

The National Agricultural
Law Center



University of Arkansas · Division of Agriculture
NatAgLaw@uark.edu · (479) 575-7646

An Agricultural Law Research Article

**Endangered Species Act Enforcement
and Western Water Law**

by

Jennie L. Bricker & David E. Filippi

Originally published in ENVIRONMENTAL LAW
30 ENVTL. L. 735 (2000)

www.NationalAgLawCenter.org

ARTICLES

ENDANGERED SPECIES ACT ENFORCEMENT AND WESTERN WATER LAW

BY

JENNIE L. BRICKER AND DAVID E. FILIPPI*

During the 1990s, more than thirty populations of anadromous and resident fish species were listed as threatened or endangered under the federal Endangered Species Act (ESA). Now that the listing process is largely complete, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and interested environmental groups are turning their attention to ESA-based enforcement actions. These entities are more frequently calling for long-established water users to give up all or a portion of their water and return it to streams for the benefit of fish. To date, these efforts have been undertaken largely without regard to the priority of the water rights in a given water basin. This system of priority, which is embedded in the prior appropriation doctrine, serves as the foundation for western state water law. This Article examines the unfolding tension between federal ESA enforcement efforts and state water law and advances the position that, in order to ensure a more predictable, precise, and fair process, the prior appropriation doctrine must be incorporated into basin-wide enforcement efforts in which voluntary water reallocation efforts fail. The authors call on state governments to become more involved with federal agencies in addressing the growing conflict between federal and state law, so that individual water users and state watermasters will have a more uniform and predictable way of ensuring the avoidance of take and meeting recovery objectives for listed fish.

* Jennie Bricker and David Filippi practice natural resources and environmental law at Stoel Rives LLP, which represents numerous water delivery organizations throughout Oregon and Washington. The views presented in this paper are the authors' own and not necessarily those of their clients. An earlier version of this Article was prepared on behalf of the Oregon Water Resources Congress, a trade organization representing water delivery organizations, and presented to the Oregon Water Resources Commission on May 19, 2000. Ms. Bricker received her J.D. degree in 1997 and Mr. Filippi received his J.D. degree in 1996, both from the Northwestern School of Law of Lewis & Clark College.

I.	INTRODUCTION	737
II.	WESTERN WATER LAW AND THE PRIOR APPROPRIATION DOCTRINE.....	738
	A. <i>Overview</i>	738
	B. <i>Riparian Doctrine</i>	739
	C. <i>Prior Appropriation Doctrine</i>	739
	D. <i>Water Rights in Oregon</i>	740
III.	THE ENDANGERED SPECIES ACT	741
	A. <i>Overview of the ESA</i>	741
	B. <i>Listed Salmonids</i>	742
	C. <i>Other Listed Fish Species</i>	743
	D. <i>Critical Habitat Designations</i>	743
IV.	ENFORCEMENT OF SECTION 9.....	744
	A. <i>Types of Enforcement</i>	744
	1. <i>Criminal Enforcement</i>	745
	2. <i>Civil Penalties</i>	745
	3. <i>Injunction</i>	746
	4. <i>Citizen Suit Enforcement</i>	746
	B. <i>Activities That Trigger Enforcement</i>	747
	1. <i>Screening</i>	748
	2. <i>Off-Channel Stock Watering</i>	748
	3. <i>Water Withdrawals</i>	749
V.	CONFLICTS BETWEEN ESA ENFORCEMENT AND STATE WATER LAW.....	750
	A. <i>Tensions Between Federal and State Law</i>	751
	1. <i>Federalism</i>	751
	2. <i>Abstention</i>	752
	3. <i>Taking of Private Property Without Just Compensation</i>	753
	B. <i>Local Problems Created by Federal Enforcement</i>	754
	1. <i>Water Delivery Contracts</i>	754
	2. <i>Definition of Available</i>	754
	3. <i>Causation and Proof Issues</i>	755
VI.	COOPERATION BETWEEN FEDERAL AND STATE WATER INTERESTS.....	757
	A. <i>ESA Section 2(c)</i>	758
	B. <i>ESA Section 4(d)</i>	758
	C. <i>Cooperative Efforts</i>	759
	1. <i>Methow Valley Memorandum of Agreement</i>	759
	2. <i>Platte River Cooperative Agreement</i>	760
	3. <i>Truckee River Operating Agreement</i>	761
	4. <i>Walla Walla Basin</i>	761
	D. <i>Key Concepts</i>	764
	1. <i>Funding</i>	764
	2. <i>Science</i>	764
	3. <i>Treating Water Like Property</i>	765
VII.	ENFORCEMENT SOLUTIONS.....	765
	A. <i>Conservation Measures and Water Marketing</i>	765

B. <i>Opt-In Habitat Conservation Plans</i>	766
C. <i>Mitigation Banking</i>	767
VIII. CONCLUSION.....	768

I. INTRODUCTION

As pioneers settled the western United States, conflicts over water use frequently arose. East of the 100th meridian, water supplies were relatively plentiful; west of that meridian, however, low rainfalls—combined with hot, dry summers—necessitated a different approach to water use. State policy makers recognized that need and developed the system of prior appropriation—“first in time, first in right.”¹ Early in the twentieth century, many western states, including Oregon, adopted the prior appropriation doctrine. While the doctrine has undergone a number of refinements, it has long provided western water users with a fair and predictable method for allocating water when supplies were insufficient to meet overall demand.

At the end of the twentieth century, uncertainty over water allocation in the Pacific Northwest is reappearing, and water conflicts are again brewing. As more and more fish species are listed under the Endangered Species Act (Act or ESA),² calls to leave more water instream for fish are becoming commonplace. While many view the ESA as a tool for trumping long-established state water rights and returning water to streams in order to protect threatened fish species, others view the ESA as effectively undermining states’ rights and usurping local economies. Whatever one’s particular view may be, a prudent observer will recognize that disputes about water are likely to be at the forefront of the controversy over the survival of listed species and the survival of the Northwest’s agricultural communities. While the prior appropriation doctrine still has the potential to provide certainty in the post-ESA era, current pressures on the doctrine will necessarily involve policy choices. For instance, some would argue that in exchange for certainty, the doctrine rewards waste and discourages conservation, thereby unnecessarily protecting wasteful senior water users while punishing conservation-minded junior water users, all at the expense of local economies. At the same time, those who developed their water rights later in time did so with the full knowledge that the more senior users had priority. To require proportionate reductions in water use arguably places a disproportionate burden on senior water users.

For the foreseeable future, there surely will be much uncertainty with regard to the intersection between the ESA and state water rights. However, the time is ripe to begin a formal dialogue. Western state governors and state water resources departments have an opportunity—indeed, an obligation to the people of their states—to develop strategies for coordinating directly

¹ See Krista Koehl, *Partial Forfeiture of Water Rights: Oregon Compromises Traditional Principles to Achieve Flexibility*, 28 ENVTL. L. 1137, 1140–41 (1998) (discussing the history of the prior appropriation system).

² Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (1994).

with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) on the growing conflict between the ESA and state water law. While it may be premature to choose one approach over another, states must begin taking the initiative so that when new shortages are brought about by the need to protect fish and the federal agencies are demanding water be returned to streams, state water resource agencies can provide direction to field staff and water users as to how water is to be returned to streams and who will return it. The direction should not be on an ad hoc basis, but instead must be fair and predictable. While many observers anticipate that cooperation among water users—basin by basin—may be the most effective and immediate solution, basin-wide cooperation among users may be the exception to the rule. The authors hope this Article will provide a strong starting point for further discussion on these issues, which are so vital to the economic and environmental futures of Northwest communities.

Part II summarizes water allocation in the western states under the system of prior appropriation. Part III provides an overview of key sections in the ESA, the specific listings of fish species in the Pacific Northwest, and the habitat issues attendant to those listings. Enforcement of the ESA prohibition against “take” of protected species³ is the focus of Part IV; specifically, Part IV explores whether the federal agencies will be able to prove that a particular diverter of water has violated the ESA take prohibition. Part V outlines the issues and conflicts between federal and state law. Part VI analyzes some possibilities for cooperative solutions to fish conservation, and finally, Part VII presents some specific ideas for whole-basin water reallocation models.

As detailed in Part VIII, this Article concludes that federal hammer-style enforcement over water users is a bad idea. Any workable solution to the conflict must be cooperative, creative, and respectful of the western prior appropriation doctrine.

II. WESTERN WATER LAW AND THE PRIOR APPROPRIATION DOCTRINE

A. Overview

In the United States, water law has developed according to the unique needs and resources of each state. East of the 100th meridian, surface water is plentiful and precipitation is generally sufficient to support agriculture without irrigation. In the West, precipitation amounts to only ten to twenty inches annually, and farming without irrigation is generally impossible. In addition, streamflows, which depend largely on spring runoff from glaciers and snowpack accumulated during the winter months, vary widely from season to season and from one year to the next. Despite the relative scarcity of water, about two-thirds of the nation's food supply is grown in the West.⁴

³ *Id.* § 1538(a).

⁴ See Michael R. Moore et al., *Water Allocation in the American West: Endangered Fish Versus Irrigated Agriculture*, 36 NAT. RESOURCES J. 319, 329 (1996) (estimating that 81% of the total irrigated acreage is located in seventeen western states, and half of that acreage is irrigated with surface water).

B. Riparian Doctrine

In the East, plentiful water supplies have allowed state water law to develop with loose legal doctrines and imprecise standards. The riparian doctrine's standard of reasonable use controls water rights in eastern states. Basically, everyone who lives next to water has an inchoate right to its reasonable use, shared fairly with other riparians.⁵ The amount of water to which each riparian is entitled varies with availability.⁶ Thus, in times of water shortage, all riparians must reduce their consumption proportionately. This system of proportionality is possible because water is plentiful, and true drought conditions are uncommon. Generally, pro rata reductions do not create significant hardship.

C. Prior Appropriation Doctrine

In western states, where water is scarce and crops perish without irrigation, a more sophisticated, precise, and predictable doctrine than riparian rights was required for development and progress to continue.⁷ Western states adopted the rule of priority—first in time, first in right.⁸ Thus, under the prior appropriation doctrine, water belongs to the first person to put it to beneficial use. That person has the most senior right to water, but only to the exact quantity used and only as long as the use continues.⁹ In times of shortage, senior users take their full measure of water first (that is, they “call the river”); if no more water is available, junior users are precluded from using the water supply.¹⁰ Although the result can be harsh—junior irrigators without water may have no alternative but to watch their crops die in a drought year—the doctrine has developed out of necessity, and it is crucial to agricultural production in the arid West. When there is a shortage of water, allowing senior users to call the river ensures that the farmers with the most senior rights will still be able to produce crops. Those holding junior rights expect that they may get no water and prepare for the possibility, just as senior users know they can rely on their full water right.¹¹ If western irrigators used the riparian system of proportionate reduction in a year of severe drought, probably no one would have sufficient water for

⁵ 2 THE LAW OF WATERS AND WATER RIGHTS 1577–78 (Henry Phillip Farnham ed., 1904).

⁶ *In re Water Rights of Deschutes River & Its Tributaries*, 294 P. 1049, 1052 (Or. 1930) (en banc), *appeal dismissed*, *Columbia-Deschutes Power Co. v. Stricklin*, 290 U.S. 590 (1933).

⁷ *See United States v. Willow River Power Co.*, 324 U.S. 499, 505 n.3 (1945) (observing that the system of prior appropriation was adopted in arid regions in response to compelling social need); *Deschutes*, 294 P. at 1051 (noting that unlike riparians, appropriators have rights to “a definite amount of water”).

⁸ Koehl, *supra* note 1.

⁹ *Teel Irrigation Dist. v. Water Res. Dep't of State of Oregon*, 919 P.2d 1172, 1175 (Or. 1996). *See generally* Janet C. Neuman, *Oregon*, in 6 WATERS AND WATER RIGHTS 699 (Robert E. Beck ed., 1994) (discussing requirement of beneficial use).

¹⁰ THE LAW OF WATERS AND WATER RIGHTS, *supra* note 5, at 1580.

¹¹ It should come as no surprise that the value of a given piece of farmland is often tied to the priority of the appurtenant water rights. Agricultural lenders regularly take into account the seniority of a borrower's water rights when making lending decisions.

B. Riparian Doctrine

In the East, plentiful water supplies have allowed state water law to develop with loose legal doctrines and imprecise standards. The riparian doctrine's standard of reasonable use controls water rights in eastern states. Basically, everyone who lives next to water has an inchoate right to its reasonable use, shared fairly with other riparians.⁵ The amount of water to which each riparian is entitled varies with availability.⁶ Thus, in times of water shortage, all riparians must reduce their consumption proportionately. This system of proportionality is possible because water is plentiful, and true drought conditions are uncommon. Generally, pro rata reductions do not create significant hardship.

C. Prior Appropriation Doctrine

In western states, where water is scarce and crops perish without irrigation, a more sophisticated, precise, and predictable doctrine than riparian rights was required for development and progress to continue.⁷ Western states adopted the rule of priority—first in time, first in right.⁸ Thus, under the prior appropriation doctrine, water belongs to the first person to put it to beneficial use. That person has the most senior right to water, but only to the exact quantity used and only as long as the use continues.⁹ In times of shortage, senior users take their full measure of water first (that is, they "call the river"); if no more water is available, junior users are precluded from using the water supply.¹⁰ Although the result can be harsh—junior irrigators without water may have no alternative but to watch their crops die in a drought year—the doctrine has developed out of necessity, and it is crucial to agricultural production in the arid West. When there is a shortage of water, allowing senior users to call the river ensures that the farmers with the most senior rights will still be able to produce crops. Those holding junior rights expect that they may get no water and prepare for the possibility, just as senior users know they can rely on their full water right.¹¹ If western irrigators used the riparian system of proportionate reduction in a year of severe drought, probably no one would have sufficient water for

⁵ 2 THE LAW OF WATERS AND WATER RIGHTS 1577–78 (Henry Phillip Farnham ed., 1904).

⁶ In re Water Rights of Deschutes River & Its Tributaries, 294 P. 1049, 1052 (Or. 1930) (en banc), *appeal dismissed*, Columbia-Deschutes Power Co. v. Stricklin, 290 U.S. 590 (1933).

⁷ See United States v. Willow River Power Co., 324 U.S. 499, 505 n.3 (1945) (observing that the system of prior appropriation was adopted in arid regions in response to compelling social need); *Deschutes*, 294 P. at 1051 (noting that unlike riparians, appropriators have rights to "a definite amount of water").

⁸ Koehl, *supra* note 1.

⁹ Teel Irrigation Dist. v. Water Res. Dep't of State of Oregon, 919 P.2d 1172, 1175 (Or. 1996). See generally Janet C. Neuman, *Oregon*, in 6 WATERS AND WATER RIGHTS 699 (Robert E. Beck ed., 1994) (discussing requirement of beneficial use).

¹⁰ THE LAW OF WATERS AND WATER RIGHTS, *supra* note 5, at 1580.

¹¹ It should come as no surprise that the value of a given piece of farmland is often tied to the priority of the appurtenant water rights. Agricultural lenders regularly take into account the seniority of a borrower's water rights when making lending decisions.

irrigation, and no crops would survive. This is exactly the result that the prior appropriation doctrine was designed to avoid.

D. Water Rights in Oregon

With the passage of the Water Code in 1909,¹² Oregon adopted the system of prior appropriation for the allocation of surface water throughout the state. Oregon law provides that “[a]ll water within the state from all sources of water supply belongs to the public.”¹³ Water may be “appropriated for beneficial use.”¹⁴ Beneficial use is “the basis, the measure and the limit of all rights to the use of water.”¹⁵ Water users are not allowed to waste water; however, waste has been narrowly defined so that even very inefficient water users are entitled to the full measure of their water rights if their use of the water is supported by custom.¹⁶

Beneath Oregon’s statutory water law lies an administrative foundation—the Water Resources Commission, a seven member policy-making body responsible for conducting public hearings, adopting administrative rules, and providing direction to the Oregon Water Resources Department (Department).¹⁷ The Department administers Oregon’s permit system governing the acquisition of all new water rights as well as water rights transfers, adjudications, and forfeitures.¹⁸ The Department assigns a date to each application for a new water right; once the right is perfected and a certificate is issued, that date becomes the priority date. That date controls the right of the holder to use water in relation to all other certificate holders that divert water from the same stream.¹⁹ Watermasters administer these rights in the field, monitoring the exercise of water rights by certificate holders and enforcing the rules of priority.²⁰ Oregon is divided into eighteen water districts; the director of the Department appoints one watermaster to regulate each district.²¹

Oregon law protects instream water rights within the same priority system, and watermasters can and do regulate users on a stream to protect instream flows.²² However, any water that remains in the stream, but is not part of a certificated instream right, is available for use by appropriators—even if the extra water is left instream by a senior appropriator pursuant to a federal mandate under the ESA.²³

¹² 1909 Lord’s Or. Laws, Title XLIII, ch. VI; 1909 Or. Gen. Laws, ch. 216.

¹³ OR. REV. STAT. § 537.110 (1999).

¹⁴ *Id.* § 537.120.

¹⁵ *Id.* § 540.610(1); see *In re Waters of Umatilla River*, 172 P. 97 (Or. 1918) (beneficial use limitation); *Bennett v. City of Salem*, 235 P.2d 772 (Or. 1951) (en banc) (prohibition on waste).

¹⁶ See Janet C. Neuman, *Beneficial Use, Waste, and Forfeiture: The Inefficient Search for Efficiency in Western Water Use*, 28 ENVTL. L. 919, 933–46 (1998) (discussing waste).

¹⁷ OR. REV. STAT. § 536.02–.031 (1999).

¹⁸ See generally *id.* ch. 536 (water resources administration).

¹⁹ See generally *id.* ch. 537 (appropriation of water generally).

²⁰ *Id.* § 540.045; OR. ADMIN. R. 690-250-0100 (2000).

²¹ OR. REV. STAT. § 540.010, .020 (1999).

²² See *id.* § 537.332–.360 (1999) (instream water rights).

²³ See *infra* Part V.B.2.

III. THE ENDANGERED SPECIES ACT

A. Overview of the ESA

The ESA was passed in 1973 and was substantially amended in 1978 and 1982.²⁴ The ESA's purpose is the protection and recovery of fish, wildlife, and plant species that are threatened with extinction.²⁵ The Act provides a mechanism for designating (or listing) species as either endangered²⁶ or threatened.²⁷ Any interested person may petition the government to list a species as endangered or threatened, or the government itself may initiate the listing process.²⁸ Either the Secretary of Commerce through NMFS or the Secretary of the Interior through FWS has responsibility for listing decisions, which occur through rulemaking.²⁹ Once a species is listed, the listing agency designates through rulemaking the species's critical habitat.³⁰ NMFS has jurisdiction over marine species, including anadromous fish species.³¹ FWS is responsible for nonmarine species, including freshwater fish species.³²

The ESA contains several important components. Section 7 imposes a duty upon all federal agencies to ensure their actions pose no jeopardy to protected species.³³ Agencies must consult with NMFS or FWS before undertaking any action that could pose harm to species listed under the Act.³⁴ For example, a federal agency must consult with the appropriate agency before issuing a permit to a private party that would allow activities that could pose harm to a listed species. When agencies assess jeopardy, they are required by the regulations promulgated under section 7 to consider indirect modifications to habitat and cumulative effects of future federally related state or private activities.³⁵

Section 9 of the Act prohibits "any person" from "taking" a species listed as endangered.³⁶ Section 4(d) allows the agencies to apply section 9 prohibitions to threatened species as well.³⁷ FWS regulations thus provide that the take prohibition extends to all threatened as well as endangered animal and fish species, unless special rules apply.³⁸ NMFS adopts

²⁴ Congress has not reauthorized the ESA, and the Act continues to receive scrutiny in Congress.

²⁵ 16 U.S.C. § 1531(b) (1994).

²⁶ Endangered species are in danger of extinction throughout all or a significant portion of its range. *Id.* § 1532(6).

²⁷ Threatened species are likely to become endangered within the foreseeable future. *Id.* § 1532(20).

²⁸ *Id.* § 1533(b)(3)(A).

²⁹ *Id.* § 1533.

³⁰ *Id.* § 1533.

³¹ General Endangered and Threatened Marine Species, 50 C.F.R. § 222.101 (1999).

³² Endangered and Threatened Wildlife and Plants, 50 C.F.R. § 17.01-.02 (1999).

³³ 16 U.S.C. § 1536 (1994).

³⁴ *Id.* § 1536(a) (1994 & Supp. IV 1998).

³⁵ 50 C.F.R. § 402.02, .14 (1999).

³⁶ 16 U.S.C. § 1538 (1994).

³⁷ *Id.* § 1533(d) (1994).

³⁸ Threatened Wildlife, 50 C.F.R. § 17.31 (1999).

regulations on a case-by-case basis, usually with the same effect. The term "take" has been broadly defined, applied, and enforced. A taking includes any action that kills or harms a member of listed species.³⁹ The term "harm" includes any action that significantly modifies a listed species's habitat, when such modification results in the death or injury of a member of the listed species by impairing "essential behavioral patterns" such as "breeding, spawning, rearing, migrating, feeding or sheltering."⁴⁰ The section 9 prohibition applies to everyone, including private property owners, and it provides criminal sanctions for "knowing" violations.⁴¹

Section 10 of the Act provides a mechanism to allow an incidental take of a listed species without the risk of section 9 penalties.⁴² To obtain a section 10 permit, an applicant submits a description of the proposed activity and an explanation of the measures the applicant will take to avoid or to mitigate harm to the species. Once approved by FWS or NMFS, this habitat conservation plan (HCP) becomes the justification for the agency to authorize incidental taking of the species. The applicant is permitted to take a limited number of protected fish or wildlife as an unavoidable incident of the proposed activity.⁴³

B. Listed Salmonids

Pacific Northwest rivers are home to seven anadromous fish species within the family Salmonidae and the genus *Oncorhynchus*.⁴⁴ Anadromous fish hatch in freshwater streams from redds (nests) that spawning salmon dig in streambed gravel.⁴⁵ The newly hatched fish (fry) and the more mature juveniles (parr) live in freshwater until the biological process of smoltification prepares them for migration to salt water.⁴⁶ Smoltification transforms freshwater parrs into smolts, which migrate downriver to estuaries and finally to the ocean. The smolts mature and live their adult lives—about five years for most salmon—in the ocean. At the end of their lives, the salmon return to their natal streams to spawn.⁴⁷

Pacific Northwest salmonids include five species of salmon—pink, chum, sockeye, coho, and chinook—and two species of anadromous trout—steelhead and cutthroat.⁴⁸ Populations (stocks) of each salmonid species are

³⁹ 16 U.S.C. § 1532(19) (1994) ("['T]ake' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct.").

⁴⁰ 50 C.F.R. § 222.102 (2000) (defining "take"); see also 16 U.S.C. § 1532(19) (1994); 50 C.F.R. § 17.3 (1999) (defining "harm" for nonmarine species).

⁴¹ 16 U.S.C. §§ 1538(g), 1532(a), 1540(b)(1) (1994).

⁴² *Id.* § 1539.

⁴³ See *id.* § 1539(a)(1) (1994).

⁴⁴ JIM LICHTOWICH, SALMON WITHOUT RIVERS: A HISTORY OF THE PACIFIC SALMON CRISIS 9 (1999).

⁴⁵ *Id.*

⁴⁶ See generally *id.* at 11–12 (discussing the origin of anadromy); see also ANTHONY NETBOY, SALMON OF THE PACIFIC NORTHWEST, FISH V. DAMS 1–9 (1958) (reviewing the life history and migrations of salmon).

⁴⁷ LICHTOWICH, *supra* note 44, at 12.

⁴⁸ *Id.* at 9.

often identified by differences in run-time—the time of the year when adult fish begin their return to freshwater. For example, chinook salmon migrate in four distinct runs: spring, fall, summer, and winter.⁴⁹

For ESA purposes, a species includes “any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.”⁵⁰ NMFS applies this definition to Pacific salmonids by evaluating whether a stock represents an “evolutionarily significant unit” (ESU).⁵¹ To qualify as an ESU, a stock must be “substantially reproductively isolated” and must be “an important component in the evolutionary legacy of the species.”⁵²

Throughout the 1990s, twenty-five Pacific Northwest salmonid ESUs have been listed under the ESA as endangered or threatened.⁵³ This includes two endangered and seven threatened ESUs of chinook, two threatened ESUs of chum, three threatened ESUs of coho, one endangered and one threatened ESU of sockeye, and two endangered and seven threatened ESUs of steelhead. In addition, eight other ESUs are candidates or have been proposed for listing.⁵⁴

C. Other Listed Fish Species

Several species of Pacific Northwest freshwater fish (under FWS jurisdiction) have also been listed. These include three populations of bull trout, seven other populations of trout, the shortnose sucker and the Lost River sucker in the Klamath Basin, and three populations of chub found in Oregon.⁵⁵

D. Critical Habitat Designations

For most listed species, the ESA requires the listing agency to issue rules that designate critical habitat.⁵⁶ Critical habitat is defined under the Act to include all geographical areas necessary to the species's survival and recovery.⁵⁷ Regulations issued by both NMFS and FWS prohibit the destruction or adverse modification of critical habitat.⁵⁸ The U.S. Court of Appeals for the Ninth Circuit has approved the legality of these regulations,

⁴⁹ Policy on Applying the Definition of Species Under the Endangered Species Act to Pacific Salmon, 56 Fed. Reg. 58,612, 58,616–58,617 (Nov. 20, 1991) (hereinafter ESU Policy); LICHTATOWICH, *supra* note 44, at 234.

⁵⁰ 16 U.S.C. § 1532(16) (1994).

⁵¹ ESU Policy, *supra* note 49, at 58,612.

⁵² *Id.*

⁵³ See 50 C.F.R. § 17.11 (1999) (listing endangered and threatened wildlife and plants); see also NMFS Northwest Regional Office, *The Endangered Species Act*, available at <http://www.nwr.noaa.gov/1salmon/salmesa> (last visited May 3, 2000) (providing listing status and ESU maps for listed fish in the Northwest).

⁵⁴ NMFS Northwest Regional Office, *supra* note 53.

⁵⁵ See, e.g., Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for Bull Trout in the Coterminous United States, 64 Fed. Reg. 58,910 (Nov. 1, 1999).

⁵⁶ 16 U.S.C. § 1533(b)(2) (1994); 50 C.F.R. § 424.12 (1999).

⁵⁷ 16 U.S.C. § 1532(5)(A) (1994).

⁵⁸ 50 C.F.R. § 17.3 (1999).

concluding that habitat destruction *can* constitute a taking if such destruction results in actual harm to the species.⁵⁹ Some courts have also suggested that destruction of nondesignated habitat can also amount to a taking.⁶⁰

NMFS has designated critical habitat for listed salmonids by listing hydrologic units from U.S. Geological Survey maps.⁶¹ Habitat includes "the water, substrate, and adjacent riparian zone" in all "[a]ccessible reaches" of rivers.⁶² Accessible reaches include any part of a river that is within the salmonids' historic range and that "can still be occupied by any life stage of salmon or steelhead."⁶³

Significantly, neither NMFS nor FWS has attempted to designate specific instream flow amounts as part of species's critical habitat. Although NMFS noted that water quantity is one of the "essential features of critical habitat," the agency concluded that, for purposes of regulation, "it is not practical to describe specific values or conditions for each of these essential habitat features."⁶⁴ Nevertheless, if water withdrawals impair river habitat so actual harm occurs to listed fish, the current trend is for the federal agencies to point to the entity or entities responsible for the withdrawals and to allege they are liable for a taking.

IV. ENFORCEMENT OF SECTION 9

A. Types of Enforcement

As summarized above, ESA section 9 prohibits the taking of any endangered species of fish or wildlife. The prohibition applies to any person, and "person" includes individuals, corporations and other business entities, municipalities, states, and political subdivisions of states.⁶⁵ By regulation, NMFS and FWS have extended the take prohibition to many threatened species as well. As defined in the Act, "take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."⁶⁶ Destruction of a listed species's habitat can amount to

⁵⁹ *Palila v. Hawaii Dep't of Land & Natural Res.*, 649 F. Supp. 1070 (D. Haw. 1986), *aff'd*, 852 F.2d 1106 (9th Cir. 1988).

⁶⁰ See *Mountain States Legal Found. v. Hodel*, 799 F.2d 1423, 1427-28 (10th Cir. 1986), *cert. denied*, 480 U.S. 951 (1987) (noting that grazing animals may have to be removed from an endangered species's habitat if grazing would cause harm); *Sierra Club v. Lyng*, 694 F. Supp. 1260 (E.D. Tex. 1988), *aff'd in part, vacated in part*, *Sierra Club v. Yeulter*, 926 F.2d 429 (9th Cir. 1991) (holding that forest management techniques effected a taking of endangered woodpeckers).

⁶¹ Designated Critical Habitat: Critical Habitat for 19 Evolutionarily Significant Units of Salmon and Steelhead in Washington, Oregon, Idaho, and California, 65 Fed. Reg. 7764, 7777 (Feb. 16, 2000) (to be codified at 50 C.F.R. pt. 226.212).

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.* at 7773.

⁶⁵ Endangered Species Act of 1973, 16 U.S.C. § 1538(a)(1) (1994); *id.* § 1532(13) (West Supp. 2000).

⁶⁶ *Id.* § 1532(19).

a taking if the destruction actually kills or injures the species.⁶⁷ The ESA prohibits unintentional as well as deliberate takings of species; it is no defense under section 9 that the violator did not intend to harm the species or its habitat.⁶⁸

Three basic elements must be present in order to prove a taking has occurred:

- (1) an act or omission that
- (2) (directly or indirectly) causes
- (3) injury or death to a listed species or injury to the habitat on which it depends (which in turn results in injury or death to the listed species).⁶⁹

Each element must be proven to maintain a section 9 violation; the level of proof will depend upon the type of enforcement.⁷⁰

1. Criminal Enforcement

The United States can subject a section 9 violator to criminal sanctions, including fines and imprisonment, if the violator knowingly takes a listed species.⁷¹ A knowing violation requires only general intent; a hunter who shoots an endangered gray wolf violates section 9 even if he believes he is shooting some other animal.⁷² Criminal conviction requires proof, beyond a reasonable doubt, of each element of a taking.⁷³

2. Civil Penalties

FWS and NMFS have authority to assess civil penalties against violators of section 9.⁷⁴ The appropriate agency issues a notice of violation, after which the accused violator may request a hearing or attempt to negotiate a settlement.⁷⁵ If the violator does not settle and fails to pay the assessment, then the agency initiates an action in federal district court. If the elements of a taking are supported by substantial evidence, the court will order payment.⁷⁶ Substantial evidence, a much more lenient standard than reasonable doubt, requires "such evidence as a reasonable mind might

⁶⁷ 50 C.F.R. pts. 17.3, 222.102 (1999); *Palila v. Hawaii Dep't of Land & Natural Res.*, 471 F. Supp. 985, 995 (D. Haw. 1979), *aff'd*, 639 F.2d 495 (9th Cir. 1981).

⁶⁸ *Babbitt v. Sweet Home Chapter of Cmty. for a Great Oregon*, 515 U.S. 687, 700-01 (1995).

⁶⁹ Christine O. Gregoire & Robert K. Costello, *The Take and Give of ESA Administration: The Need for Creative Solutions in the Face of Expanding Regulatory Proscriptions*, 74 WASH. L. REV. 697, 705-06 (1999).

⁷⁰ See discussion *infra* Part IV.A.

⁷¹ 16 U.S.C. § 1540(b)(1) (1994).

⁷² *United States v. McKittrick*, 142 F.3d 1170, 1176-77 (9th Cir. 1998), *cert. denied*, 525 U.S. 1072 (1999).

⁷³ *United States v. Doyle*, 786 F.2d 1440, 1444 (9th Cir. 1986), *cert. denied*, 479 U.S. 984 (1986).

⁷⁴ 16 U.S.C. § 1540(a) (1994); 50 C.F.R. § 11 (1999); 15 C.F.R. § 904 (2000).

⁷⁵ 50 C.F.R. § 11.11, .12, .15 (1999); 15 C.F.R. § 904.101-102 (2000).

⁷⁶ 16 U.S.C.A. § 1540(a)(1) (West Supp. 2000); *Newell v. Baldrige*, 548 F. Supp. 39, 42 (W.D. Wash. 1982).

accept as adequate to support a conclusion."⁷⁷

3. Injunction

The U.S. Attorney General may seek a temporary or permanent injunction against anyone who is alleged to be in violation of the ESA.⁷⁸ Any person may also bring a citizen suit to enjoin ESA violations, as further outlined below.⁷⁹ Before a court will issue an injunction, it must find, by a preponderance of the evidence, that a reasonably certain, imminent threat of harm exists to a protected species.⁸⁰

4. Citizen Suit Enforcement

The ESA permits any person to bring a citizen suit to enjoin a violation of section 9 or to compel the appropriate agency to carry out its ESA obligations.⁸¹ As noted above, "person" is defined by the ESA to include individuals, corporations, associations, and other business or governmental entities.⁸² Typically, an environmental group or other watchdog organization brings a citizen suit to enforce the ESA. However, "any person" has been broadly defined by the courts and includes not just environmental groups, but also anyone affected by the Act. In *Bennett v. Spear*,⁸³ for example, the Supreme Court held that ranchers and irrigation districts had standing to bring a citizen suit in support of their claim that FWS's proposed minimum water levels in reservoirs serving the Klamath Irrigation Project violated an ESA provision requiring use of the best available scientific data.⁸⁴

The Ninth Circuit has affirmed that "a reasonably certain threat of imminent harm to a protected species is sufficient for the issuance of an injunction under section 9 of the ESA" and that if modification to the species's habitat is "reasonably certain to injure an endangered species by impairing their essential behavioral patterns," a permanent injunction is justified.⁸⁵

A citizen suit can, and frequently does, have the effect of shutting down activities on property, whether public or private. For example, in *Marbled Murrelet v. Babbitt*,⁸⁶ a suit by an environmental group prompted the federal courts to enjoin Pacific Lumber Company from harvesting a 237-acre

⁷⁷ *Newell*, 548 F. Supp. at 42 (quoting *RSR Corp. v. Fed. Trade Comm'n*, 602 F.2d 1317, 1320 (9th Cir. 1979)).

⁷⁸ 16 U.S.C. § 1540(e)(6) (1994).

⁷⁹ *Id.* § 1540(g).

⁸⁰ *Marbled Murrelet v. Babbitt*, 83 F.3d 1060, 1066 (9th Cir. 1996), *cert. denied sub nom Pac. Lumber Co. v. Marbled Murrelet*, 519 U.S. 1108 (1997); *United States v. W. Coast Forest Res. Ltd. P'ship*, No. CIV. 96-1575-HO, 2000 WL 298707, at *5 (D. Or. Mar. 13, 2000).

⁸¹ 16 U.S.C. § 1540(g)(1)(A)-(C) (1994).

⁸² *Id.* § 1532(13).

⁸³ 520 U.S. 154 (1997).

⁸⁴ *Id.* at 166.

⁸⁵ *Defenders of Wildlife v. Bernal*, 204 F.3d 920, 925 (9th Cir. 2000).

⁸⁶ 83 F.3d 1060 (9th Cir. 1996).

segment of its privately owned forest land.⁸⁷ The court concluded the proposed logging would create a reasonable certainty of imminent harm to marbled murrelets nesting in that forest.⁸⁸ In *United States v. Glenn-Colusa Irrigation District*,⁸⁹ a federal district court enjoined an irrigation district from pumping water from a diversion facility during the smolt migration of Sacramento River winter-run chinook.⁹⁰ The court found that the district's pumping resulted in the taking of as many as ten million smolts every year, because screen approach velocities trapped fish against the screen or entrained them in its mesh.⁹¹

An unsuccessful party to a citizen suit, whether plaintiff or defendant, can be liable for attorneys' fees and litigation costs.⁹² For example, in *Marbled Murrelet* the district court required Pacific Lumber to pay more than \$1 million in attorneys' fees to the environmental group that brought the lawsuit.⁹³

B. Activities That Trigger Enforcement

Any direct or incidental death or injury to a listed fish is actionable under the ESA.⁹⁴ Activities that modify a species's critical habitat and thereby cause harm to the species are also potentially subject to enforcement action.⁹⁵ A wide range of activity is thus potentially subject to ESA enforcement, either by the government or private citizens.

The agencies have provided some guidance as to what actions may constitute a take under section 9 of the Act. For example, NMFS has identified water withdrawals, unscreened diversions, and grazing in riparian areas as "activities that may constitute a take."⁹⁶ In the recently promulgated section 4(d) rules governing the take of several threatened salmonid ESUs, NMFS has listed and explained the types of activities that would most likely constitute a violation of section 9.⁹⁷

Irrigation-related activities that are listed in the final 4(d) rule as "most likely to result in injury or harm to listed salmonids" include the use of

⁸⁷ *Id.* at 1062.

⁸⁸ *Id.* at 1068; *see also* *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781 (9th Cir. 1995) (enjoining timber harvest on 40 acres of forest inhabited by spotted owl pair).

⁸⁹ 788 F. Supp. 1126 (E.D. Cal. 1992).

⁹⁰ *Id.* at 1135.

⁹¹ *Id.* at 1130.

⁹² Endangered Species Act of 1973, 16 U.S.C. § 1540(g)(4) (1994).

⁹³ 83 F.3d at 1063.

⁹⁴ *See* *United States v. McKittrick*, 142 F.3d 1170, 1176-77 (9th Cir. 1998), *cert. denied*, 525 U.S. 1072 (1999) (death); *Strahan v. Cox*, 127 F.3d 155, 165 (1st Cir. 1997), *cert. denied*, 525 U.S. 830 (1998) (injury).

⁹⁵ *See, e.g.,* *Palila v. Hawaii Dep't of Land & Natural Res.*, 852 F.2d 1106, 1110 (9th Cir. 1988) (upholding district court's decision that sheep be removed because their grazing harmed the habitat of endangered bird species).

⁹⁶ Endangered and Threatened Wildlife and Plants; Definition of "Harm," 64 Fed. Reg. 60,727, 60,730 (Nov. 8, 1999).

⁹⁷ Final Rule Governing Take of 14 Threatened Salmon and Steelhead Evolutionarily Significant Units (ESUs), 65 Fed. Reg. 42,422, 42,472-42,473 (July 10, 2000) (to be codified at 50 C.F.R. pt. 223.203) [hereinafter Final 4(d) Rule].

inadequately screened dams or diversions, the use of push-up dams or other streambed disturbance, and access by livestock to streambeds when redds are present.⁹⁸ NMFS also included water withdrawals in the final rule, although withdrawals had been characterized in the proposed rule as less likely to produce a take of listed species.⁹⁹

1. Screening

In the proposed 4(d) rule, NMFS emphasized that unscreened or inadequately screened diversions are a "widely recognized cause of mortality among anadromous fish."¹⁰⁰ Accordingly, the final rule includes a safe harbor to encourage screening; NMFS will not apply take prohibitions to diversions that are screened in compliance with NMFS criteria and approved by NMFS engineering staff or NMFS-authorized state agency engineers.¹⁰¹ However, the agency cautions that take liability could still arise if the diversion reduces instream flow and thereby harms salmonids.¹⁰² Commenters on the proposed 4(d) rule noted that NMFS screen criteria may lack the flexibility needed to account for regional conditions, such as algae levels.¹⁰³ Commenters also questioned whether NMFS has adequate staffing to approve the screens installed at thousands of diversion points.¹⁰⁴ NMFS responded to the latter concern by providing in the final rule that state agency engineers may take responsibility for screen approval.¹⁰⁵

2. Off-Channel Stock Watering

Streambed trampling by livestock is identified in the final 4(d) rule as an activity likely to result in a take, at least when redds are present.¹⁰⁶ As with screening, NMFS proposed a safe harbor against take prohibitions for development of off-channel stock watering.¹⁰⁷ However, the proposed safe harbor was offset by numerous conditions, such as "no more than de minimus impacts on flows that are critical to fish [and] diversion quantity [that] never exceed[s] 10 percent of current flow . . . nor reduce[s] any established instream flows."¹⁰⁸ Commenters were critical of this provision

⁹⁸ *Id.* at 42,472.

⁹⁹ See Proposed Rule Governing Take of Seven Threatened Evolutionarily Significant Units (ESUs) of West Coast Salmonids, 65 Fed. Reg. 170, 172-73 (proposed Jan. 3, 2000) [hereinafter Proposed 4(d) Rule].

¹⁰⁰ *Id.* at 180.

¹⁰¹ Final 4(d) Rule, *supra* note 97, at 42,452, 42,471.

¹⁰² Proposed 4(d) Rule, *supra* note 99, at 181.

¹⁰³ See Letter from Jan Lee, Executive Director, Oregon Water Resources Congress, to Garth Griffin, Branch Chief, National Marine Fisheries Service 10 (Mar. 3, 2000) (on file with authors) (comments on Proposed 4(d) Rules); Memorandum from Martha Pagel, Director, Oregon Water Resources Department, to Roy Hemmingway, National Marine Fisheries Service 4 (Feb. 7, 2000) (on file with authors) (draft comments on Proposed 4(d) Rule).

¹⁰⁴ Letter from Jan Lee, *supra* note 103, at 8-9.

¹⁰⁵ Final 4(d) Rule, *supra* note 97, at 42,452, 42,471.

¹⁰⁶ *Id.* at 42,472-42,473; see also Proposed 4(d) Rule, *supra* note 99, at 172.

¹⁰⁷ Proposed 4(d) Rule, *supra* note 99, at 179.

¹⁰⁸ *Id.*

for its lack of incentive to develop off-channel watering: "In reality, the rule offers nothing of value to a water user contemplating off-channel stock watering If the NMFS is serious about encouraging off-channel stock watering, it should exempt such projects without reference to flow impacts."¹⁰⁹ Ultimately, the final rules did little to address the commenters concerns.

3. Water Withdrawals

NMFS's inclusion of water withdrawals in the take guidance provisions of the final 4(d) rule is somewhat problematic. In the proposed rule, withdrawals were listed with category 2 activities that were only somewhat likely to injure salmonids.¹¹⁰ Commenters criticized the category 2 list—including the mention of water withdrawals—as speculative and unhelpful, "rais[ing] the specter of take in cases where it may not be warranted."¹¹¹ However, other commenters encouraged NMFS to add withdrawals to the list of activities that are very likely to injure salmonids. NMFS did so, with the qualification that "the likelihood that take will actually occur depends on the individual action."¹¹²

Nonetheless, like the other activities listed in category 2, the designation of water withdrawals as probably harmful to species seems less to offer guidance about the section 9 take prohibition and more to address the agency's published conclusions regarding the importance of habitat.

In its designation of critical habitat, NMFS stated:

Essential habitat types for these species can be generally described to include the following: (1) juvenile rearing areas; (2) juvenile migration corridors; (3) areas for growth and development to adulthood; (4) adult migration corridors; and (5) spawning areas. Within these areas, essential features of critical habitat include adequate: (1) [s]ubstrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions.¹¹³

As the commenters pointed out, an impact on habitat does not, by itself, constitute a take. The courts have repeatedly held actual harm must occur to the species; speculative harm is not sufficient to sustain an enforcement action or injunction.¹¹⁴ Nevertheless, it is clear FWS and NMFS are willing to apply, or attempt to apply, section 9 prohibitions to a range of agricultural

¹⁰⁹ Memorandum from Martha Pagel to Roy Hemmingway, *supra* note 103, at 4.

¹¹⁰ Proposed 4(d) Rule, *supra* note 99, at 172.

¹¹¹ Memorandum from Martha Pagel to Roy Hemmingway, *supra* note 103, at 2; *see also* Letter from Jan Lee to Garth Griffin, *supra* note 103, at 3 (expressing concern that Proposed 4(d) Rules will mislead actors about potential take liability).

¹¹² Final 4(d) Rule, *supra* note 97, at 42,429.

¹¹³ Designated Critical Habitat: Critical Habitat for 19 Evolutionarily Significant Units of Salmon and Steelhead in Washington, Oregon, Idaho, and California, 65 Fed. Reg. 7764, 7773 (Feb. 16, 2000) (to be codified at 50 C.F.R. pt. 226.212).

¹¹⁴ *Babbitt v. Sweet Home Chapter of Cmty. for a Great Oregon*, 515 U.S. 687, 708 (1995); *United States v. W. Coast Forest Res. Ltd. P'ship*, No. CIV. 96-1575-HO, 2000 WL 298707, at *5 (D. Or. Mar. 13, 2000).

activities, including water diversion.

V. CONFLICTS BETWEEN ESA ENFORCEMENT AND STATE WATER LAW

The federal agencies' stated enforcement priorities for ESA section 9 takings imply that state-certificated water rights may be reduced or eliminated by federal law. However, no federal court has explicitly addressed the question. Even in *United States v. Glenn-Colusa Irrigation District*, the court did not reach the issue because in that case, the court noted, "enforcement of the Act does not affect the District's water rights but only the manner in which it exercises those rights."¹¹⁵

Nevertheless, although the ESA's full effect on state water rights is not known, there are judicially created doctrines that can have an impact on state-held water rights.¹¹⁶ For example, the doctrine of reserved water rights can give the federal government priority for instream flows within national forests or Indian reservations.¹¹⁷ Also, the doctrine of equitable apportionment allows the United States to order the reallocation of individual water rights when necessary to resolve interstate disputes.¹¹⁸ Finally, the doctrine of navigational servitude permits the federal government to regulate navigation and even to take certain private property rights—including, possibly, water rights—without compensation.¹¹⁹

Under the Supremacy Clause of the U.S. Constitution,¹²⁰ federal regulation may override conflicting state laws. However, Congress has traditionally deferred to state law regarding the allocation of water rights. The Mining Act of 1866¹²¹ recognized state law as governing water rights for mining. Likewise, under the Desert Lands Act of 1877,¹²² water rights were established by prior appropriation pursuant to state law.¹²³ Finally, the Reclamation Act of 1902,¹²⁴ which provided the mechanism for federal development of large-scale irrigation in the arid West, specifically deferred to state law with respect to water rights. Section 8 stated that the Reclamation Act would not be construed to affect state laws regulating water appropriation.¹²⁵ The Supreme Court read this provision and its legislative history to mean that the United States must "defer to the substance, as well as the form, of state water law."¹²⁶ Even the Clean Water

¹¹⁵ 788 F. Supp. 1126, 1134 (E.D. Cal. 1992).

¹¹⁶ See generally Melissa K. Estes, Comment, *The Effect of the Federal Endangered Species Act on State Water Rights*, 22 ENVTL. L. 1027, 1044-45 (1992) (explaining federal law and state allocated water rights).

¹¹⁷ *Winters v. United States*, 207 U.S. 564, 577 (1908).

¹¹⁸ See, e.g., *Nebraska v. Wyoming*, 295 U.S. 40 (1935) (covering dispute between Nebraska and Wyoming over Platte River waters).

¹¹⁹ *United States v. Willow River Power Co.*, 324 U.S. 499, 510 (1945).

¹²⁰ U.S. CONST. art. VI, cl. 2.

¹²¹ Ch. 262, § 9, 14 Stat. 253 (codified as amended at 43 U.S.C. § 661 (1994)).

¹²² Ch. 107, 19 Stat. 377 (codified as amended at 42 U.S.C. §§ 321-323 (1994)).

¹²³ *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U.S. 142, 163 (1935).

¹²⁴ Ch. 1093, 32 Stat. 388 (1902) (codified as amended in scattered sections of 43 U.S.C.).

¹²⁵ 42 U.S.C. § 383 (1994).

¹²⁶ *California v. United States*, 438 U.S. 645, 675 (1978).

Act,¹²⁷ an environmental protection statute, provides “nothing in this chapter shall be construed to supersede or abrogate rights to quantities of water which have been established by any State.”¹²⁸

The ESA also contains provisions that address deference to state water rights. When the ESA was amended in 1982, western irrigation interests pushed for an amendment that would make ESA claims to water subordinate to state-established water rights.¹²⁹ The result was a simple declaration of policy in section 2(c) of the Act: “It is further declared to be the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species.”¹³⁰

A. Tensions Between Federal and State Law

Although it requires cooperation from the federal government, section 2(c) of the ESA provides little guidance about resolving conflicts between ESA instream water requirements and state water law. The ESA explicitly preempts state laws that are less protective of listed species than federal law.¹³¹ Despite this preemption, several legal doctrines weigh into the conflict.

1. Federalism

The Tenth Amendment of the U.S. Constitution provides: “The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”¹³² While the federal government may regulate individual conduct, federal regulation preempts inconsistent state regulation of the same conduct under the Supremacy Clause.¹³³ Congress may not, however, curtail the power of states by, for example, directly compelling a state to “enact and enforce a federal regulatory program.”¹³⁴

Thus, while Congress is not permitted to control specific methods used by states to allocate water rights, it may, through comprehensive federal statutes such as the ESA, affect the administration and exercise of those rights. For example, in *Strahan v. Coxe*,¹³⁵ the First Circuit upheld an injunction against Massachusetts that prohibited it from regulating commercial fishing in a way that harmed endangered northern right

¹²⁷ Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387 (1994 & Supp. III 1997).

¹²⁸ *Id.* § 1251(g) (1994). *But see* *United States v. Akers*, 785 F.2d 814, 821 (9th Cir. 1986), *cert. denied*, 479 U.S. 828 (1986) (holding that 33 U.S.C. § 1251(g) does not prohibit “incidental effect[s] on . . . rights to state-allocated water”).

¹²⁹ Moore, *supra* note 4, at 322.

¹³⁰ 16 U.S.C. § 1531(c)(2) (1994).

¹³¹ *Id.* § 1531.

¹³² U.S. CONST. amend. X.

¹³³ U.S. CONST. art. VI, cl. 2.

¹³⁴ *New York v. United States*, 505 U.S. 144, 161 (1992) (quoting *Hodel v. Virginia Surface Mining & Reclamation Ass'n*, 452 U.S. 264, 288 (1981)).

¹³⁵ 127 F.3d 155 (1st Cir. 1997), *cert. denied*, 525 U.S. 830 (1998).

whales.¹³⁶ The court said that Tenth Amendment federalism limitations were not implicated because, although the court found the State's current regulatory scheme violated ESA section 9, it did not purport to tell Massachusetts how it should regulate instead.¹³⁷ Similarly, in *Palila v. Hawaii Dep't of Land & Natural Resources*, the Ninth Circuit affirmed the federal district court's conclusion that the Tenth Amendment did not prevent the government from ordering Hawaii to modify its administration of a wildlife reserve.¹³⁸ These cases tend to demonstrate that federal agencies have broad discretion to enforce the ESA without running afoul of Tenth Amendment limitations.

2. Abstention

Another potential, but broad, limit on federal control of state water law is the abstention doctrine. The doctrine allows federal courts to stay or dismiss their proceedings in deference to state courts.¹³⁹ There are four types of abstention that are called for under differing circumstances. *Pullman* abstention is appropriate when a plaintiff brings a constitutional cause of action in federal court that could be resolved in a state court on state law grounds.¹⁴⁰ *Burford* abstention occurs when the federal court is not called upon to decide any substantial federal questions, but the claims implicate important state interests, such as a significant, comprehensive state regulatory scheme designed to be handled by a specific state forum.¹⁴¹ Abstention is particularly appropriate when federal court interference would endanger state policies.¹⁴² *Younger* abstention is invoked in a federal action when the action itself seeks to enjoin concurrent, related proceedings in state court.¹⁴³ The federal court stays its action until the state case is resolved.¹⁴⁴ Finally, *Colorado River* abstention is called for only in exceptional circumstances: when there is a concurrent state proceeding, the federal forum is inconvenient, and other factors weigh in favor of deferring to state courts in the interest of wise judicial administration.¹⁴⁵

While the main rationale for *Colorado River* abstention is conservation of judicial resources,¹⁴⁶ *Pullman*, *Burford*, and *Younger* abstention are rooted in federalism—the concept that federal courts should not interfere in matters better left to state administration. *Burford* abstention, particularly,

¹³⁶ *Id.* at 158.

¹³⁷ *Id.* at 170.

¹³⁸ 417 F. Supp. 985, 995, 999 (D. Haw. 1979), *aff'd*, 639 F.2d 495 (9th Cir. 1981).

¹³⁹ See generally New York State Bar Association, *The Abstention Doctrine: The Consequences of Federal Court Deference to State Court Proceedings*, 122 F.R.D. 89 (1988) (discussing *Pullman*, *Burford*, *Younger*, and *Colorado River* abstention doctrines).

¹⁴⁰ R.R. Comm'n v. *Pullman Co.*, 312 U.S. 496, 501 (1941).

¹⁴¹ *Burford v. Sun Oil Co.*, 319 U.S. 315, 331–34 (1943).

¹⁴² *Id.* at 334.

¹⁴³ *Younger v. Harris*, 401 U.S. 37, 41 (1971).

¹⁴⁴ *Id.*

¹⁴⁵ *Colorado River Water Conservation Dist. v. United States*, 424 U.S. 800, 818 (1976).

¹⁴⁶ New York State Bar Association, *The Abstention Doctrine: The Consequences of Federal Court Deference to State Court Proceedings*, 122 F.R.D. 89, 97–98 (1988).

is focused on federalism concerns. Consequently, the Fifth Circuit invoked *Burford* abstention in dismissing an ESA citizen suit based on state-regulated groundwater allocations from the Edwards Aquifer.¹⁴⁷ The court did not question the Sierra Club's assertion that municipal pumping from the aquifer during low spring flows directly caused death and injury to the endangered fountain darter. Nevertheless, it vacated the district court's injunction under the *Burford* abstention doctrine because it concluded that recent Texas legislation, the Edwards Aquifer Act, had created a comprehensive regulatory scheme to control allocation of aquifer water and to conserve endangered species.¹⁴⁸

A federal court in the Ninth Circuit is unlikely to treat the Oregon Water Code¹⁴⁹ or the Washington State Water Code¹⁵⁰ as a regulatory system comprehensive enough to warrant abstention under the *Burford* doctrine. However, the abstention doctrines clearly place an outside limit on federal ESA enforcement. If the states act aggressively for species conservation within state-specific water allocation or other regulatory schemes, federal courts may abstain from interference.

3. Taking of Private Property Without Just Compensation

Another factor that weighs heavily in the debate over state water rights is the Constitution's Fifth Amendment proscription against government takings of private property without just compensation—a corollary of the sovereign power of eminent domain.¹⁵¹ Theoretically, if ESA enforcement results in the deprivation of a state-certificated water right, the federal government has taken a property interest, and it must compensate the owner.

An individual appropriator would have a pure takings case if the government ordered her to leave all or part of a vested water right instream. Because these exact circumstances have not arisen and because takings jurisprudence tends to proceed in an ad hoc, fact-dependent fashion, whether federal courts would require compensation in such a situation is speculative.¹⁵² Despite this lack of certainty, the threat of litigation will

¹⁴⁷ *Sierra Club v. City of San Antonio*, 112 F.3d 789, 792–94 (5th Cir. 1997), *cert. denied*, 522 U.S. 1089 (1998).

¹⁴⁸ *Id.* at 792–94.

¹⁴⁹ OR. REV. STAT. § 45 (1999).

¹⁵⁰ WASH. REV. CODE § 90.03.010 (2000).

¹⁵¹ U.S. CONST. amend. V.

¹⁵² See, e.g., Jeffrey B. Van Duzer & Mary Kate Lehman, *Between Two "Takings,"* Paper presented at Law Seminars International, Endangered Species Act Seminar (Jan. 27, 2000) (on file with authors) (concluding that such a takings case would be viable, but the results would be uncertain); Oliver A. Houck, *Why Do We Protect Endangered Species, and What Does That Say About Whether Restrictions on Private Property to Protect Them Constitute "Takings"?*, 80 IOWA L. REV. 297 (1995) (concluding that potential for takings claims is high, but the results would be unknown); Michael A. Yuffee, Note, *Prior Appropriations Water Rights: Does Lucas Provide a Takings Action Against Federal Regulation Under the Endangered Species Act?*, 71 WASH. U. L.Q. 1217 (1993) (concluding that although takings action would certainly arise in such circumstances, taking would probably be held not compensable).

surround, and to some extent circumscribe, any federal agency enforcement that affects private property rights, including rights to water.

B. Local Problems Created by Federal Enforcement

A number of local, real-world difficulties arise within the nexus between state water law and federal ESA enforcement—most are a result of the diversity of irrigation interests present in any given water basin. Although irrigation water rights are appurtenant to the land they irrigate, the right itself may be held by an individual appropriator, an irrigation district, the Bureau of Reclamation (Bureau), or some combination of the three. For example, the Bureau may deliver federal water to an irrigation district under contract; the district may then distribute the water to individual irrigators pursuant to another set of contracts.

1. Water Delivery Contracts

The Bureau, as a federal agency, has a duty under ESA section 7 to ensure that its actions are not likely to jeopardize the continued existence of any listed species.¹⁵³ Therefore, the Bureau's section 7 obligations could require it to leave sufficient water instream or to discharge time releases of stored water to benefit fish. However, this could also leave the Bureau vulnerable to a breach of contract action by the irrigation districts it supplies.¹⁵⁴

If local irrigation districts decide to curtail water deliveries to avoid section 9 enforcement, they could likewise be subject to suit by their users. Although districts that are sued for breach of their water delivery contracts might ultimately prevail based on the contract defense of illegality,¹⁵⁵ they would first spend considerable resources on litigation. This is an issue that undoubtedly deserves further attention.

2. Definition of Available

Individual irrigators, as well as districts, could face other difficulties in attempting to comply with section 9. For example, a senior appropriator might elect to reduce the quantity of a diversion to leave sufficient water instream for fish. Because the forgone water would not be specifically designated as an instream right, however, it technically would be in the stream and available for appropriation by junior users.¹⁵⁶

The flip side of the availability problem is that junior appropriators often have supplemental groundwater sources they are allowed to utilize

¹⁵³ 16 U.S.C. § 1536(a)(2) (1994).

¹⁵⁴ See, e.g., *Barcellos & Wolfson, Inc. v. Westlands Water Dist.*, 849 F. Supp. 717, 723–24 (E.D. Cal. 1993), *aff'd sub nom.*, *O'Neill v. U.S.* 50 F.3d 677 (9th Cir. 1995) (holding, based on this fact pattern, that Bureau did not breach contract because of broad contract clause conditioning water delivery on availability).

¹⁵⁵ Van Duzer & Lehman, *supra* note 152, at 19–20.

¹⁵⁶ See *Barcellos & Wolfson*, 849 F. Supp. at 728–29 (discussing “availability”).

only when their full surface water appropriation is unavailable. Under current law, those irrigators may not be permitted to pump from their supplemental wells if there is water in the stream, even if that water has been left there for fish.¹⁵⁷

The Oregon Water Resources Department (Department) has set up a work group to examine these issues and correct them, if possible, through amendments to administrative rules or Oregon statutes.¹⁵⁸ The Department first hoped to create, by rule, authority for split-season and split-duty leasing within the instream water rights statutes, but these plans have been tabled, because the Oregon attorney general's office concluded that such rulemaking would go beyond the Department's statutory authority.¹⁵⁹ The Department is now working on possible amendments to rules that implement the water transfer statutes.¹⁶⁰ If the rules can be crafted to provide an "umbrella beneficial use" category that includes both irrigation and streamflow protection, water rights holders would be allowed to transfer their water use and create bypass flows that could be protected by local watermasters.¹⁶¹

3. Causation and Proof Issues

Just as the Bureau, local irrigation districts, and individual users will encounter problems with ESA compliance, so too will federal agencies face difficulties in enforcement. The main issue will likely be proof of causation. That is, if a stream is overappropriated, leaving fish stranded or redds exposed, a section 9 taking may have occurred, but who is responsible? In theory, responsibility would lie with the irrigator whose diversion is furthest

¹⁵⁷ Cf. OR. REV. STAT. § 540.531 (1999) (restricting water right transfers to hydrologically connected aquifers).

¹⁵⁸ At its May 2000 Commission meeting, the Commission ordered the formation of an ESA/Water Law Work Group. The Work Group evaluated a variety of different mechanisms for protecting flows that were being bypassed by water users to meet ESA-related requirements. The Work Group's efforts culminated in a set of recommendations that were presented at the Commission's August 24, 2000 Work Session. Those recommendations included improvements to the Allocation of Conserved Water Program, the initiation of discussions with policy-level representatives of federal agencies, and the facilitation of a dialogue between state agencies regarding the impact of the ESA on state programs. For a summary of the work group discussions and recommendations, see Memorandum from Meg Reeves, Deputy Director, Oregon Water Resources Department, to Water Resources Commission (Aug. 24, 2000) (on file with authors). The authors of the Article are Work Group members and have participated on behalf of their clients, the Oregon Water Resources Congress and various water delivery organizations.

¹⁵⁹ The Department has since made a preliminary determination to pursue legislation that would expressly allow split-season and split-duty leasing. This preliminary decision was made at the October 24, 2000 ESA/Water Law Work Group. See *supra* note 158 for information about the Work Group.

¹⁶⁰ Telephone Interview with Thomas Byler, Senior Policy Coordinator, Oregon Water Resources Department (Sept. 6, 2000).

¹⁶¹ See, e.g., OR. REV. STAT. § 543.092 (1999) (authorizing holders of hydroelectric water rights to amend their rights). The Oregon Water Resources Department is currently promulgating administrative rules to implement ORS § 543.092 to allow hydroelectric water rights to be amended to add instream use as a beneficial purpose.

downstream—the last to divert water. Under the prior appropriation system, however, the real responsibility arguably lies with the most junior appropriator who has withdrawn water. The agencies have advocated for proportionate reductions from all water users, as though all appropriators on a stream are equally liable under section 9.¹⁶² Clearly, however, the agencies would face enforcement difficulties if they attempted to impose section 9 penalties uniformly upon all irrigators on a stream.

Another complicating factor is that fish habitat in many river basins has been degraded by practices other than irrigation, including hydropower dams, point source and non-point source pollution, timber harvests, and commercial and residential development of riparian zones.¹⁶³ In enforcing section 9, the agencies will often find it difficult to even prove irrigation itself is harming fish species.

If the federal agencies could somehow identify an accurate group of water users potentially liable for take, under Oregon law they would still likely have to identify the *one* user whose negligence was the proximate cause of harm. For example, *Strahan v. Coxe* said section 9 causation issues are determined under state law.¹⁶⁴ Although many states have adopted alternative liability as a doctrine affecting proof of proximate causation,¹⁶⁵ Oregon is not among them. In *Senn v. Merrell-Dow Pharmaceuticals, Inc.*,¹⁶⁶ the Oregon Supreme Court considered and rejected the alternative liability theory.¹⁶⁷

However, the California Supreme Court reached a different result under this theory in *Summers v. Tice*,¹⁶⁸ the casebook example of alternative liability. This case involved three hunters. With one hunter (the plaintiff) slightly ahead and uphill from the others, the other two (the defendants) simultaneously fired at a quail they had flushed out. The plaintiff was struck in the face by some of the shot, but it was impossible to determine which defendant had done the damage. The California Supreme Court decided

¹⁶² 15 C.F.R. § 904.107 (1999) (providing that civil penalties may be assessed jointly and severally); Letter from Lynn Tominaga, Idaho Water Users Association, Inc., to Chief, Endangered Species Division, NMFS 1 (June 30, 1998) (on file with authors) (raising the issue of whether NMFS would have sufficient evidence to find that a water user had violated the section 9 take prohibition when water was insufficient for fish 200 to 300 miles downstream from the water diverted by the user). See also Endangered and Threatened Wildlife and Plants; Definition of "Harm," 64 Fed. Reg. 60,727, 60,730 (Nov. 8, 1999) (to be codified at 50 C.F.R. pt. 222) (noting that "specific elements of causation to be proved, including foreseeability, will be determined on a case-by-case basis").

¹⁶³ TIM PALMER, *LIFELINES: THE CASE FOR RIVER CONSERVATION* 18–20 (1994); PACIFIC RIVERS COUNCIL, *A CALL FOR A COMPREHENSIVE WATERSHED AND WILD FISH CONSERVATION PROGRAM IN EASTERN OREGON & WASHINGTON* 1 (1995).

¹⁶⁴ 127 F.3d 155, 163 (1st Cir. 1997).

¹⁶⁵ See, e.g., *Summers v. Tice*, 199 P.2d 1, 5 (Cal. 1948) (en banc); *State Dep't of Envtl. Regulation v. CTL Distribution, Inc.*, 715 So. 2d 262, 264 (Fla. Dist. Ct. App. 1998) (acknowledging the doctrine but finding it inapplicable to the facts before the court); RESTATEMENT (SECOND) OF TORTS § 433B (1965).

¹⁶⁶ 751 P.2d 215 (Or. 1988) (en banc).

¹⁶⁷ *Id.* at 223.

¹⁶⁸ *Summers*, 199 P.2d 1.

although the defendants had not been acting in concert, and thus were not joint tortfeasors under classic tort law, they were nevertheless "both wrongdoers [and] both negligent toward plaintiff."¹⁶⁹ The court concluded in such cases, the burden of proof must shift to the defendants to either prove which one caused the injury or to apportion responsibility between them.¹⁷⁰

More than twenty years before *Summers v. Tice*, the Oregon Supreme Court heard a similar case. In *Anderson v. Maloney*,¹⁷¹ the defendants were two police officers who, firing at a fleeing suspect, shot and killed a streetcar passenger. The court reversed a jury verdict imposing joint liability on the officers for the death of the passenger. In the absence of any "evidence whatever as to who fired the bullet that struck [the passenger]," the court refused to impose liability on either officer.¹⁷² The issue did not make its way through Oregon courts again until 1988, when the Oregon Supreme Court decided *Senn v. Merrell-Dow Pharmaceuticals, Inc.*¹⁷³ In *Senn*, the plaintiff had been injured by a vaccination she received as an infant. Only two manufacturers could have produced the vaccine she received, but she could not prove which of the two had been responsible. Sitting en banc, the court examined *Summers v. Tice* and other precedent, but ultimately decided that "any theory of alternative liability requires a profound change in fundamental tort principles of causation We are not persuaded to depart from the rule of *Anderson v. Maloney*"¹⁷⁴

Under the *Summers v. Tice* rule of alternative liability, the federal agencies could point the finger at all appropriators on a stream containing dead salmon and argue the appropriators, as section 9 wrongdoers, have the burden of proving causation. In Oregon, *Senn v. Merrell-Dow* forecloses this possibility. To prove a section 9 violation, the federal agencies will have to establish proximate causation for each alleged violator.

VI. COOPERATION BETWEEN FEDERAL AND STATE WATER INTERESTS

The most viable method of reconciling the conflicts between federal and state interests probably lies in federal, state, and local cooperation. Section 2(c) of the ESA encourages and even mandates such cooperation.¹⁷⁵ Recent rulemaking ventures by NMFS, under ESA section 4(d), have attempted to codify cooperation between federal and state entities. In addition, numerous existing or planned agreements embrace whole-basin, multiple-user, cooperative approaches to species management; these agreements provide both precedent and instruction for fashioning similar systems capable of resolving the fundamental doctrinal inconsistencies between state water law and federal species conservation.

¹⁶⁹ *Id.* at 4.

¹⁷⁰ *Id.* at 4-5.

¹⁷¹ 225 P. 318 (Or. 1924).

¹⁷² *Id.* at 321.

¹⁷³ 751 P.2d 215 (Or. 1988) (en banc).

¹⁷⁴ *Id.* at 223.

¹⁷⁵ 16 U.S.C. § 1531(c)(2) (1994).

A. ESA Section 2(c)

Section 2(c) of the Act provides: "It is further declared to be the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species."¹⁷⁶ NMFS has acknowledged this policy, stating, "The ESA and state water law operate in cognizance of the principles of comity, federalism and importance of reading apparently conflicting laws in such a manner as to avoid conflict and promote the purposes of both legislative acts wherever possible."¹⁷⁷

B. ESA Section 4(d)

NMFS issued proposed 4(d) rules on December 30, 1999 and January 3, 2000.¹⁷⁸ The proposed rules applied to fourteen salmon and steelhead ESUs in Oregon, Washington, and Northern California.¹⁷⁹ Following publication of the proposed rules, the agency held twenty-five public hearings throughout the Northwest, and it received more than 6,500 public comments. Final rules were adopted by June 19, 2000, as required by a legal settlement between NMFS and various conservation and fishing groups.¹⁸⁰ For the seven steelhead ESUs, the rules took effect on September 8, 2000.¹⁸¹ However, for the seven salmon ESUs the rules have a delayed effective date of January 8, 2001.¹⁸²

The relevance of the 4(d) rules relates to the section 9 prohibition on take of listed species. By itself, section 9 does not prohibit the take of species listed as threatened. For threatened species, defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range,"¹⁸³ the prohibition on take may occur only by administrative rule. Section 4(d) of the ESA provides that NMFS and FWS may adopt whatever "protective regulations" they deem necessary for the conservation of threatened species,¹⁸⁴ and section 9(a)(1)(G) prohibits the violation of any regulation promulgated by

¹⁷⁶ *Id.*

¹⁷⁷ Endangered and Threatened Wildlife and Plants; Definition of "Harm," 64 Fed. Reg. 60,727, 60,730 (Nov. 8, 1999).

¹⁷⁸ Proposed Rule Governing Take of Threatened Evolutionarily Significant Units of West Coast Steelhead, 64 Fed. Reg. 73,479 (proposed Dec. 30, 1999) (to be codified at 50 C.F.R. pt. 223); Limitation on Section 9 Protections Applicable to Salmon Listed as Threatened Under the Endangered Species Act, 65 Fed. Reg. 108 (proposed Jan. 3, 2000) (to be codified at 50 C.F.R. pt. 223); Proposed Rule Governing Take of Seven Threatened Evolutionarily Significant Units of West Coast Salmonids, 65 Fed. Reg. 170 (proposed Jan. 3, 2000) (to be codified at 50 C.F.R. pt. 223).

¹⁷⁹ *Id.*

¹⁸⁰ Final Rule Governing Take of 14 Threatened Salmon and Steelhead Evolutionarily Significant Units, 65 Fed. Reg. 42,422, 42,422 (July 10, 2000) (to be codified at 50 C.F.R. pt. 223.203).

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ 16 U.S.C. § 1532 (20) (1994).

¹⁸⁴ 65 Fed. Reg. at 42,422.

the agencies.¹⁸⁵

According to NMFS, the goal of the 4(d) rules is to provide a simpler way to get ESA approval for broad categories of actions—primarily those undertaken by state and local governments.¹⁸⁶ The proposed rules identify circumstances that can be considered a limit—or exception—to the take prohibitions. NMFS identified two kinds of limits for which the prohibitions on take would not apply, 1) where NMFS has reviewed and approved a completed program in operation as having sufficient protection for the listed fish species (an approved program) and 2) where there is a program that meets criteria or standards that are outlined in the rules but has not yet been completely developed (an approvable program).¹⁸⁷ By incorporating these two kinds of limits in the rules, NMFS attempts both to recognize existing state and local efforts to protect species and habitat and to streamline the process of obtaining assurance that activities do not violate the ESA.¹⁸⁸

In the Final 4(d) Rule, NMFS identifies thirteen activities or programs, including both approved and approvable programs, it believes sufficiently limit impacts to salmonid species, making added protection through application of the section 9 prohibition on take unnecessary.¹⁸⁹ In addition, as summarized above, NMFS identified activities that it believes are most likely to injure or kill salmonids—activities that could constitute a violation of section 9.¹⁹⁰

C. Cooperative Efforts

1. Methow Valley Memorandum of Agreement

The Methow River and its tributaries contain steelhead, bull trout, and chinook salmon ESUs that have been listed as endangered or threatened under the ESA. Minimum instream flows and overappropriation have been primary concerns in the valley for nearly thirty years.¹⁹¹ Federal and state conservation agencies and Okanogan County have developed a draft executory agreement, the Methow Valley Memorandum of Agreement (Draft MOA).¹⁹² The Draft MOA is designed to facilitate a whole-basin section 10 HCP. Individual appropriators could opt into the Draft MOA, and eventually the HCP, by committing to an established reduction in their water diversion. To participate, each irrigator must agree to contribute a “Proportionate Share” of water for instream use. In exchange, the irrigator is protected

¹⁸⁵ 16 U.S.C. § 1538(a)(1)(G) (1994).

¹⁸⁶ 65 Fed. Reg. 42,422, 42,423 (July 10, 2000) (to be codified at 50 C.F.R. pt. 223.203).

¹⁸⁷ *Id.* at 42,423.

¹⁸⁸ *See id.* at 42,423–42,425 (discussing NMFS's views on the final regulation).

¹⁸⁹ *Id.* at 42,423.

¹⁹⁰ *Id.* at 42,472–42,473.

¹⁹¹ Melanie J. Rowland, *The Center of the Storm: Water and the ESA in the Methow Valley*, Paper presented at Law Seminars International, Endangered Species Act Seminar 1–2 (Jan. 27, 2000) (stating that “concern for instream flows dates from at least the 1970s”) (on file with authors).

¹⁹² Methow Valley Draft Memorandum of Agreement (Nov. 4, 1999) (on file with authors).

against section 9 enforcement.¹⁹³ Water rights priority dates do not affect the proportionate share; all irrigators contribute equally. Although the Draft MOA provides that the “[p]arties agree to make every appropriate effort to secure . . . funding,”¹⁹⁴ there seems to be no firm funding source for implementation of the Draft MOA. To date, negotiations to finalize the Draft MOA have stalled, and NMFS is pursuing separate HCPs with individual diverters.¹⁹⁵

2. Platte River Cooperative Agreement

In 1978, the “big bend” segment of the Platte River in south central Nebraska was designated critical habitat for migratory waterfowl that had been listed as endangered and threatened.¹⁹⁶ The Platte River has long been used for irrigation and hydropower generation in Nebraska, Colorado, and Wyoming.¹⁹⁷ By one estimate, seventy percent of the Platte River’s flow at Grand Island, Nebraska has been depleted by irrigation diversions.¹⁹⁸ A negotiated basin-wide settlement, the Platte River Cooperative Agreement (the Cooperative Agreement),¹⁹⁹ provides for a state and federal cooperative effort to balance critical habitat protection with irrigation and hydropower production in the Platte Basin. The Secretary of the Interior and the governors of Nebraska, Colorado, and Wyoming signed the Cooperative Agreement on July 1, 1997.²⁰⁰

Under the Cooperative Agreement, the three states agreed they will provide 130 to 150 thousand acre-feet (KAF) of water for habitat.²⁰¹ The states plan to achieve the 130 to 150 KAF goal by improving irrigation efficiency, purchasing existing consumptive water rights, offering incentives for municipal conservation, and subjecting new water uses to water depletion mitigation requirements.²⁰² The mitigation requirements do not apply to water rights that are senior to the Cooperative Agreement.²⁰³ If, however, the contemplated measures fail to achieve the 130 to 150 KAF goal, senior users may be required to reduce or discontinue their water uses.²⁰⁴ If the nonfederal parties to the Cooperative Agreement meet their obligations, they will be considered in compliance with the ESA.²⁰⁵ If they do not fulfill

¹⁹³ *Id.* § 6.1.2, 1.6(g).

¹⁹⁴ *Id.* § 11.5.

¹⁹⁵ Rowland, *supra* note 191, at 7.

¹⁹⁶ J. David Aiken, *Balancing Endangered Species Protection and Irrigation Water Rights: The Platte River Cooperative Agreement*, 3 GREAT PLAINS NAT. RESOURCES J. 119, 121 (1999).

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

¹⁹⁹ Platte River Cooperative Agreement (May 9, 2000), available at <http://www.platteriver.org/library/CA6.5.htm>.

²⁰⁰ *Id.* at 12–13.

²⁰¹ This is to take place by 2010 to 2013. *Id.*

²⁰² *Id.* at app. A.

²⁰³ *Id.* at 3.

²⁰⁴ Aiken, *supra* note 196, at 149–50.

²⁰⁵ Platte River Cooperative Agreement, *supra* note 199, at 5–7.

those obligations, they will be deemed out of compliance.²⁰⁶

3. Truckee River Operating Agreement

The Truckee-Carson Basin in western Nevada is a physically closed water basin with limited water surrounded by very arid land.²⁰⁷ Urban users, irrigators, and two Indian tribes share the scarce water. Two endangered fish species—the cui-ui and the Lahontan cutthroat trout—create another demand on the basin; in fact, the cui-ui is now found *only* in the basin's Pyramid Lake.²⁰⁸ The Truckee River Operating Agreement, mandated by the 1990 Truckee-Carson-Pyramid Lake Water Rights Settlement Act,²⁰⁹ has been under negotiation since 1991, but it will probably require an additional five years before implementation.²¹⁰

The draft Truckee River Operating Agreement is a large-scale example of a "place based solution" to reallocate the risk of water scarcity in the West.²¹¹ The agreement's salient features include 1) government incentives for water stakeholders to consider reallocation, 2) large blocks of water held by institutional players with the capacity to assume substantial new risk, 3) a scientific basis for physical reallocation solutions, and 4) the flexibility to adjust the solutions, also known as "adaptive management."²¹² The ten-year process of negotiating the agreement (which is now approximately 250 pages long) is also instructive. While some delays were the inevitable result of the complexity of interests involved, others could have been avoided by ensuring all stakeholders were involved from the beginning and to the extent possible, that all relevant issues were on the table early in the negotiations.²¹³

4. Walla Walla Basin

On January 14, 2000, FWS sent a letter to the managers of the Walla Walla River Irrigation District (WWRID) and the Hudson Bay District Improvement Company, Inc. (HBDIC), which stated, "While many agencies and entities are working toward forthcoming fish and water conservation efforts in the Walla Walla River watershed, we believe that more immediate action needs to be taken to address certain existing water management practices that are adversely impacting federally listed fish species, including

²⁰⁶ *Id.*

²⁰⁷ See generally A. Dan Tarlock, *The Creation of New Risk Sharing Water Entitlement Regimes: The Case of the Truckee-Carson Settlement*, 25 *ECOLOGY L.Q.* 674, 677-78 (1999) (exploring the Truckee-Carson Basin as "an example of the new politics and law of western water").

²⁰⁸ *Id.* at 678-79.

²⁰⁹ Pub. L. No. 101-618 § 201, *et seq.*, 104 Stat. 3289, 3294 (1990).

²¹⁰ Telephone Interview with Chester Buchanan, U. S. Fish and Wildlife Service (May 16, 2000).

²¹¹ Tarlock, *supra* note 207, at 680.

²¹² *Id.* at 681-82.

²¹³ Telephone Interview with Buchanan, *supra* note 210.

bull trout.”²¹⁴ The letter recommended that the Walla Walla Basin Watershed Council and the irrigation districts “assist water users in exploring water management practices that avoid killing or injuring bull trout during the upcoming irrigation season.”²¹⁵ FWS unequivocally asserted that it believed the districts’ activities had dewatered the Walla Walla River and had resulted in the take of bull trout in the 1998 and 1999 irrigation seasons. FWS noted, under authority of the ESA, the agency could assess civil penalties of up to \$25,000 per violation (that is, per fish).²¹⁶

Portions of the Walla Walla River run dry during the summer months. Consequently, the Confederated Tribes of the Umatilla Reservation (Tribes) and the Oregon Department of Fish and Wildlife (ODFW) hold an annual fish rescue operation in order to recover and transport fish that become stranded in disconnected pools in the river.²¹⁷ The irrigation districts in the Walla Walla Basin are the largest water users, but significantly, the three major districts deliver only about forty percent of the irrigation water used throughout the basin. In addition, many of the district water rights are the oldest in the basin. Non-district users, who control about sixty percent of the appropriated water and hold the most junior rights, were not targets of FWS enforcement.

Despite this lack of enforcement, the managers and boards for WWRID, HBDIC, and Gardena Farms Irrigation District #13 (GFID) (collectively, the Districts) came together in the two-month period after receiving the FWS letter and undertook an unprecedented effort to respond to the agency’s concerns. The Districts held a series of meetings with FWS, NMFS, ODFW, the Oregon Water Resources Department, the Tribes, environmental groups, and Washington state agencies.²¹⁸ The Districts also retained an engineering firm, a fisheries biologist, and legal counsel. Following a meeting with FWS representatives in late February 2000 and an early March 2000 tour of the Districts’ facilities, Robert Hallock, FWS acting field supervisor, sent a second letter to the three district managers. Pursuant to conversations with the Districts, the letter stated, “A settlement agreement may serve as an interim remedy for issues facing the irrigation districts prior to the completion of an HCP, or other long-term strategy.”²¹⁹ The letter outlined the basic terms for a settlement agreement and also requested that the Districts provide a “typical plan of operations,” a description of district-held water rights, and background on the extent and priority dates of district diversions.²²⁰

With the assistance of their consultants, the Districts quickly prepared a

²¹⁴ Letter from Mark Miller, Acting Field Supervisor, U.S. Fish and Wildlife Service, to WWRID and HBDIC (Jan. 14, 2000) (on file with authors).

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ Mike Lee, *Deal to Keep Water in Walla Walla River*, TRI-CITY HERALD, June 16, 2000, at 1, available at <http://www.bluefish.org/wallawal.htm> (last visited Nov. 13, 2000).

²¹⁸ The irrigated land in the Walla Walla Basin is located in both Oregon and Washington.

²¹⁹ Letter from Robert Hallock, Acting Field Supervisor, U.S. Fish and Wildlife Service, to WWRID, HBDIC, and GFID (Mar. 15, 2000) (on file with authors).

²²⁰ *Id.*

response to FWS's request. The Districts included in the settlement process not only the federal agencies but also the Tribes and interested environmental groups. The result, which took only three months to complete, was an interim settlement agreement for the 2000 irrigation season.²²¹ The Tribes and environmental groups showed their support for the settlement process and made a written commitment not to bring a citizen suit against the Districts for the term of the settlement agreement.²²²

The settlement agreement requires the Districts to leave water in the Walla Walla River below the Districts' two diversion dams. In particular, FWS required bypass flows sufficient to allow the operation of the fish ladders on each dam, which amount to a bypass flow of thirteen cubic feet per second (cfs) at the WWRID and HBDIC diversion and ten cfs at the GFID diversion.²²³ The Districts also agreed to gradually ramp up water diversion rates to encourage fish to migrate to the headwaters before low flows would otherwise occur. The agreement also requires the Districts to protect those bypass flows from other water users who might otherwise be entitled to use of the water under state water law and to be responsible for ensuring that comprehensive fish monitoring and hydrological monitoring occur throughout the season. Finally, the Districts are responsible for ensuring the development of a long-term solution, which will likely involve the development of a basin-wide HCP.²²⁴

In exchange for the Districts' commitments, FWS did not impose ESA penalties for 1998 and 1999 and allowed the Districts to continue to deliver irrigation water for the 2000 season, even though those deliveries might otherwise take bull trout.²²⁵ The agreement does not grant the Districts formal incidental take authorization under either section 7 or section 10.²²⁶ Without formal authorization, the Districts are not immune from a third-party section 9 suit. However, by including in the settlement process all third parties that had expressed an interest in Walla Walla River flow

²²¹ Walla Walla Basin Settlement Agreement (June 9, 2000) (on file with authors) [hereinafter Settlement Agreement].

²²² Letter from Kristen L. Boyles, attorney for American Rivers, the Center for Environmental Law and Policy, Friends of the Earth, Institute for Fisheries Resources, Pacific Coast Federation of Fishermen's Associations, Trout Unlimited, Washington Environmental Council, and WaterWatch of Oregon, to David E. Filippi, attorney for WWRID, HBDIC, and GFID (June 12, 2000) (expressly stating that the seven environmental groups "will not bring a third-party citizen suit under section 9 of the Endangered Species Act during the 2000 irrigation season") (on file with authors); Letter from William Burke, Chairman, Tribal Water Committee, Confederated Tribes of the Umatilla Indian Reservation, to John Brough, Manager, HBDIC, Brent Stevenson, Manager, WWRID, and Stuart Durfee (June 20, 2000) (endorsing the settlement agreement) (on file with authors).

²²³ Settlement Agreement, *supra* note 221, at B, E.

²²⁴ *Id.* at C.

²²⁵ *Id.* at Conclusion.

²²⁶ In the Walla Walla Basin, there is no federal connection to irrigation water (such as stored water made available by the Bureau in other basins), so section 7 incidental take authorization was not an option. The parties had neither the time nor the scientific basis to develop a full-scale HCP under section 10, which could have resulted in a formal incidental take permit. The agreement simply provides that FWS will exercise its prosecutorial discretion and not pursue the Districts for section 9 violations.

restoration and then incorporating their comments and viewpoints into the settlement agreement, the Districts were able to gain some level of certainty regarding their 2000 operations.

In the end, the collaborative process led to more certain results and definite commitments that began helping fish immediately. Resources that might have gone to litigation expenses are now going to meet the needs of fish. This agreement represents the first of its kind, and initial indications are that the Districts' commitments have achieved measurable benefits for fish. Fish rescue numbers were markedly lower this year as compared to earlier years, and fish populations appear stable and even improving. The settlement, however, is an interim agreement; it provides the Districts with protection through January 31, 2001.²²⁷ Currently, various stakeholders in the basin are formulating a basin-wide HCP to provide long-term ESA compliance for the Districts and protection for fish.

D. Key Concepts

The few existing (or aborted) cooperative agreements teach several key concepts that are crucial to reaching a cooperative, whole-basin solution to the conflicting systems and values inherent in western water law and federal ESA regulation. Only when those concepts are in place can all affected water interests participate in fashioning a workable plan.

1. Funding

If the federal government is serious about ESA enforcement, it will need to appropriate funds to implement local programs for salmon recovery. Such funding is available; for example, the ESA already allocates financial assistance to states that enter into cooperative agreements with the federal government.²²⁸ In addition, for the last hundred years the government has provided large sums of money for reclamation of the arid West; now that a shift to the "species recovery era" seems to be underway, the government would be well advised to keep its pocketbook open. ESA compliance will probably require the retirement of some irrigated agricultural acreage. If so, part of the economic burden of those losses will need to be shouldered at the national level. Without a federal willingness to share the economic burden, water users will have little incentive to conserve.

2. Science

It is important that agencies and others do not become so caught up in the quest for scientific certainty that they lose all impetus for action. On the other hand, any whole-basin solution that is not based on the biological needs of fish will amount to so much wheel-spinning. If all irrigators dedicate ten percent of their water to instream flows for fish but water

²²⁷ Settlement Agreement, *supra* note 221, at M.

²²⁸ Federal/State Cooperation in the Conservation of Endangered and Threatened Species, 50 C.F.R. § 222.103 (1999).

pollution kills the fish before they reach those flows, nothing has been gained. Careful use of the best biological information about a species will ensure that conservation measures correspond to what fish really need, not just to what is expedient or enforceable.

3. Treating Water Like Property

Another crucial component of a whole-basin solution is the ability to appraise and value water rights. At a minimum, the appraisal should take into account the quantity of the right and its place in the priority system. Other factors could be incorporated into the valuation as well, such as the water's economic return. For example, on a particular farm, each acre irrigated with 1/40th cfs might produce an average profit of fifty dollars; that ratio could be measured against a basin-wide median to determine whether the water's economic return is below or above average, and that factor could be used in evaluating the worth of the water right.

With some adjustments, water can thus be valued and treated like any other property. It can be purchased, sold, leased, and converted from one type of use to another. The Oregon Water Trust, for example, purchases or leases water for instream flows to enhance fish habitat.²²⁹ As with real estate, market forces will eventually demand that water be put to its highest and best use throughout each basin. Sometimes the highest and best use for water will be agricultural irrigation; other times it may be instream flows for fish, tourism, hydropower, or some other nonconsumptive use.

VII. ENFORCEMENT SOLUTIONS

The prior appropriation system is not just a system of allocating water, it is also a system of allocating risks and expectations—two sides of the same coin. The primary risks involved in irrigation are drought and crop failure. Each appropriator bears a slightly different level of risk, depending on factors such as priority date, farming practices, and the hydrological features of the particular river basin. On the flip side, the primary expectation of irrigators is that, once those risks are accounted for, water will be available under the predictable system of prior appropriation. Other than a few key concepts for cooperation, which are summarized above, the crux of a successful, whole-basin, cooperative solution to fish conservation lies in finding or creating new ways to spread risks and satisfy expectations while satisfying the mandates of the ESA.²³⁰

A. Conservation Measures and Water Marketing

Once water users and government agencies are accustomed to treating water like property, and once funding is dedicated to water conservation, state laws and local practices can be altered to provide incentives for the

²²⁹ For background and project information on Oregon Water Trust, see Oregon Water Trust Homepage, available at <http://www.owt.org/owthome.html> (last visited Nov. 13, 2000).

²³⁰ See Tarlock, *supra* note 207, at 689–90 (discussing property rights as risk allocation).

highest and best use of available water. For example, if an irrigator saves ten cfs by piping a ditch, current Oregon law allows the irrigator to retain three-quarters of the conserved water with the rest going to the state.²³¹ To provide a real incentive for conservation, the state or federal government should either pay for the system improvements in exchange for retaining the conserved water, or it should pay the irrigator a fair price for the percentage of conserved water it retains. Another example consists of various state law restrictions on transfer of place or use.²³² Relaxing such restrictions could encourage buying and selling of water, water rotation agreements, or other incidents of a free market system. As a result, water use would tend toward economic equilibrium and waste would give way to efficiency.

B. Opt-In Habitat Conservation Plans

Establishing values for water and using the best available scientific knowledge of what fish need could be the foundations for an HCP that is more user-friendly than the Methow Valley Draft MOA. Using the Draft MOA's opt-in approach for section 9 protection,²³³ a basin could produce an agreement that gives irrigators greater incentive for compliance and greater flexibility as to the method of compliance.

As NMFS has instructed, fish need the following adequate features in their river environment: "(1) Substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions."²³⁴ Riparian areas are almost as crucial as the stream itself; they provide several important habitat functions such as:

shade, sediment transport, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter. Habitat quality in this range is intrinsically related to the quality of riparian and upland areas and of inaccessible headwater or intermittent streams which provide key habitat elements (e.g., large woody debris, gravel, water quality) crucial for salmon and steelhead in downstream reaches.²³⁶

Once the biological needs of fish are established for a particular basin, each water right could be assigned a number of points based on its appraised market value. For example, the HCP agreement would create a mechanism for each user to contribute ten percent of that user's points toward species conservation. The agreement might also provide credit to users who had already taken conservation measures. For example, anyone whose diversion already sported an approved NMFS screen would be credited one point. Other measures could be worth additional points,

²³¹ OR. REV. STAT. § 537.470 (1999).

²³² See, e.g., OR. REV. STAT. § 537.348 (1999) (allowing instream leasing but requiring land to be taken out of production).

²³³ Methow Valley Draft MOA, *supra* note 191, at 6.1.3 ("Voluntary Conservation Standards").

²³⁴ Designated Critical Habitat: Critical Habitat for 19 Evolutionarily Significant Units of Salmon and Steelhead in Washington, Oregon, Idaho, and California, 65 Fed. Reg. 7764, 7773 (Feb. 16, 2000) (to be codified at 50 C.F.R. pt. 226.212).

²³⁶ *Id.*

allowing a user to choose the most practical compliance method. Some irrigators could contribute to instream flows, either by retiring their most inefficient cropland, investing in a tailwater return system, or converting from rill to microspray sprinkler irrigation. Others might opt in through participation in an agency-approved plan to restore streambank stability or to provide shading. Where non-point source pollution from agricultural runoff affects stream habitat, some users could contribute their conservation points by constructing berms to divert runoff, reducing pesticide use, or installing settlement ponds in order to reduce siltation. Livestock growers could contribute points by converting to off-channel stock watering.

Funding would form an important component. In some cases, the best strategy might be for the United States to directly ensure instream flows by either purchasing a water right or purchasing property containing appurtenant water rights. Section 5 of the ESA specifically authorizes such purchases.²³⁶ Large-scale water conservation or water storage projects might be needed in some basins to augment summer streamflows; those projects would likely require federal funding.

C. Mitigation Banking

Mitigation banking is another market-based approach that has been used successfully for ESA mitigation on land.²³⁷ An investor may purchase, for example, a thousand acres of undeveloped land within the historic range of the endangered fringe-toed lizard. As part of the investment, the investor may take steps in order to enhance the quality of the habitat—by removing invasive, nonnative vegetation, for example. With the agreement of federal and state agencies, this thousand acres becomes the “mitigation bank,” a resource for off-site mitigation needed by developers for ESA compliance. A commercial developer may plan a project that the permitting agencies decide will adversely affect the fringe-toed lizard. As a condition of the development permit, the developer purchases one hundred acres from the mitigation bank. The purchase preserves lizard habitat and thus satisfies the permitting agencies that harm to the species has been mitigated. FWS then grants the developer an incidental take permit, and the project proceeds to completion. The owner of the mitigation bank realizes a real estate profit as segments of the bank are withdrawn; the developer complies with the ESA painlessly and with the comfort of federal preapproval; and the fringe-toed lizard obtains the security of one thousand contiguous acres of habitat.

Instream flows could also function as mitigation banks. The investor would purchase senior water rights in an overappropriated river system where protected fish species were (or could be) present. Those who want to “develop” the river could then purchase portions of the instream flow as mitigation credit for their developments. For example, many hydropower

²³⁶ 16 U.S.C. § 1534 (1994).

²³⁷ See, e.g., Coachella Valley Fringe-Toed Lizard Habitat Conservation Plan (June 1985) (on file with authors).

dams in the northwest will apply for relicensing within the next decade. Because the Federal Energy Regulatory Commission is a federal agency with obligations under section 7, each relicensing process will trigger an ESA consultation and will likely require the dam operator to undertake mitigation measures in exchange for an incidental take permit.²³⁸ Such operators may welcome the opportunity to purchase instream flows from a mitigation bank. Even land developers, whose projects may be located in riparian areas and flagged as potentially harmful to fish, might solve their ESA compliance problems with a purchase from an instream mitigation bank.

VIII. CONCLUSION

The interplay between state water law and federal ESA requirements is fraught with uncertainty, and stakes are high on all sides of the issue. Cooperation between stakeholders on a whole-basin scale is preferable to command-and-control enforcement strategies by federal agencies. Prior appropriation, a precise doctrine that has developed in response to scarcity, is an essential part of the landscape in the western United States. There may be enough play in the system to accommodate ESA concerns with whole-basin solutions, but those solutions will have to be workable for everyone. The time is ripe for state governments to take the lead in working with federal enforcement authorities to navigate the intersection between state water law and the ESA.

²³⁸ See discussion *supra* Part III.A. (explaining duties imposed by section 7); see also 19 U.S.C. § 1539 (1994) (stating that “the applicant will . . . mitigate the impacts of such [incidental] taking”).