal improvement of the Sacramento River,[115] and eleven days later President Franklin Delano Roosevelt allocated $20 million in federal funds to the Bureau of Reclamation for the project.[116] On June 22, 1936, Congress continued construction by appropriating $6.9 mil-

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109 SNAKE RIVER BASIN BA, *supra* note 82, at III-7.

110 Pulling, *supra* note 12, at 40; O'Neill v. United States, 50 F.3d 677, 680 (9th Cir. 1995). The CVP consists of more than 20 dams and 500 miles of canals. It diverts over 90% of the project's water out of area rivers for use in irrigated agriculture. Pulling, *supra* note 12, at 38.

111 In 1945, California governor Earl Warren said that "we should not relax until California has adopted and put into operation a statewide program that will put every drop of water to work." Joel W. Hedgpeth, *The Passing of the Salmon, reprinted in* CALIFORNIA'S SALMON AND STEELHEAD 52, 59 (Alan Lufkin ed., 1991) (quoting Earl Warren); *see also* Harrison C. Dunning, *Confronting the Environmental Legacy of Irrigated Agriculture in the West: The Case of the Central Valley Project*, 23 ENVTL. L. 943, 950–51 (1993) (noting that the water use ethic at the time of the CVP's planning and construction "was very different from today's notions" because the project's planners designed it to divert the entire flow to agriculture); ARTHUR L. LITTLEWORTH & ERIC L. GARNER, CALIFORNIA WATER 19 (1995) ("Water for environmental purposes was not included among the original stated purposes of the [CVP].").

112 LITTLEWORTH & GARNER, *supra* note 111, at 18.

113 ROSE, *supra* note 2, at 99. The exact vote was 459,712 to 426,109. Margaret Rohrer, *Water Resources Development in the Central Valley of California: General Materials*, 38 CAL. L. REV. 761, 765 (1950).

114 *See* WILLIAM E. WARNE, THE BUREAU OF RECLAMATION 154 (1973).

115 Rivers and Harbors Act of 1935, ch. 831, 49 Stat. 1028, 1038.

116 Rohrer, *supra* note 113, at 766. President Roosevelt made the allocation under the authority of the Emergency Relief Appropriation Act of 1935, ch. 48, 49 Stat. 115, 115. Rohrer, *supra* note 113, at 766. Roosevelt's allocation was subsequently reduced to $15 million and then to $4.2 million. *Id.*

lion to the project.[117] Finally, on August 26, 1937, the CVP officially became a federal reclamation project.[118]

In 1942, the Bureau finished construction of the Friant Dam, a concrete gravity unit of the CVP, near Fresno, California on the San Joaquin River.[119] The Friant traps water into Millerton Lake behind the dam above the Mendota Pool and diverts the water into two canals.[120] Within two years of the Friant's construction, salmon below the dam were eradicated.[121] For over fifty years, the Friant and other dams of the CVP have harmed salmon and steelhead throughout the Central Valley by diverting massive amounts of water, damming off access to freshwater habitat, trapping fish in unscreened diversion pipes, and increasing water temperature to lethal levels.[122] NMFS listed the Sacramento winter-run chinook salmon as threatened in August 1989[123] and reclassified it as endangered in January 1994.[124] On February 14, 1992, NMFS issued a biological opinion concluding that operation of the CVP as proposed for 1992 was likely to jeopardize the continued existence of the winter-run chinook.[125]

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117 Emergency Relief Appropriation Act of 1936, ch. 689, 49 Stat. 1608, 1622. The $6.9 million appropriation included $6 million earmarked for the Friant Dam. *Id.*

118 Rivers and Harbors Act of 1937, ch. 832, 50 Stat. 844, 850.

119 BUREAU OF RECLAMATION, U.S. DEP'T OF THE INTERIOR, STATISTICAL COMPILATION OF ENGINEERING FEATURES ON BUREAU OF RECLAMATION PROJECTS 27 (1995).

120 WARNE, *supra* note 114, at 153 (Madera and Friant-Kern canals).

121 Appellants' Opening Brief at 7, *NRDC v. Houston*, (Nos. 97-16030, 97-16041, 967-16042, 97-16043, 97-16044, 97-16045, 97-16155, 97-16173).

122 *See generally* Pulling, *supra* note 12, at 39 (discussing the effects of dams and diversions); UNITED STATES GENERAL ACCOUNTING OFFICE, RECLAMATION LAW: CHANGES NEEDED BEFORE WATER SERVICE CONTRACTS ARE RENEWED 20–21 (1991) [hereinafter CHANGES NEEDED] (discussing the effects of inadequate streamflows and high temperature); Screening of Water Diversions to Protect Sacramento River Winter-Run Chinook Salmon, 58 Fed. Reg. 53,703 (Oct. 18, 1993) (notice of proposed rulemaking to require screening).

123 *See* Critical Habitat; Winter-Run Chinook Salmon, 54 Fed. Reg. 32,085 (Aug. 4, 1989) (emergency interim rule listing winter-run chinook as threatened); 55 Fed. Reg. 12,191 (Apr. 2, 1990) (second emergency rule listing winter-run chinook as threatened); Sacramento River Winter-Run Chinook Salmon, 55 Fed. Reg. 46,515 (Nov. 5, 1990) (final rule listing winter-run chinook as threatened).

124 *See* Endangered Status for Winter-Run Chinook Salmon, 57 Fed. Reg. 27,416 (June 19, 1992) (proposed rule to reclassify winter-run chinook as endangered); Status of Sacramento River Winter-Run Chinook Salmon, 59 Fed. Reg. 440 (Jan. 4, 1994) (stating that winter-run chinook should be reclassified as endangered); Reclassification of the Sacramento Winter-Run Chinook Salmon from Threatened to Endangered Status, 59 Fed. Reg 13,836 (Mar. 23, 1994) (final rule reclassifying winter-run chinook as endangered).

125 57 Fed. Reg. at 27,417. NMFS issued another biological opinion on February 12, 1993, again concluding that operation of the CVP as proposed for 1993 was likely to jeopardize the continued existence of the winter-run chinook. 59 Fed. Reg. at 442. NMFS has not since found that the CVP's operation would likely jeopardize the continued existence of the species, largely because Congress in late 1992 enacted the Central Valley Project Improvement Act (CVPIA), which was intended to protect, restore, and enhance fishery resources in the Central Valley and Trinity River Basin. Reclamation Projects Authorization and Adjustments Act of 1992, Pub. L. No. 102-575, §§ 3401–3412, 106 Stat. 4600, 4706–31; *see also infra* notes 140, 166, and 228 (discussing the CVPIA's specific protections for salmon). For NMFS's position on the CVPIA, see 59 Fed. Reg. at 446.

In the late 1940s the Bureau began to negotiate long-term contracts with irrigation and water districts in the Central Valley for the supply of water from the CVP.[126] These contracts were entered into with no prior evaluation of their environmental effects.[127] Eventually, the Bureau entered into 238 long-term contracts to deliver CVP water.[128] Each of the contract holders has a right of renewal at the completion of the contract period, which in most instances is forty years.[129] Most of the contracts contain a clause entitled "Compliance with Reclamation Laws," which permits minor modifications to the contracts in order to comply with federal law.[130]

In June 1988 the Bureau began negotiating with the Orange Cove District for renewal of its forty-year contract, the first of the 238 up for renewal.[131] The Bureau renewed the Orange Cove contract in May 1989.[132] Before the State of California validated the Orange Cove contract, NMFS listed the Sacramento winter-run chinook as threatened under the ESA.[133] Although the Bureau requested formal consultation with FWS for other endangered species in the area, and a "no jeopardy" biological opinion was issued for those species, the Bureau never requested formal consultation with NMFS on possible adverse effects to the winter-run chinook.[134] The Bureau independently determined that renewal of the contracts was not likely to adversely affect the salmon.[135] On November 1, 1991, the Director of NMFS refused to concur with the Bureau's opinion that the salmon would not be adversely affected, but also stated that formal consultation would not be necessary.[136] Relying on NMFS's determination that formal consultation was unnecessary, the Bureau proceeded to execute several CVP water contract renewals without requesting formal consultation.[137]

B. The Litigation

In December 1988 fifteen environmental groups, led by the Natural Resources Defense Council (NRDC), filed suit against the Bureau after it began negotiating with Orange Cove for renewal of their contract.[138] In 1989 the irrigation and water districts that had contracts up for renewal

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126 Natural Resources Defense Council v. Houston, 146 F.3d 1118, 1123 (9th Cir. 1998), *cert. denied*, 119 S. Ct. 1754 (1999).

127 *See* Boyle, *supra* note 8, at 21.

128 CHANGES NEEDED, *supra* note 122, at 10.

129 *Id.*

130 146 F.3d at 1124.

131 *Id.* at 1123. The original period of the Orange Cove contract ended in February 1989. *Id.*

132 *Id.*

133 *Id.* at 1129–30; *see also supra* note 123 and accompanying text.

134 146 F.3d at 1127.

135 *Id.* at 1126.

136 *Id.* at 1126–27. NMFS felt that the effects of the Friant contracts would be sufficiently addressed by ongoing consultations being conducted on the CVP as a whole. *Id.*; *see also supra* note 125 and accompanying text.

137 146 F.3d at 1127.

138 *Id.* at 1124.

were permitted to intervene.[139] NRDC's amended complaint alleged that the Bureau had violated ESA section 7 by failing to consult with NMFS on the effects of its contract renewals on the endangered winter-run chinook and by making an irreversible and irretrievable commitment of resources.[140] NRDC also raised a substantive ESA claim, challenging the validity of FWS's "no jeopardy" biological opinion, prepared midway through the litigation, which addressed other protected species.[141]

In 1995 the United States District Court for the Eastern District of California granted summary judgment to NRDC on the procedural ESA claims, holding that the Bureau had violated the ESA by failing to consult with NMFS before it renewed the contracts.[142] In a separate order, the court rescinded the contracts in order to remedy the violation.[143] Finally, in yet another order, the district court dismissed the substantive challenge to the biological opinion because the contract rescissions had offered complete relief.[144]

Both sides appealed, and the Ninth Circuit issued its decision in June 1998. First, the Ninth Circuit affirmed the district court's finding of a procedural ESA violation. The court stated that the Bureau had had an affirmative duty to request consultation, even though NMFS had considered consultation to be unnecessary.[145] The Bureau should not have relied on NMFS's assurances that consultation was unnecessary; the Bureau had to request from NMFS either a biological opinion or a concurrence that the proposed action was not likely to affect the salmon. By failing to meet its duty of requesting consultation, the Bureau had acted arbitrarily and capriciously and not in accordance with the law.[146]

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139 *Id.*

140 *Id.* at 1126–27. The Central Valley Project Improvement Act prohibited the renewal of any existing long-term contracts until the Secretary of Interior completed an environmental impact statement on the operations of the Central Valley Project as a whole. Pub. L. No. 102-575, § 3404(c), 106 Stat. at 4708. Therefore, in *NRDC v. Houston* the Ninth Circuit concerned itself only with the first fourteen contracts, renewed prior to passage of the CVPIA. 146 F.3d at 1124. The CVPIA also explicitly limits the duration of subsequently renewed water service contracts to 25 years, as opposed to the original 40-year period. Pub. L. No. 102-575 § 3404(c), 106 Stat. at 4709. Finally, the CVPIA imposes requirements on all water districts—and additional requirements on water districts receiving water from the Friant Dam—to make payments to a habitat restoration fund at the time they renew their contracts. *Id.*; *see also* Douglas E. Noll, *Analysis of Central Valley Project Improvement Act*, 3 SAN JOAQUIN AGRIC. L. REV. 3, 13–15 (1993).

141 146 F.3d at 1127–28.

142 *Id.* at 1124, 1127–28 (order filed May 31, 1995).

143 *Id.* at 1124, 1129 (order filed Jan. 16, 1997).

144 *Id.* at 1124, 1129 n.8 (order filed Apr. 16, 1997). A total of five district court orders were appealed to the Ninth Circuit. The three orders discussed here, *supra* notes 142–44, were not published. The only order published by the district court, *Natural Resources Defense Council v. Patterson*, 791 F. Supp. 1425 (E.D. Cal. 1992), *aff'd and remanded by NRDC v. Houston*, 146 F.3d at 1131–33, did not contain any ESA issues and is not relevant for purpose of this Chapter.

145 140 F. 3d at 1126–27. To reach this determination, the Ninth Circuit first held that the contract renewals qualified as "agency action" under the ESA. *Id.* at 1125–26. For a further discussion of agency action, see *infra* notes 151–62 and accompanying text.

146 146 F.3d at 1127.

Furthermore, the Bureau had made an irreversible and irretrievable commitment of resources in violation of ESA section 7(d) by renewing several of the contracts before the consultation process with FWS and NMFS was complete.[147] FWS's eventual issuance of a no jeopardy biological opinion did not moot this claim, because the agency had violated the ESA's procedural mandates by issuing this biological opinion at an untimely date.[148] Finally, the contract renewals were properly subject to rescission in light of the foregoing violations.[149] Injunctive relief would not have been appropriate, because the contracts had already been entered into, leaving no real opportunity for choice among policy alternatives.[150]

V. THE SIGNIFICANCE OF THE *NRDC V. HOUSTON* HOLDING

A. The Meaning of "Agency Action"

In order to assess the import of *NRDC v. Houston* with respect to future Bureau proceedings, it is necessary to first consider a fundamental step that allowed the Ninth Circuit to reach its decision. That step was the Ninth Circuit's finding that the contract renewals qualified as "agency action" under the ESA.[151]

Section 7 applies to all agency actions that are likely to affect listed species.[152] There are three main prerequisites to the triggering of section 7. First, a federal agency must be involved. "Federal agency" is defined by regulations promulgated under the ESA as "any department, agency, or instrumentality of the United States."[153] Second, there must be an "action."[154] The ESA regulations define "action" as an activity or program "of

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147 *Id.* at 1128, 1133; *cf.* Pacific Rivers Council v. Thomas, 30 F.3d 1050, 1056–57 (9th Cir. 1994) (finding section 7(d) not applicable unless and until consultation is initiated; nevertheless, the agency is forbidden from proceeding with the action without first complying with the ESA's procedural requirements).

148 146 F.3d at 1128–29. FWS issued its no jeopardy biological opinion on October 15, 1991, but by then the Bureau had already executed 10 of the Friant contracts. *Id.* at 1127. Because the biological opinion had been untimely, it did not provide all the relief that might have been granted initially. If it had been timely, it might have allowed for more flexibility in modifying the contracts before they were issued. For instance, FWS has the power to make nonbinding conservation recommendations even when it reaches a no jeopardy conclusion. 50 C.F.R. § 402.14(g)(6), (j) (1998). The Ninth Circuit repeated the long-recognized tenet that the ESA's procedural mandates must be strictly complied with because they offer valuable protections against the risk of a substantive violation by helping to ensure that environmental concerns will be factored into the decision. 146 F.3d at 1128–29; *see also supra* note 25 and accompanying text. The court emphasized this point by stating that "[t]he failure to respect the process mandated by law cannot be corrected with post-hoc assessments of a done deal." 146 F.3d at 1129.

149 146 F.3d at 1129.

150 *Id.* The Ninth Circuit made other holdings (involving the unique facts of several water districts, the mootness of a claim under NEPA, the ripeness of a claim under California's Fish and Game Code, and the district court's discovery rulings) that are not relevant to this Chapter. *Id.* at 1129–33.

151 *See id.* at 1125–26.

152 16 U.S.C. § 1536(a)(2) (1994).

153 50 C.F.R. § 450.01 (1998).

154 16 U.S.C. § 1536(a)(2) (1994).

any kind authorized, funded, or carried out, in whole or in part, by Federal agencies."[155] Finally, the agency must possess discretionary authority to influence the action for the benefit of protected species while authorizing, funding, or carrying it out.[156]

Notwithstanding these three prerequisites, the courts have historically construed the term "agency action" broadly.[157] Agency action encompasses such widely varied actions as federal land resource management plans,[158] private actions under a nationwide Army Corps of Engineers permit,[159] and approval of private mining plans by the Forest Service.[160] The Service has also interpreted the term broadly by finding the requisite nexus between private acts and federal agency actions, albeit on a selective basis.[161] The agencies' implementing regulations explicitly designate "the granting of licenses, contracts, leases, easements, rights-of-way, permits, and grants-in-aid" as types of agency actions.[162]

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155 50 C.F.R. § 402.02 (1998).

156 Section 7 applies "to all actions in which there is discretionary Federal involvement or control." 50 C.F.R. § 402.03 (1998). *See generally* Sierra Club v. Babbitt, 65 F.3d 1502, 1508–09 (9th Cir. 1995) (finding that when a "federal agency lacks the discretion to influence [a] private action, consultation would be a meaningless exercise"); Strahan v. Linnon, 967 F. Supp. 581, 607 (D. Mass. 1997) ("'[I]f the federal agency has no discretion to modify the activity at issue to accommodate the mandate of the ESA, then the consultation process would be pointless.'") (quoting the court's own unpublished May 2, 1995 Memorandum and Order).

157 Conner v. Burford, 848 F.2d 1441, 1453 (9th Cir. 1988).

158 *See, e.g.*, Pacific Rivers Council v. Thomas, 30 F.3d 1050, 1051 (9th Cir. 1994); *see also* John P. Hogan, *The Legal Status of Land and Resource Management Plans for the National Forests: Paying the Price for Statutory Ambiguity*, 25 ENVTL. L. 865, 890–94 (1995).

159 *See, e.g.*, Riverside Irrigation Dist. v. Andrews, 758 F.2d 508 (10th Cir. 1985).

160 *See, e.g.*, Baker v. United States Dep't of Agriculture, 928 F. Supp. 1513, 1518 (D. Idaho 1996). Section 7 still applied here, even though the Forest Service is required to approve any reasonable plan, reserving only the right to impose mitigation measures. *Id.* at 1517–18.

161 *See* Donald L. Soderberg & Paul E. Larsen, *Triggering Section 7: Federal Land Sales and "Incidental Take" Permits*, 6 LAND USE & ENVTL. L. 169, 171–72 (1991). Soderberg and Larsen note two situations where FWS has employed "inventive techniques" to trigger section 7 consultation. In the first example, the requisite nexus was found between a private proposal to construct a landfill in an area known as habitat for a proposed endangered species and federal plans to construct highway access to the landfill, even though the proposed highway exchange itself would not affect the species. In the second example, a nexus was found when the federal government granted right-of-way access to a landowner's development project on land purchased from the Bureau of Land Management. According to Soderberg and Larsen, the reason for employing section 7 in these cases was to obtain an incidental take permit under ESA section 7(b)(4), as opposed to an incidental take permit under ESA sections 10(a) or 10(b), which are customarily applied to private development actions. Soderberg and Larsen further assert that "[t]he complexity and length of procedures inherent in these types of permits can mean the difference between obtaining relief from the Act in a relatively short period of time, as is often the case with a section 7 permit, or waiting years for such relief, as is often true with a section 10 permit." *Id.* at 172.

162 50 C.F.R. § 402.02 (1998).

B. O'Neill v. United States

If *NRDC v. Houston* is a powerful weapon for change in western water law, then *O'Neill v. United States*[163] is the warhead it delivers. In *O'Neill*, the Ninth Circuit held that the Bureau was not obligated to furnish the full contractual amount of water to water service contract holders south of the Sacramento-San Joaquin Delta when that amount could not be delivered consistently with the mandates of the Central Valley Project Improvement Act (CVPIA)[164] and the ESA.[165] Congress enacted the CVPIA in October 1992 to provide Central Valley Project water to fish and wildlife.[166] Three months later, the Bureau announced that in order to comply with the CVPIA and ESA section 7(a)(2)'s jeopardy provision,[167] the agency would be reducing its initial allocation of water to several contract holders by fifty percent.[168] The court upheld this action, stating that federal water delivery contracts are not immune from subsequently enacted statutes such as the ESA and the CVPIA, even if the contracts explicitly obligate the government to supply a specified amount of water without exception.[169] This decision laid the foundation for the *NRDC v. Houston* holding, issued only three years later.

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163 50 F.3d 677 (9th Cir. 1995).

164 Reclamation Projects Authorization and Adjustments Act of 1992 (CVPIA), Pub. L. No. 102-575, §§ 3401–3412, 106 Stat. 4600, 4706–31 (1992).

165 50 F.3d at 680, 686.

166 In addition to various new limitations on contract renewals, discussed *supra* note 140, the CVPIA mandates that the Bureau provide 800,000 acre-feet (or roughly 10%) of Central Valley Project water annually to wildlife refuges, instream uses in Central Valley rivers and streams, and instream flows in the Trinity River in northwest California. Pub. L. No. 102-575, § 3406(b)(2), 106 Stat. at 4715–16; *see also infra* note 228.

167 16 U.S.C. § 1536(a)(2) (1994). The ESA's jeopardy provision came into play when NMFS issued a biological opinion stating that operation of the CVP as proposed in 1993 was likely to jeopardize the continued existence of the Sacramento winter-run chinook salmon. *O'Neill*, 50 F.3d at 681; *see also supra* note 125 and accompanying text.

168 *O'Neill*, 50 F.3d at 681.

169 *Id.* at 686. The court noted that the "CVPIA marks a shift in reclamation law modifying the priority of water uses. There is nothing in the contract that precludes such a shift." *Id.* The notion that contracts between the federal government and private parties are subject to revision by subsequently enacted law is grounded in the well-established doctrine that the government always retains sovereign authority unless that authority is unequivocally surrendered. *See generally* Providence Bank v. Billings, 29 U.S. 514, 561 (1830) (holding that in the absence of deliberate abandonment of the government's taxation power, a governmental grant of land to a bank and issuance of a charter incorporating the bank did not preclude subsequent taxation of the bank); Peterson v. United States Dep't of Interior, 899 F.2d 799, 812 (9th Cir. 1990) (holding that water districts may not "continue to receive reclamation water under the terms of . . . pre-existing contracts if those terms violate the newly amended law"); Westlands Water Dist. v. United States, 850 F. Supp. 1388, 1402–08 (E.D. Cal. 1994) (holding that a contract clause granting water districts the option of renegotiating their contracts was not a surrender of the sovereign's power to make changes in federal reclamation laws).

C. Implications for Bureau of Reclamation Water Delivery in the Northwest

In *NRDC v. Houston*, the Ninth Circuit ruled that the contract renewals at issue were "agency actions" as contemplated by the Endangered Species Act and its regulations.[170] Three of the intervening water districts argued that the Bureau did not possess statutory authority to alter the terms of the contracts, particularly the quantity of water delivered, and that therefore, section 7 had not been triggered.[171] The Ninth Circuit repudiated this argument, noting that the Bureau did have discretion during the negotiation process to influence the terms of the contracts.[172] Even though the districts had "a first right . . . to a stated share or quantity of the project's available water supply,"[173] the Bureau retained discretion to alter other key terms in the contract or to reduce the amount of water available for sale if necessary to comply with the ESA.[174] Federal reclamation laws state that contracts are to be renewed "under stated terms and conditions mutually agreeable to the parties,"[175] that water rights are based on the amount of available project water,[176] and that the Secretary of Interior has discretion to set rates to cover operation and maintenance costs.[177] Additionally, under *O'Neill*, the Bureau retained discretion to comply with subsequently enacted federal law throughout the life of the contracts.[178] Thus, once FWS listed the Sacramento winter-run chinook, the Bureau had a mandatory duty to consult on the effects of any subsequent agency action.

In sum, under *NRDC v. Houston*, routine renewals of Bureau water service contracts constitute agency actions under the ESA, as long as the Bureau possesses discretionary authority to modify the contract terms upon renewal.[179] Additionally, when renewal of a contract "may affect"[180] a protected species, an affirmative formal consultation duty is triggered.[181] If the contracts are renewed before the consultation process is complete, the courts may justifiably rescind the contracts.[182] In such an event, the contract holder(s) must either find water from other sources, or the Bureau must go back to the drawing board, requesting a biological opinion from the Service.

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170 146 F.3d at 1125–26.

171 *Id.* at 1125.

172 *Id.* at 1126.

173 43 U.S.C. § 485h-1(4) (1994).

174 146 F.3d at 1126.

175 43 U.S.C. § 485h-1(1) (1994).

176 *Id.* § 485h-1(4).

177 *Id.* § 485h(e). In fact, negotiations for the contracts at issue resulted in an increase in water rates from $3.50 to $14.84 per acre-foot. DORIS OSTRANDER DAWDY, CONGRESS IN ITS WISDOM: THE BUREAU OF RECLAMATION AND THE PUBLIC INTEREST, 189 (1989). The higher price still represents only a fraction of the actual cost of the irrigated water, which is heavily subsidized by the federal government. *See id.*

178 146 F.3d at 1126 (citing O'Neill v. United States, 50 F.3d 677, 686 (9th Cir. 1995)).

179 *Id.*

180 50 C.F.R. § 402.14(a) (1998).

181 146 F.3d at 1127.

182 *Id.* at 1129.

NRDC v. Houston injects new strength into the ESA's consultation requirements. The case unmistakably expands section 7's application, providing a means of obligating federal agencies to alter water delivery activities in order to protect salmon and other listed species in the West.[183] Still, it remains to be seen just how far *NRDC v. Houston* expands the ESA's protections. The answer will hinge in large part on the meaning of the term "agency action" and on interpretation of *O'Neill*.

1. Water Service Contract Renewals

The Bureau presently administers roughly two thousand water service contracts nationwide, and almost seventy percent of them are in the Pacific Northwest Region.[184] Most of these contracts are part of the Columbia Basin Project.[185] The Bureau's most recent quarterly listing of nationwide contracting activity identifies 143 total contract actions pending as of December 31, 1998, a number of them involving renewals of water service contracts.[186] Only seventeen of the 143, or roughly twelve percent, are in the Pacific Northwest.[187] That percentage is likely to increase over time as the region's long-term water service contracts begin to come up for renewal.

In light of the definite relationship between irrigation diversions and adverse impact to endangered species in the Columbia/Snake System,[188] it is clear that the Bureau is now bound by *NRDC v. Houston* to consult with NMFS and FWS on potential adverse effects of renewing its water service contracts in the region. Most contracts contain language similar to those issued in the Central Valley, where the contracts are renewable only upon terms "mutually agreeable to the parties."[189] In other words, the Bureau

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183 Even during informal consultation, the Service may recommend ameliorative measures that would help to achieve compliance with section 7's substantive prohibitions. 50 C.F.R. § 402.13(b) (1998); *see also supra* note 54 and accompanying text.

184 Duane Mecham & Benjamin M. Simon, *Forging a New Federal Reclamation Water Pricing Policy: Legal and Policy Considerations*, 27 ARIZ. ST. L.J. 507, 533 (1995).

185 Rigby, *supra* note 101. The Bureau also administers several hundred "repayment contracts" in the region. Rigby likens the difference between repayment contracts and water service contracts to the difference between home mortgages and lease agreements. Repayment contracts are not reopened at the expiration of the contract period; rather, title in the water delivery vests with the holder of the contract at the expiration of the repayment period, which can last 50 years or longer. *Id.*; *see also* Benson, *supra* note 102, at 371; Mecham & Simon, *supra* note 184, at 512–13. Most Bureau water delivery contracts in Idaho and many in Oregon are "spaceholder contracts," which are a type of repayment contract that conveys only a share of reservoir capacity to irrigation districts rather than a guaranteed amount of water. *See* SNAKE RIVER BASIN BA, *supra* note 82, at II-9 to II-10; NORTHWEST WATER LAW AND POLICY PROJECT, A SURVEY OF COLUMBIA RIVER BASIN WATER LAW INSTITUTIONS AND POLICIES 33 n.26 (1997).

186 Quarterly Status Report of Water Service and Repayment Contract Negotiations, 64 Fed. Reg. 3544 (Jan. 22, 1999).

187 *Id.* at 3545.

188 *See supra* notes 76–101 and accompanying text.

189 This language comes directly from a section of the Reclamation Act inserted by Congress in 1956. 43 U.S.C. § 485h-1 (1994). That section requires the Bureau to provide for renewal of any long-term water service contracts "under stated terms and conditions mutu-

will have discretionary authority during renewal negotiations to vary terms such as the quantity of water delivered, the rates paid for the water, and the duration of the contracts. At the very least, the Bureau can be expected to increase water prices to reflect inflation,[190] but whether or not it actually does so is irrelevant. The real focus will be whether the Bureau possesses the authority to influence the "agency action" represented by the contract renewals in order to benefit protected species, and *NRDC v. Houston* answers with a resounding yes.[191] This will trigger the procedural and substantive obligations of section 7, beginning a new era of accountability under the ESA for the effects of the agency's intricate Northwest water delivery system.

Once section 7 is invoked in the context of water service contract renewals, its inflexible mandate will benefit salmon and other imperiled species. Pursuant to the ESA and its regulations, the Service must recommend reasonable and prudent alternatives that would prevent jeopardy to listed species, and the Bureau must either follow the Service's recommendations or carry a heavy burden of showing that it has developed equally prudent measures of its own.[192] Either way, changes will surely be made in contract terms and in Bureau operations in order to protect listed species before the contracts may be renewed. Potential ameliorative measures include reductions in the quantity of water to be delivered under the contracts, flow augmentation, reservoir drawdowns, continuance of the moratorium on issuing new water rights in the Snake and Columbia River mainstems,[193] mandatory irrigation conservation, diversion of specified amounts of water for in-stream and out-of-stream wildlife needs, and installation of screens at diversion intakes. NMFS's 1995 proposed recovery plan for Snake River salmon, which is instructive for section 7 consulta-

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ally agreeable to the parties" if the other contracting party so requests. *Id.* § 485h-1(1). The same section also requires the Bureau to provide all holders of long-term water service contracts with "a first right . . . to a stated share or quantity of the project's available water supply . . . and a permanent right to such share or quantity." *Id.* § 485h-1(4). *NRDC v. Houston* holds that notwithstanding Congress's mandates to provide guaranteed contractual rights to water, the Bureau retains discretion to reduce the amount of water available for sale and alter other key terms in the contracts. 146 F.3d at 1126; *see also supra* notes 172–78 and accompanying text.

190 *See generally* DAWDY, *supra* note 177, at 189; Mecham & Simon, *supra* note 184.

191 146 F.3d at 1127–28. It is well established that the Bureau may include new terms in water service contracts during renewal. *See* Madera Irrigation Dist. v. Hancock, 985 F.2d 1397, 1403–04 (9th Cir. 1993) (contractual "right of renewal" or "right to a permanent water supply," without more, does not bestow upon the contract holder a permanent, renewable right to water service under the exact terms and conditions as those set forth in the original contract); *see also* Implementation of National Environmental Policy Act; Council Recommendations, 54 Fed. Reg. 28,477, 28,484–86 (July 6, 1989) (Council on Environmental Quality's findings that the Bureau had "considerable discretion" during the renewal of the contracts at issue in *NRDC v. Houston* to change significant contract terms, including rates, duration, and adjustments, to meet the needs of the California Water Resources Control Board).

192 *See supra* note 64 and accompanying text.

193 *See supra* note 108 and accompanying text.

tion in the region,[194] calls for many of these measures.[195] Because NMFS looks to this recovery plan as the "best source" of measures to achieve compliance with substantive consultation obligations, many of the recovery plan's measures will necessarily be invoked in order to attain adequate flow levels that ensure survival and recovery of protected species.[196]

2. Water Spreading

A tougher question is whether *NRDC v. Houston* applies to the problem of water spreading.[197] If so, the Bureau will be required to consult on the effects of this illegal practice—and hence will finally be forced to address a highly volatile issue that the agency has previously sought to avoid. The major determining factor in the analysis will be whether water spreading qualifies as an "agency action" for purposes of the ESA.

The Bureau may argue that the water districts, and not the Bureau, are delivering the water, and that therefore the water spreading has not been "authorized, funded, or carried out"[198] by the federal government. However, if the Bureau is delivering water to the irrigation districts, fully aware that some of it will not be used in compliance with the terms of the contracts, the Bureau is in a sense "authorizing" the illegal water use, especially when it is fully aware of the illegal deliveries and fails to take steps to stop them.[199] Although the issue is unresolved in the courts, the Bureau arguably possesses discretionary authority to control water spreading through the promulgation and enforcement of regulations, because Congress has expressly prohibited excess lands from receiving water[200] and has granted the Bureau the authority "to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of [the Reclamation] Act

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194 "[T]he Recovery Plan will be the best evidence of the amount of improvement required in each life stage and the amount of [risk] reduction sufficient to satisfy the requirements of Section 7(a)(2). *NMFS will therefore first consider whether the proposed action is consistent with the Recovery Plan.*" 1995 BIOP, *supra* note 107, at 14; *see also* 1995 PROPOSED RECOVERY PLAN, *supra* note 84, at I-14 to I-15 (noting that the recovery plan will be used by various federal agencies as a guide during consultation but will not be a self-implementing mandate under the ESA); Mary Christina Wood, *Reclaiming the Natural Rivers: The Endangered Species Act as Applied to Endangered River Ecosystems*, 40 ARIZ. L. REV. 197, 228 (1998) (noting that the recovery plan "remains in draft form, but NMFS has calibrated its ongoing section 7 determinations to the long-term objectives set forth in the plan").

195 *See, e.g.*, 1995 PROPOSED RECOVERY PLAN, *supra* note 84, at Table VI-2, Task Nos. 1.2.a., 1.5.c., 2.1.a., 2.1.c.7, 2.7.a.

196 1995 BIOP, *supra* note 107, at 15.

197 See *supra* notes 93–101 and accompanying text for background on this problem.

198 16 U.S.C. § 1536(a)(2) (1994).

199 In some alleged instances, Bureau officials have assured water districts that water deliveries were legitimate when in fact they were not. Benson & Priestley, *supra* note 93, at 107. If this is in fact the case, a strong argument could be made that "authorization" is occurring.

200 43 U.S.C. § 423e (1994) (limiting eligibility to receive water to 160 irrigable acres per individual landowner and prohibiting lands in excess of that 160-acre limitation from receiving "water from any [Bureau] project").

into full force and effect."[201] Additionally, *O'Neill* provides the Bureau with the authority to alter water delivery contracts pursuant to subsequently enacted federal law in order to prevent jeopardy to protected species.[202]

The Bureau's authority under both the Reclamation Act and *O'Neill* to remedy water spreading bestows upon the agency the requisite discretion for purposes of agency action analysis. Therefore, water spreading conceivably meets all three elements of the definition of agency action—federal involvement, some identifiable action, and federal discretionary authority[203]—triggering consultation under *NRDC v. Houston*.[204]

If the courts indeed find that water spreading qualifies as an agency action, triggering consultation duties, the repercussions will be felt most heavily in the Pacific Northwest, where water spreading has been most documented.[205] NMFS has previously stated that "additional stored water is needed for fish flow augmentation, particularly in the Snake River, in low flow years," and that the Bureau "should take all reasonable steps to secure [this] additional water."[206] Because illegal over-appropriation of water necessarily deprives salmon and other endangered species of water vital to their survival, consultation on water spreading would undeniably call for a reduction in illegitimately delivered water.

3. Delivery of Water Under Existing Contracts

The most difficult question of all regarding the future effects of *NRDC v. Houston* on Bureau operations is that of delivery of water under existing contracts. Again, the answer will hinge in large part on the definition of "agency action" and the influence of *O'Neill*.

The delivery of water under existing contracts might qualify as an ongoing agency action. In the Ninth Circuit, ongoing agency actions are subject to section 7's consultation requirements.[207] In *Pacific Rivers Council v. Thomas*, the Ninth Circuit held that two land resource management plans (LRMPs) adopted by the Forest Service for timber sales, range activities, and road building projects were ongoing agency actions, and that the Forest Service must consult with NMFS on the effects of the LRMPs on threatened chinook salmon throughout the LRMPs' duration.[208] It mattered not that NMFS had listed the salmon only *after* the Forest

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201 *Id.* § 373; *see also id.* § 390ww(c). For an argument that the Bureau possesses statutory authority to stop water spreading, see Benson & Priestley, *supra* note 93, at 105–07.

202 50 F.3d 677, 686 (9th Cir. 1995).

203 *See supra* notes 153–56 and accompanying text.

204 146 F.3d at 1118, 1126–27.

205 *See, e.g.*, STAFF OF HOUSE OF REPRESENTATIVES COMM. ON NATURAL RESOURCES, 103D CONG., 2D SESS., TAKING FROM THE TAXPAYER: PUBLIC SUBSIDIES FOR NATURAL RESOURCE DEVELOPMENT 58 (Comm. Print 1994) ("In the Pacific Northwest there is a substantial amount of application of water outside project boundaries and on non-irrigable lands.").

206 1995 BIOP, *supra* note 107, at 99–100.

207 Pacific Rivers Council v. Thomas, 30 F.3d 1050, 1054–56 (9th Cir. 1994).

208 *Id.* at 1056.

Service had adopted the LRMPs.[209] The LRMPs continued to qualify as agency actions long after their adoption because they had "ongoing and long-lasting effect[s]."[210]

Storage and delivery of water under existing water service contracts can be analogized to the LRMPs at issue in *Pacific Rivers Council*. Just as the LRMPs in *Pacific Rivers Council* governed individual forest projects, water service contracts govern individual water deliveries. When entering into its contracts, the Bureau determines the delivery of specified quantities of water on an annual schedule for periods of up to forty years. Accordingly, the contracts may be characterized as having ongoing and long-lasting effects, and may in turn be deemed ongoing agency actions.[211] As a result, subsequent species listings may trigger consultation duties long after the contracts are entered into and long before they expire.

Much as with water spreading, the discretionary authority element of "agency action"[212] again comes into play. If the Bureau has no discretion in delivering water under the contracts, then such delivery may not be considered agency action, and section 7 will not be triggered. Because *Pacific Rivers Council* does not speak on the discretionary authority element,[213] other cases must be turned to.

Most courts never touch upon the discretionary authority element, so scant case law on this element exists. One case, *Platte River Whooping Crane Critical Habitat Maintenance Trust v. Federal Energy Regulatory Commission*,[214] ostensibly held that the Federal Energy Regulatory Commission's issuance of annual interim power generation licenses that simply continued terms and conditions of pre-existing licenses were not agency actions because Congress had not afforded FERC with discretion in issuing the interim contracts.[215] Another recent case, *Environmental*

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209 *Id.* The Wallowa Whitman LRMP was promulgated and approved on April 23, 1990. The Umatilla LRMP was promulgated and approved on June 11, 1990. The Snake River chinook was listed as threatened on April 22, 1992. *Id.* at 1052.

210 *Id.* at 1053.

211 An alternative approach is that each time the Bureau makes an individual delivery of water under a contract, it is performing an agency action subject to the ESA's consultation requirements. *See* Plaintiffs/Appellees' Opposition to Defendant/Intervenor-Appellants' Opening Brief at 20, *NRDC v. Houston* (Nos. 97-16030, 97-16041, 97-16042, 97-16043, 97-16044, 97-16045, 97-16155, 97-16173) (citing unpublished district court opinion).

212 *See supra* note 156 and accompanying text.

213 The *Pacific Rivers Council* opinion never mentions the discretionary authority element in its discussion of agency actions, perhaps because the court thought it obvious that the Forest Service maintained discretionary authority in carrying out the guidelines found in the LRMPs. *See* Environmental Protection Info. Ctr. v. Simpson Timber Co., No. C98-3740 CRB, 1999 WL 183606, at *10 (N.D. Cal. Mar. 30, 1999) ("[I]t is fair to conclude that the [*Pacific Rivers Council*] opinion implicitly found . . . discretion in that case.").

214 962 F.2d 27 (D.C. Cir. 1992).

215 *Id.* at 33–34. The portion of this case discussing ESA § 7(a)(2) is very muddled, but courts have construed it as holding that the discretionary authority element of "agency action," *supra* note 156, was not present. For a well-reasoned criticism of the case's holding, see John W. Steiger, *The Consultation Provision of Section 7(a)(2) of the Endangered Species Act and its Application to Delegable Federal Programs*, 21 ECOLOGY L.Q. 243, 277–78 (1994) (arguing that the court confused ESA section 7(a)(1) (recovery) with section 7(a)(2) (prohibition against jeopardy)).

Protection Information Center v. Simpson Timber Co., held that FWS was not required to reinitiate internal consultation on the effects of previously approved private logging action on two newly listed species, because FWS did not retain sufficient discretion to influence the private activities it had already approved.[216]

O'Neill and *NRDC v. Houston* can be used to distinguish the delivery of water under Bureau water service contracts from the interim FERC licenses at issue in *Platte River Whooping Crane* and the previously approved private logging actions at issue in *Environmental Protection Information Center*. *O'Neill* and *NRDC v. Houston* clearly hold that the Bureau is not obligated to supply the full contractual amount of water to contract holders if federal law shifts priorities among water users.[217] The Bureau's power under these two cases to reduce water deliveries despite contrary contract terms arguably grants the agency with the requisite discretion to make delivery of water under existing contracts qualify as ongoing agency actions.[218] Thus, the Bureau has a continuing duty to consult on the effects of water deliveries if the agency has reason to believe that the deliveries "may affect"[219] listed species.[220] This duty exists even with respect to contracts entered into before enactment of the ESA.[221] As a result, the Bureau's duties under section 7 to avoid jeopardy and conserve

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216 *Environmental Protection Info. Ctr.*, 1999 WL 183606, at *7–8.

217 *O'Neill*, 50 F.3d at 686; *NRDC v. Houston*, 146 F.3d at 1126; *see also* Sierra Club v. Babbitt, 65 F.3d 1502, 1508 (9th Cir. 1995) (noting, in discussing the annual delivery of water in *O'Neill*, that "a project undertaken pursuant to a preexisting agreement could not avoid the procedural requirements of section 7(a)(2) if the project's implementation depended on additional agency action").

218 The Bureau's discretion is more clear when water service contracts are involved, as was the case in both *O'Neill* and *NRDC v. Houston*. The Bureau may be characterized as having less discretion to reduce water deliveries to holders of repayment contracts because of the structural differences between repayment contracts and water service contracts. A holder of a repayment contract makes payments to partially pay back the project costs until receiving title to the project, while a holder of a water service contract simply pays an agreed rate in exchange for annual water deliveries. Benson, *supra* note 102, at 371; *see also* 43 U.S.C. § 485h(d) (1994) (repayment contracts); 43 U.S.C § 485h(e) (1994) (water service contracts). The Bureau presently administers 1980 water service contracts and 865 repayment contracts in the Pacific Northwest region. Mecham & Simon, *supra* note 184, at 533.

Holders of repayment contracts can be expected to raise Fifth Amendment challenges to any restrictions placed on water deliveries stemming from consultation if they feel that their contracts provide them with property interests in project water. However, the structural distinctions between repayment and water service contracts are diminished by the fact that many repayment contracts in the Pacific Northwest are spaceholder contracts—which merely convey a specified portion of reservoir capacity rather than a guaranteed amount of water. *See supra* note 185. While the amount of water received by the contract holders may be reduced through consultation, the contract holders would continue to receive their fair share of *legally available* water. Finally, once title to a project vests in the holder of a repayment contract, the federal nexus for ESA purposes arguably no longer exists, and the contract holder will be free of the requirements of ESA section 7.

219 50 C.F.R. § 402.14(a) (1998); *see also supra* note 55.

220 *See* 50 C.F.R. § 402.14(a) (1998).

221 *NRDC v. Houston*, 146 F.3d at 1126 (Bureau retains discretion to alter key terms of a contract throughout its duration in order to comply with subsequently enacted law).

listed species "effectively trump" its contractual obligations to deliver irrigation water.[222]

If and when delivery of water under existing contracts is seen as an agency action under the Act, it is inevitable that NMFS will determine that such delivery "may affect"[223] protected salmonids,[224] thereby triggering formal consultation. As a result, the Bureau will be obligated to comply with section 7's substantive standards—particularly the duty of ensuring the continued existence of listed species. The consultation process, coupled with the guidance of NMFS's *1995 Proposed Recovery Plan*,[225] will likely result in the curtailment of the Bureau's deliveries.[226]

VI. CONCLUSION

NRDC v. Houston builds on a recent trend of placing the protection of salmon higher on the priority list. Other examples of this trend include the listing of numerous salmonid populations over the last decade,[227] the CVPIA,[228] and recent federal dam removals.[229]

The procedural safeguards required by the Ninth Circuit in *NRDC v. Houston* will mean greater protection for salmon and other endangered species in the Pacific Northwest. Consultation will now be required for renewals of federal water service contracts in the region. This new empha-

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222 Blumm et al., *supra* note 64, at 1037 (citing *NRDC v. Houston*, 146 F.3d at 1127).

223 50 C.F.R. § 402.14(a) (1998); *see also supra* note 55.

224 *See* U.S. BUREAU OF RECLAMATION, EXECUTIVE SUMMARY FOR THE BUREAU OF RECLAMATION CUMULATIVE EFFECTS STUDY ON IRRIGATION WITHDRAWALS IN THE COLUMBIA RIVER BASIN ABOVE BONNEVILLE DAM 4 (1997) (draft) (stating that irrigation withdrawals are the "major reason" why flow targets for operation of the Federal Columbia River Power System are rarely met).

225 *Supra* note 84.

226 Proposed actions must be consistent with recovery plans developed by NMFS, and therefore the 1995 BIOP looks to the 1995 PROPOSED RECOVERY PLAN for guidance. *See supra* notes 194–96 and accompanying text. The 1995 PROPOSED RECOVERY PLAN calls for numerous ameliorative measures to promote the recovery of salmon that could be invoked during consultation. *See supra* note 195.

227 *See, e.g.*, *supra* note 79.

228 *See supra* notes 125, 140, 166. It is worth noting that the CVPIA specifically excludes upper San Joaquin River water from the mandatory 800,000 acre-foot annual allocation to fish and wildlife, discussed *supra* note 166. Pub. L. No. 102-575 § 3406(b)(1), 106 Stat. at 4714; *see also* Douglas E. Noll, *Searching for the Zone of Reasonableness*, 8 SAN JOAQUIN AGRIC. L. REV. 59, 63–64 (1998). Instead, the CVPIA authorizes a "separate program" for the waters that spawned the *NRDC v. Houston* litigation that requires FWS to "develop a comprehensive plan, which is reasonable, prudent, and feasible, to address fish, wildlife, and habitat concerns on the San Joaquin River, including, but not limited to the streamflow, channel, riparian habitat, and water quality improvements that would be needed to reestablish fisheries from Friant Dam to its confluence with the San Francisco Bay/Sacramento-San Joaquin Delta Estuary." Pub. L. No. 102-575, § 3406(b)(1), (c)(1), 106 Stat. at 4714, 4721. The CVPIA also benefits the endangered Sacramento winter-run chinook indirectly, through its mandatory environmental impact statement on the Friant Dam, its limitation on the duration of subsequently renewed contracts, its newly imposed transaction costs, and its habitat restoration fund. *See supra* note 140 and accompanying text.

229 *See generally* Bruce Babbitt, *A River Runs Against It: America's Evolving Views of Dams*, OPEN SPACES, Fall 1998, at 8.

sis on consultation will mean modifications of contract terms upon renewal to include measures that will benefit protected salmon and other species.

The case's potential impact does not end there. Perhaps condoned illegal practices like water spreading will finally be seen as agency actions that require consultation. It is also possible that the delivery of water under existing contracts may soon be considered ongoing agency actions requiring consultation. Only time will tell just how far section 7's scope will be expanded. In the meantime, *NRDC v. Houston* waits patiently to revolutionize western water law.