

PROTECTING WATER QUALITY AND SALMON IN THE
COLUMBIA BASIN: THE CASE FOR STATE CERTIFICATION
OF FEDERAL DAMS

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Many of the Pacific Northwest’s salmon runs face extinction, in part, due to the hydroelectric power systems’ adverse effects on water quality. This Comment presents the novel theory that section 401 of the Clean Water Act provides states the authority to impose terms and conditions on federal dam operators that will ensure compliance with state water quality standards. Section 401 requires any applicant for a federal license or permit, whose activities may result in a discharge, to obtain state certification that the activity will comply with water quality standards. Historically, only privately owned dams have been subject to state certification under section 401 because they require a license from the Federal Energy Regulatory Commission. Federal dams, on the other hand, have never been subjected to the state certification process because no readily apparent “permit or license” exists. This Comment asserts that many federal dams have erroneously been exempted from section 401 because Incidental Take Statements (ITSs), required under the Endangered Species Act, function as a permit or license. Consequently, the federal agencies issuing ITSs and operating dams under them are in violation of the Clean Water Act until they obtain from the states certification that dam operations will not impair state water quality standards.

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I. INTRODUCTION

Many of the once-mighty Columbia Basin wild salmon and steelhead runs face extinction, and some have already met that fate.¹ Among the causes of their imperiled status are habitat degradation and loss, competition with hatchery fish, overharvesting, predation,² adverse ocean conditions, and impacts from the hydropower system.² Hydroelectric dams have been particularly lethal to salmon because they kill fish passing through turbines; cut off forty-five percent of historic habitat; and increase migration time by creating slack-water and reducing river velocity, which, in turn, leads to greater energy expenditures and increased predation during migration to and from the ocean.³ One of dams’ greatest harms to salmon is water quality impairment, especially the alteration of water temperature regimes throughout the basin.⁴

¹ MICHAEL C. BLUMM, *SACRIFICING THE SALMON: A LEGAL AND POLICY HISTORY OF THE DECLINE OF COLUMBIA BASIN SALMON* 21, 45–52 (2002) (detailing former abundance and recent status of Pacific salmon runs, including extinctions); THOMAS P. QUINN, *THE BEHAVIOR AND ECOLOGY OF PACIFIC SALMON AND TROUT* 320–26 (2005) (same); Robin S. Waples et al., *Evolutionary Responses by Native Species to Major Anthropogenic Changes to Their Ecosystems: Pacific Salmon in the Columbia River Hydropower System*, 17 *MOLECULAR ECOLOGY* 84, 85 (2007) (“Cumulative human impacts have depressed Columbia River salmon populations to the point that most are now listed as threatened or endangered . . .”); *id.* at 93 (indicating up to “30% of historic populations in the contiguous USA” have gone extinct).

² BLUMM, *supra* note 1, at 44–52; QUINN, *supra* note 1, at 321–22; Waples et al., *supra* note 1, at 84–91.

³ Waples et al., *supra* note 1, at 85, 87–90.

⁴ *Id.* at 87. In addition, dam reservoirs promote agricultural development by permitting water diversions for irrigation. *Id.* at 88. The water returning to the river is often of poorer quality, “with lower dissolved oxygen and higher temperature, salinity, sediment loads, and contaminates from pesticides and

Dams and their reservoirs affect thermal regimes in the Columbia and Snake Rivers, in part, by slowing water flow and delaying seasonal cooling.⁵ Resulting higher temperatures cause myriad problems for salmon—which are uniquely adapted to historic temperature patterns—including “elevated risks of disease, fatality, increased predation, and barriers to migration.”⁶ Because of temperature’s effects on salmon, Pacific Northwest states have set water quality standards, or “water quality goals for specific waterbodies,”⁷ for temperature.⁸ Many stream and river segments

fertilizers.” *Id.* Water quality impairment like this “adversely affect[s] development, growth, survival, susceptibility to disease, and the virulence of infection [in salmon].” *Id.* (internal citations omitted).

⁵ U.S. ENVTL. PROT. AGENCY (EPA), EPA REGION 10 GUIDANCE FOR PACIFIC NORTHWEST STATE AND TRIBAL TEMPERATURE WATER QUALITY STANDARDS 7 (2003), available at [http://yosemite.epa.gov/R10/water.nsf/6cb1a1df2c49e4968825688200712cb7/b3f932e58e2f3b9488256d16007d3bca/\\$FILE/TempGuidanceEPAFinal.pdf](http://yosemite.epa.gov/R10/water.nsf/6cb1a1df2c49e4968825688200712cb7/b3f932e58e2f3b9488256d16007d3bca/$FILE/TempGuidanceEPAFinal.pdf) [hereinafter EPA TEMPERATURE GUIDANCE]. As EPA writes,

[Dams] can increase maximum [water] temperatures by holding waters in reservoirs to warm, especially in shallow areas near shore. Reservoirs, due to their increased volume of water, are more resistant to temperature change which results in reduced diurnal temperature variation and prolonged periods of warm water. . . . Reservoirs also inundate alluvial river segments, thereby diminishing the groundwater exchange between the river and the riverbed . . . that cools the river and provides cold water refugia during the summer. Further, dams can significantly reduce the river flow rate, thereby causing juvenile migrants to be exposed to high temperatures for a much longer time than they would under a natural flow regime.

Id. While Pacific Northwest rivers and streams “naturally warm in the summer due to increased solar radiation and warm air temperature,” human activities like dam construction, thermal pollution, reduction of groundwater flow, removal of shade-providing and erosion-preventing vegetation, and withdrawal of water for irrigation and industrial use “have magnified the degree of river warming, which adversely affects salmonids and reduces the number of river segments that are thermally suitable for salmonids.” *Id.* at 6–7.

⁶ Craig N. Johnston, *Salmon and Water Temperature: Taking Endangered Species Seriously in Establishing Water Quality Standards*, 33 ENVTL. L. 151, 153–54 (2003); BLUMM, *supra* note 1, at 225 (describing additional adverse effects, which include “increased spawning mortalities, reduced juvenile growth, diminished ability to compete for food and habitat with non-salmonids, decreased resistance to and increased virulence of disease, and delay or prevention of smoltification [i.e., the physiological changes juveniles undergo before seaward migration]”). See also EPA TEMPERATURE GUIDANCE, *supra* note 5, at 5 (“Salmonids have evolved and thrived under the water temperature patterns that historically existed (i.e., prior to significant anthropogenic impacts that altered temperature patterns) in Pacific Northwest streams and rivers.”); Waples et al., *supra* note 1, at 87 (“Higher temperatures reduce growth efficiencies, which must be offset by higher consumption rates and greater prey production. Changes in water temperature also affect metabolic rates of salmon predators . . . [and] predation on juvenile salmonids in the mainstream Columbia River is 30% higher in periods of relatively warm water temperatures.”); L.I. Crawshaw & C.S. O’Connor, *Behavioral Compensation for Long-Term Thermal Change*, in GLOBAL WARMING IMPLICATIONS FOR FRESHWATER AND MARINE FISH 368 (C.M. Wood & D.G. McDonald eds., 1997) (“Increased fresh water temperatures usually reduce survival of adult salmon, through both an increased incidence of disease and an increased utilization of energy stores.” (internal citations omitted)).

⁷ EPA TEMPERATURE GUIDANCE, *supra* note 5, at 3; see also *infra* Part II.B (describing water quality standards and how they are set in detail).

⁸ See OR. ADMIN. R. 340-041-0028 (2008); WASH. ADMIN. CODE § 173-201A-200 (2007); IDAHO ADMIN. CODE r. 58.01.02.100 (2007). Temperature represents the criteria for the water quality standard, while the rivers’ pertinent beneficial uses are as salmon and steelhead migration corridors. See *infra* notes 50–58 and accompanying text (explaining parts of a water quality standard).

routinely fail to attain water quality standards, finding themselves on the Clean Water Act⁹ section 303(d) list for impaired water bodies.¹⁰ In large part due to the hydropower system,¹¹ both the lower Columbia and Snake Rivers are water quality-limited for temperature,¹² with summer temperatures frequently exceeding the maximum twenty degrees Celsius allowed.¹³ As the climate warms, the water quality problem will only grow, and in the heavily managed Columbia Basin, the effects will be especially harsh for the salmon.¹⁴

⁹ Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387 (2000).

¹⁰ See *id.* § 1313(d) (2000); BLUMM, *supra* note 1, at 223–25 (describing water quality-limited stream segments in Columbia Basin).

¹¹ See EPA TEMPERATURE GUIDANCE, *supra* note 5, at 7 and accompanying text (describing hydrosystem’s effect on water temperature in Columbia Basin).

¹² Oregon and Washington have online databases of section 303(d)-listed water bodies, and Washington has a helpful interactive mapping tool as well. Or. Dep’t of Envtl. Quality, Water Quality Assessment Database, <http://www.deq.state.or.us/wq/assessment/rpt0406/search.asp> (last visited Oct. 13, 2008) (choose “Columbia River” or “Snake River” as water body and “Temperature” as parameter) [hereinafter DEQ Water Quality Assessment Database]; Wash. State Dep’t of Ecology, Water Quality 2002/2004 Assessments for Washington, <http://apps.ecy.wa.gov/wats/WATSQBHome.asp> (last visited Oct. 13, 2008) (same); Wash. State Dep’t of Ecology, Water Quality Assessment for Washington Interactive Map, <http://apps.ecy.wa.gov/wqawa/viewer.htm> (last visited Oct. 13, 2008) (instructions online).

¹³ DEQ Water Quality Assessment Database, *supra* note 12 (providing number of temperature exceedences discovered during monitoring); OR. ADMIN. R. 340-041-0028(4)(d) (2008); WASH. ADMIN. CODE § 173-201A-200 tbl.200(1)(c) (2007); See *Nw. Envtl. Advocates v. EPA*, 268 F.Supp.2d 1255, 1261, 1265, 1272 (indicating 20 degrees Celsius may be too high to truly protect designated use of salmonid spawning and rearing).

¹⁴ Scientists predict climate change’s effect on water temperature will have detrimental consequences for salmon. For one thing, a salmon’s life cycle is intimately tied to temperature, so further temperature variations due to climate change “have the potential to significantly reduce the size of salmonid populations.” EPA TEMPERATURE GUIDANCE, *supra* note 5, at 5–6. Additionally, higher temperatures require higher energy expenditures for basic life functions, as well as lead to increased predation and risk of disease.

[W]arming trends will shift precipitation toward winter rains rather than snow, and reduced snowmelt will produce earlier peak flows and less cool water in summer, when elevated stream temperatures can approach the thermal tolerance for salmon. Higher water temperatures will mean higher metabolic rates for juvenile salmon, as well as higher consumption rates for predators. Warmer thermal regimes might also promote the evolution and spread of infectious diseases, as well as the virulence of disease outbreaks.

Waples et al., *supra* note 1, at 93; see also Gordon F. Hartman et al., *Science and Management in Sustainable Salmonid Fisheries: The Ball Is Not in Our Court*, in SUSTAINABLE FISHERIES MANAGEMENT: PACIFIC SALMON 31, 40–45 (E. Eric Knudsen et al. eds., 2000) (“Pacific Northwest salmonids will experience broad, relatively rapid effects of climate change during the next few decades. These will exert their influence through effects on both the freshwater and ocean systems.”); S.D. McCormick et al., *Temperature Effects on Osmoregulatory Physiology of Juvenile Anadromous Fish*, in GLOBAL WARMING: IMPLICATIONS FOR FRESHWATER AND MARINE FISH 279, 296 (C.M. Wood & D.G. McDonald eds., 1997) (“Obstacles to migration such as dams and water diversions not only present a physical hindrance to migration but can alter water temperatures The effects of global warming on water temperatures may be exacerbated in rivers with dams, and delays in migration imposed by dams may increase the detrimental effects of high temperature in both juvenile and adult fish.”); ROBERT M. HUGHES ET AL., TEMPERATURE REQUIREMENTS OF SALMONIDS IN RELATION TO THEIR FEEDING, BIOENERGETICS, GROWTH, AND BEHAVIOR 2 (1978) (“A persistent increase [in surface water temperatures] of relatively few degrees over the year, even when annually and seasonally the

A growing body of evidence suggests that climate change is already affecting stream temperatures in the basin, and that salmon will fall victim to ever-increasing temperatures if the hydropower system does not undergo a major transformation.¹⁵ When faced with the reality of climate change, one long-time opponent of dam breaching now argues that breaching the four Lower Snake River dams is the only strategy that will allow Snake River salmon to survive, let alone thrive.¹⁶ Others believe that, at the very least, significant changes in dam operations, like considerable flow augmentation, are necessary to curb the rising temperatures.¹⁷ Although the need for such operational changes in order to improve water quality seems quite apparent, persuading the federal government to operate its dams in this manner is another matter entirely.

Despite dams' unquestioned adverse effects on water quality, they have been subject to relatively little enforcement under the Clean Water Act (CWA). The curious decisions of two circuit courts

temperature normally varies over a much greater range, can be expected to alter the metabolism and life history patterns of individuals of different [salmon] species and so lead to changes in the success of their populations and in the composition of the biological community.”)

¹⁵ See generally COMM. ON WATER RES. MGMT., INSTREAM FLOWS, AND SALMON SURVIVAL IN THE COLUMBIA RIVER BASIN ET AL., NAT'L RESEARCH COUNCIL, MANAGING THE COLUMBIA RIVER: INSTREAM FLOWS, WATER WITHDRAWALS, AND SALMON SURVIVAL 65–69, 235–36 (2004) [hereinafter MANAGING THE COLUMBIA RIVER] (describing effects of climate change in Columbia Basin); JIM MARTIN & PATTY GLICK, A GREAT WAVE RISING: SOLUTIONS FOR COLUMBIA AND SNAKE RIVER SALMON IN THE AGE OF GLOBAL WARMING 9–16 (2008), available at http://www.lightintheriver.org/reports/march27_report.pdf (detailing climate change effects in basin and on salmon); CLIMATE IMPACTS GROUP, THE IMPLICATIONS OF GLOBAL WARMING FOR WATER AND SALMON IN THE PACIFIC NORTHWEST 2 (2004), available at http://www.cses.washington.edu/cig/pnwc/FS_CCWaterSalmon04.pdf (“Salmon productivity in the [Pacific Northwest] is clearly sensitive to climate-related changes in stream, estuary, and ocean conditions.”); Jonathan M. Hanna, *Oncorhynchus Spp.: Climate Change, Pacific Northwest Tribes, and Salmon*, NATURAL RES. & ENV'T, Fall 2007, at 13, 13–14, 17 (exploring climate change effects and solutions, including flow augmentation); Hartman et al., *supra* note 14, at 40–44 (predicting climate change effects throughout salmon's range); EPA, COLUMBIA/SNAKE RIVER TMDL PROBLEM ASSESSMENT, <http://yosemite.epa.gov/R10/WATER.NSF/34090d07b77d50bd88256b79006529e8/780e02b8962f0b5e88256aed0058d4a1!OpenDocument#Untitled%20Section> (last visited Oct. 28, 2008) (“The dams appear to be the major cause of warming of the temperature regimes of the [Columbia and Snake] rivers. . . . Global warming or climate change may play a small role in warming the temperature regime of the Columbia River.”).

¹⁶ Rocky Barker, *Dam Breaching Gets a Surprise Endorsement*, HIGH COUNTRY NEWS, Sept. 19, 2005, <http://www.hcn.org/issues/306/15798> (last visited Oct. 13, 2008) (describing position reversal of Don Chapman, a legendary fisheries biologist); see also Carl Pope, Op-Ed., *Noah's Ark for Salmon*, L.A. TIMES, Mar. 21, 2008, <http://www.latimes.com/news/opinion/commentary/la-oe-pope21mar21.0.6422855.story> (last visited Oct. 13, 2008) (arguing that breaching four lower Snake River dams is the only way to save wild salmon from extinction in face of climate change).

¹⁷ See Hanna, *supra* note 15, at 17 (“Tribes may advocate increased recognition of salmon conservation policy in determining timing of water releases, flow regimes, and hydropower generation schedules for dams. Specifically, because climate change will alter seasonal runoff patterns, tribes could advocate augmented flow regimes.”); MARTIN & GLICK, *supra* note 15, at 22–23 (detailing strategies for addressing climate change in the Columbia Basin, including increased flow).

have effectively removed dams from the ambit of the National Pollutant Discharge Elimination System (NPDES) permit program, the CWA's most powerful water quality enforcement mechanism, even when the United States Environmental Protection Agency (EPA) has since promoted the expansive interpretation of identical jurisdictional terms for its wetlands program.¹⁸ Other circuits whittled away at the primary enforcement option at federal dams—section 313 of the CWA¹⁹—by gratuitously deferring to agency expertise.²⁰ Thus, section 401's certification requirement has become the last great bastion for CWA enforcement at dams,²¹ although the provision has been applied exclusively to dams licensed by the Federal Energy Regulatory Commission (FERC).²² This final enforcement mechanism was challenged by S.D. Warren Co., a paper manufacturer, when it claimed it did not need to obtain certification for its FERC license.

In 2006, the United States Supreme Court unanimously ruled in *S.D. Warren Co. v. Maine Board of Environmental Protection*,²³ that a FERC license did, in fact, require compliance with state certifications mandating greater minimum stream flows because dam operations cause “discharges,”²⁴ which trigger section 401 of the CWA.²⁵ The decision implicates more than just FERC-licensed dams, though, since federal dams, historically subject to far less regulation than private dams, operate with the same potential for a discharge.²⁶ An unresolved question is whether, in the absence of a FERC license requirement, federal dams are subject to section 401 certification.

¹⁸ See *Nat'l Wildlife Fed'n v. Gorsuch*, 693 F.2d 156, 172–77 (D.C. Cir. 1982) (upholding as reasonable EPA's construction of CWA to exclude dams from the NPDES permit program); *Nat'l Wildlife Fed'n v. Consumers Power Co.*, 862 F.2d 580, 585 (6th Cir. 1988) (reversing district court and according deference to EPA policy regarding hydroelectric dams). See *infra* Part III.A for analysis of these cases, which made the CWA's NPDES permitting program inapplicable to dams.

¹⁹ Federal Water Pollution Control Act, 33 U.S.C. § 1323(a) (2000) (requiring federal agencies' actions to comply with water quality standards).

²⁰ See *Nat'l Wildlife Fed'n v. U.S. Army Corps of Eng'rs*, 384 F.3d 1163 (9th Cir. 2004); *In re Operation of the Mo. River Sys. Litig.*, 418 F.3d 915 (8th Cir. 2005). See *infra* Part III.B.2.a for analysis of section 313 and its limits.

²¹ Section 401 requires “[a]ny applicant for a *Federal license or permit* to conduct any activity including, but not limited to, the construction or operation of facilities, which *may result in any discharge* into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate . . . that any such discharge will comply with [effluent limitations and water quality standards].” 33 U.S.C. § 1341(a)(1) (2000) (emphasis added).

²² Federal dams do not require a FERC license, so section 401 has historically been applied only to privately owned dams.

²³ 547 U.S. 370 (2006).

²⁴ *Id.* at 373.

²⁵ 33 U.S.C. § 1341 (2000).

²⁶ Despite their identical effects on water quality, unlike private dams, federal dams are not subject to FERC licensing, so they have not been subject to section 401 certification. Regulation of federal dams primarily derives from section 7 consultation under the Endangered Species Act. See *Endangered Species Act of 1973*, 16 U.S.C. § 1536 (2006). Specifically, dams operate under the terms and conditions of incidental take statements. See *id.* § 1539(a)(1)(B).

This Comment argues that they are because section 401 requires an applicant for any “federal license or permit” to obtain state certification that potential discharges will not impair state water quality standards.²⁷ Since most, if not all, federal dams must obtain an incidental take statement (ITS) under the Endangered Species Act (ESA),²⁸ the federal agency operating the dam should be subject to the requirements of section 401 because, despite its name, an ITS functions as a permit or license.²⁹ Consequently, this Comment concludes federal dam operators without a section 401 certification are in violation of the Clean Water Act, and National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly National Marine Fisheries Service, or NMFS) has illegally issued ITSs in the absence of the required state certification.

In the case of the Columbia Basin dams, NOAA’s failure to require section 401 certification before issuing ITSs for listed Pacific salmon species navigating the extensive hydropower system seems to clearly violate the Clean Water Act. Salmon advocates have repeatedly litigated controversial, indeed illegal, incidental take statements for the Columbia and Snake River dams.³⁰ However, no suits have claimed ITSs require section 401 certification that the dams’ operations will comply with state water quality standards. Although much of the Columbia Basin is water-quality limited for temperature,³¹ which the federal agencies could help rectify through altered dam operations,³² federal agencies have shunned³³ and federal

²⁷ 33 U.S.C. § 1341 (2000).

²⁸ Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (2006); *see infra* Part III.B.2.b.i. (describing ESA consultation and take provisions, as well as incidental take statements).

²⁹ *See infra* Part IV (arguing ITS is a federal license or permit).

³⁰ *See* Michael C. Blumm et al., *Practiced at the Art of Deception: The Failure of Columbia Basin Salmon Recovery Under the Endangered Species Act*, 36 ENVTL. L. 709 (2006), for detailed discussion of past Biological Opinion (BiOp) litigation concerning salmon and hydropower in the Northwest.

³¹ *See supra* notes 10–13 and accompanying text (describing section 303(d)-listed streams in Columbia Basin); *see also* BLUMM, *supra* note 1, at 223–25 (describing water quality-limited stream segments in the Columbia Basin).

³² For example, augmenting flow through cold-water releases from the bottom of thermally stratified reservoirs behind dams can cool water temperatures downstream. MANAGING THE COLUMBIA RIVER, *supra* note 15, at 84; EPA TEMPERATURE GUIDANCE, *supra* note 5, at 7; *see also infra* notes 181–83 and accompanying text. Additionally, flow augmentation increases water velocity, which helps juvenile salmon’s outward migration. MANAGING THE COLUMBIA RIVER, *supra* note 15, at 84–91 (“Flow augmentation is the directed release of water from storage reservoirs to increase instream flows, which are intended to help reestablish suitable migratory conditions for smolts [i.e., juvenile salmon] that migrate seaward through the impounded Snake and Columbia rivers; flow augmentation from Dworshak Reservoir is also used to add cold water to the Lower Snake River.”). The United States Army Corps of Engineers (Corps) currently releases some water for temperature control in the Columbia Basin, like those from Dworshak Reservoir that cool the reservoir behind Lower Granite dam, *see infra* note 183 and accompanying text, but the Corps does not operate dams in a manner that achieves water quality standards throughout the basin. *See supra* notes 10–13 and accompanying text (discussing section 303(d)-listed streams).

³³ *See* Nat’l Wildlife Fed’n v. U.S. Army Corps of Eng’rs (*NWF v. Corps*), 384 F.3d 1163, 1181 (9th Cir. 2004) (McKeown, J., dissenting) (“Compliance with the CWA and the continued presence of the dams are not mutually exclusive options. But, in an effort to sidestep the CWA, the Corps hides

courts have been reluctant to impose all the actions necessary to produce water quality protective of salmon to date.³⁴ Section 401 certification would provide the states,³⁵ as well as the public, a much greater role in forcing solutions to the protracted salmon problem, since section 401 contains a mandatory public participation provision.³⁶

Using the Columbia Basin dams as a case study, this Comment argues that the CWA requires federal dam operators to acquire section 401 certification before they can obtain incidental take statements under the ESA. Part II provides background on the Clean Water Act's purpose and basic framework. Part III analyzes various approaches to water quality enforcement at dams, focusing particularly on section 401's potential to bring about compliance with water quality standards. Part IV explores whether an incidental take statement constitutes a federal permit or license and explains why federal agencies must obtain section 401 certification before an incidental take statement can issue. Part V applies the conclusions drawn throughout the Comment to the Columbia Basin hydropower system. The Comment concludes that the Columbia Basin dams—and any federal dam requiring an incidental take statement—operate in violation of the Clean Water Act until they obtain the appropriate section 401 certification.

II. THE CLEAN WATER ACT: PURPOSE AND BASIC FRAMEWORK

In the 1972 Federal Water Pollution Control Act Amendments, commonly known as the Clean Water Act, Congress's purpose was lofty: "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" through a comprehensive water pollution control scheme.³⁷ To achieve this purpose, Congress set

behind removal of the dams and simply defaults on the real issue—compliance with water quality standards."). Although federal agencies are supposed to comply with state water quality standards according to section 313 of the CWA, NOAA and the Corps have not advocated for dam operations that would meet water quality standards.

³⁴ See *NWF v. Corps*, 384 F.3d at 1180 ("[T]he record also supports the Corps's view that there are no additional feasible steps it could take to decrease water temperatures on the lower Snake River, consistent with the mandate of Congress to build the dams and Congress's purposes for them."); Blumm et al., *supra* note 30, at 795–96 (describing injunction ordering spill but not increased flow for five Columbia Basin dams).

³⁵ For the purposes of this Comment, when used in the context of 401 certification, "state" refers to states "in which a discharge originates or will originate," interstate water pollution control agencies "having jurisdiction over the navigable waters at the point where the discharge originates or will originate," and the EPA, depending on which entity is charged with enforcing water quality standards. Federal Water Pollution Control Act, 33 U.S.C. § 1341(a)(1) (2000). Further, "state" includes Tribes with "Treatment-as-a-state" status under section 518 of the Clean Water Act. *Id.* § 1377(e).

³⁶ *Id.* § 1341(a)(1) ("Such State or interstate agency shall establish procedures for public notice in the case of all applications for certification by it and, to the extent it deems appropriate, procedures for public hearings in connection with specific applications.").

³⁷ *Id.* § 1251(a).

goals of eliminating the discharge of pollutants by 1985,³⁸ attaining water quality producing fishable and swimmable waters by 1983 (the fishable/swimmable goal),³⁹ and prohibiting the discharge of toxic pollutants in toxic amounts.⁴⁰ The CWA envisioned achieving these goals by setting and enforcing two types of water quality measures: effluent limitations and water quality standards.

A. Effluent Limitations and NPDES Permits

Effluent limitations, which are set by the EPA, are restrictions on quantities, rates and concentrations of pollutants discharged into water by end-of-pipe polluters.⁴¹ Any activity that results in a “discharge of a pollutant” into the navigable waters from a point source satisfies the threshold for an effluent limitation and becomes subject to various provisions of the CWA.⁴² Most importantly, the discharger must comply with the National Pollutant Discharge Elimination System (NPDES) permit program established by section 402 of the CWA.⁴³ Before discharging any pollutant, the discharger must obtain a NPDES permit from the EPA or from a state with an EPA-approved permit program.⁴⁴ The permit applies the CWA’s pollution control technology- and water quality-based requirements to that particular discharger, and sets compliance schedules and requirements for monitoring and reporting.⁴⁵ If the discharger complies with the permit in all respects, it also complies with the Clean Water Act, with the permit acting as a shield from civil and criminal enforcement.⁴⁶ The NPDES program has been a major success of the Act, and it is the primary mechanism curbing pollution into the nation’s waters.⁴⁷

B. Water Quality Standards

Water quality standards (WQSs) are the other pollution control measure required by the CWA. WQSs aspire to improve the overall

³⁸ *Id.* § 1251(a)(1).

³⁹ *Id.* § 1251(a)(2).

⁴⁰ *Id.* § 1251(a)(3).

⁴¹ *Id.* § 1362(11).

⁴² Section 502 defines each of these jurisdictional terms. A “discharge of a pollutant” is “any addition of any pollutant to navigable waters from any point source.” *Id.* § 1362(12)(A). “Navigable waters” means “the waters of the United States.” *Id.* § 1362(7). “Point source” means “any discernable, confined and discrete conveyance,” and the provision lays out a nonexclusive list of types of conveyances that qualify, such as pipes, ditches, and tunnels. *Id.* § 1362(14).

⁴³ *Id.* § 1342.

⁴⁴ *See id.* § 1342 (a)–(b).

⁴⁵ OFFICE OF WASTEWATER MGMT., EPA, U.S. EPA NPDES PERMIT WRITERS’ MANUAL 23–24 (1996), available at www.epa.gov/npdes/pubs/owm0243.pdf.

⁴⁶ 33 U.S.C. § 1342(k) (2000).

⁴⁷ *See* Edward B. Witte & David P. Ross, *Nonpoint Source Pollution Control*, in THE CLEAN WATER ACT HANDBOOK 191, 191–93 (Mark A. Ryan ed., 2d ed. 2003).

quality of water bodies and apply to all sources of pollution, whether point or nonpoint (i.e., diffuse runoff). Section 303(c) requires all states to set water quality standards, subject to EPA approval and triennial review,⁴⁸ in order to protect public health and welfare, enhance water quality, and serve the Act's purposes.⁴⁹

A water quality standard consists of three elements: 1) one or more existing or designated "uses" of a water body,⁵⁰ 2) water quality "criteria" indicating the amount of a pollutant that may be present in the water body while still protecting the uses,⁵¹ and 3) a provision restricting degradation of certain types of waters.⁵² Designated uses include, but are not limited to, fish and aquatic life, fishing, boating, aesthetic quality, irrigation and water supply.⁵³ The criteria provide the narrative requirements and numeric concentrations and levels of allowable pollution that, when met, will enable a state to protect the designated uses.⁵⁴ The antidegradation policy establishes three tiers of protection, depending on the quality of the water at the time a state sets the WQS.⁵⁵ First, no matter the quality of the water, the standard must maintain and protect existing uses.⁵⁶ Second, for waters with water quality exceeding that necessary to protect uses, a state must set the WQS so as to maintain that level of quality unless, after public participation, a state finds that a lower water quality is "necessary to accommodate important economic or social development."⁵⁷ Finally, states must maintain and protect the existing level of quality for waters designated as "outstanding National resource[s]" due to their

⁴⁸ EPA's role in water quality standard development primarily consists of developing recommended scientific guidelines for state water quality standards and overseeing state adoption and revision of WQSs. 33 U.S.C. §§ 1313, 1314(a) (2000).

⁴⁹ *Id.* § 1313(c)(2)(A); 40 C.F.R. § 131.2 (2008) ("Serve the purposes of the Act" . . . means that water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water." (quoting sections 101(a)(2) and 303(c) of the Clean Water Act)).

⁵⁰ 33 U.S.C. § 1313(c)(2)(A) (2000). EPA's regulations define an "existing use" as one that is "actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." 40 C.F.R. § 131.3(e) (2008). A "designated use" is a "use[] specified in water quality standards for each water body or segment whether or not [it is] being attained." *Id.* § 131.3(f). A state may not remove an existing use, but it may remove a designated use under certain circumstances. *Id.* § 131.10(g).

⁵¹ 33 U.S.C. § 1313(c)(2)(A) (2000); 40 C.F.R. § 131.3(b) (2008).

⁵² 33 U.S.C. § 1313(d)(4)(B) (2000). Unlike the designated use and criteria elements, which were always a part of the CWA, EPA formed the antidegradation policy in 1975, which Congress later incorporated by reference in section 303(d)(4)(B) in 1987. *See* PUD No. 1 v. Wash. Dep't of Ecology, 511 U.S. 700, 718 (1994); Mary A. Stilts, *The Ever-Changing Balance of Power in Interstate Water Pollution: Do Affected States Have Anything to Say after Arkansas v. Oklahoma?*, 50 WASH. & LEE L. REV. 1341, 1356–57 (1993) (explaining roots of antidegradation policy). The antidegradation policy can be found at 40 C.F.R. § 131.12 (2008).

⁵³ *See* 33 U.S.C. § 1313(c)(2)(A) (2000); 40 C.F.R. § 131.10(a) (2008).

⁵⁴ 33 U.S.C. § 1313(c)(2)(A) (2000); 40 C.F.R. § 131.3(b) (2008).

⁵⁵ 40 C.F.R. § 131.12(a) (2008).

⁵⁶ *Id.* § 131.12(a)(1).

⁵⁷ *Id.* § 131.12(a)(2).

“exceptional recreational or ecological significance.”⁵⁸ Thus, the WQS scheme aims not only to protect uses, but also to maintain high quality water.

After establishing water quality standards, states must identify those waters for which effluent limitations are insufficient to implement established water quality standards, referred to as water quality-limited waters or section 303(d) waters.⁵⁹ Then, the states must establish a priority list of section 303(d) waters, based on the severity of the pollution and the uses of the water,⁶⁰ and also establish a total maximum daily load (TMDL) for each of the water bodies or segments on the list.⁶¹ A TMDL is a technical calculation of the maximum amount of pollution (load) that a water body can receive on a daily basis from point, nonpoint, and natural background sources while still achieving the water quality standard in question.⁶²

Water quality standards and the strictures of relevant TMDLs apply to all polluters, regardless of whether the pollution comes from a point or a nonpoint source, but the Act allows for uneven enforcement. For point sources requiring a NPDES permit, the permit includes terms to produce compliance with water quality standards, including its portion of the load allocation for section 303(d) waters.⁶³ If the source exceeds the water quality parameters of its permit, it is subject to civil and criminal liability.⁶⁴

Unfortunately, while Congress intended that the CWA regulate all sources of water pollution,⁶⁵ the Act does not contemplate an equivalent system for ensuring water quality standard compliance by sources that do not meet the jurisdictional trigger for a NPDES permit. Common criticisms of federal nonpoint programs are that they lack enforcement mechanisms and rely on financial incentives to states to implement the programs, thus they are heavy on carrots and

⁵⁸ *Id.* § 131.12(a)(3).

⁵⁹ 33 U.S.C. § 1313(d)(1)(A) (2000). A water body may be water quality-limited for more than one WQS.

⁶⁰ *Id.*

⁶¹ *Id.* § 1313(d)(1)(C). If a state fails to either establish a section 303(d) list of impaired waters or implement a TMDL, courts have charged EPA with this duty. *See* *Scott v. City of Hammond*, 741 F.2d 992, 997 (7th Cir. 1984).

⁶² EPA, Introduction to TMDLs, <http://www.epa.gov/owow/tmdl/intro.html#definition> (last visited Oct. 13, 2008). On the most basic level, the TMDL is the sum of the wasteload allocation (the portion of the TMDL allocated for existing and future point sources) and the load allocation (the portion of the TMDL allocated for existing and future nonpoint sources), taking into account seasonal variations and a margin of safety to account for any lack of knowledge regarding the relationship between effluent limitations and water quality. 33 U.S.C. § 1313(d)(1)(C) (2000); EPA, Overview of Current Total Maximum Daily Load—TMDL—Programs and Regulations, <http://www.epa.gov/owow/tmdl/overviewfs.html> (last visited Oct. 13, 2008).

⁶³ 33 U.S.C. § 1319 (2000).

⁶⁴ *Id.*

⁶⁵ *Id.* § 1251(a)(7) (“[I]t is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this [Act] to be met through the control of both point and nonpoint sources of pollution.”).

short on sticks.⁶⁶ This lack of comprehensive enforcement has been a major failure of the Act because most remaining water quality impairment is attributable to sources not subject to the NPDES program.⁶⁷ Consequently, in lieu of a major statutory overhaul to address nonpoint source pollution more directly, agencies and citizens ought to explore alternate ways to attain water quality standards if they truly want to achieve the goals of the CWA.

III. DAMS AND THE CLEAN WATER ACT

Hydroelectric dams are a major source of water quality impairment. Their existence and operation alter temperature regimes of entire river systems, allow dissolved gas supersaturation, cause instream flows and river elevations to fluctuate, eliminate spawning and rearing habitat for endemic and anadromous fish, facilitate increased predation of fish, and directly kill fish through their operations.⁶⁸ Given the adverse effects dams can have on designated uses, like maintaining aquatic species' habitat or preserving fishable waters, Clean Water Act jurisdiction should apply. Regrettably, however, dams have circumvented the provisions of the Act. This section first re-examines *National Wildlife Federation v. Gorsuch*,⁶⁹ in which the D.C. Circuit Court of Appeals effectively exempted all dams from the NPDES program.⁷⁰ It then explores the alternative approaches to water quality enforcement used for private and federal

⁶⁶ See, e.g., Witte & Ross, *supra* note 47, at 192 ("The federal program is carrot-based and lacks a sufficient stick to remedy failure."); Michael C. Blumm & William Warnock, *Roads Not Taken: EPA vs. Clean Water*, 33 ENVTL. L. 79, 97-98 n.116 (2003) [hereinafter *Roads Not Taken*] ("[M]ost state nonpoint source programs are hortatory, vague, and unenforceable, and virtually no state authorizes citizen suits against nonpoint source polluters."); Steven J. Hipfel, *Enforcement of Nonpoint Source Water Pollution Control and Abatement Measures Applicable to Federal Facilities, Activities and Land Management Practices Under Federal and State Law*, 8 ENVTL. LAW. 75, 84-86, 93-94 (2001) (describing political impediments to nonpoint source regulation and limited enforcement options for general nonpoint source pollution prohibitions); Robert W. Adler, *Integrated Approaches to Water Pollution: Lessons from the Clean Air Act*, 23 HARV. ENVTL. L. REV. 203, 289-90 (1999) ("Where water quality problems stem largely or entirely from nonpoint sources, [in contrast to the NPDES program], EPA is essentially powerless. It may deny grant funding from the state's nonpoint source control program, but no crossover sanctions allow other federal funds to be withdrawn or withheld. Most importantly, except with respect to activities on federal lands, EPA has no authority to design, implement or enforce control programs to curb nonpoint source pollution. In short, no federal 'gorilla in the closet' exists to stimulate effective state nonpoint source water pollution controls.")

⁶⁷ See Witte & Ross, *supra* note 47, at 191-92 ("A majority of the remaining water quality impairments, however, are largely caused by sources that are not directly controlled under the Clean Water Act. Controlling pollution from diffuse runoff is the next great challenge facing our nation's water regulators.")

⁶⁸ See, e.g., Johnston, *supra* note 6, at n.5 (citing NMFS's 1995 biological opinion for the Federal Columbia River Power System (FCRPS)).

⁶⁹ 693 F.2d 156 (D.C. Cir. 1982); see also Blumm & Warnock, *supra* note 66, at 83-94 (analyzing the *Gorsuch* decision and subsequent decisions in detail).

⁷⁰ *Gorsuch*, 693 F.2d at 175.

dams, extolling the approach used for the former and criticizing the approaches used for the latter.

A. The Gorsuch Decision: Exempting Dams from the NPDES Program

Given the expansive purpose Congress set out in the Clean Water Act, the Gorsuch court's interpretation of the Clean Water Act as excluding dams from the NPDES permit program, and therefore its effluent limitations, is surprising. While dams exist in navigable waters and few contest that they are point sources,⁷¹ the D.C. Circuit in Gorsuch held that dams do not meet the "addition of a pollutant" element, and are thus exempt from the NPDES permit requirement.⁷²

The Gorsuch case turned on the meaning of both "pollutant" and "addition." In reaching its conclusion that a dam's operations involved neither pollutants nor additions, the D.C. Circuit gave great deference to EPA's interpretation of the terms.⁷³ Concerning the meaning of "pollutant," the court determined that, while the Act's definition did not constitute an exclusive list,⁷⁴ Congress entrusted EPA with the discretion to determine which unenumerated pollutants qualified for regulation under the NPDES program.⁷⁵ The court therefore accorded deference to EPA's determination that dissolved oxygen, cold, and supersaturation should not be regulated under the NPDES program.⁷⁶ As for the statutorily undefined term "addition,"

⁷¹ See, e.g., *id.* at 165 n.22 ("The pipes or spillways through which water flows from the reservoir through the dam into the downstream river clearly fall within [the] definition [of 'point source'], and EPA has required NPDES permits for the discharge of grease, oil, or trash through the outlet works of a dam."); *id.* at 165 ("[B]oth the reservoir and the downstream river are 'navigable waters' within the statutory meaning whether or not they are navigable in fact."); *Greenfield Mills, Inc. v. Macklin*, 361 F.3d 934, 947 n.16 (7th Cir. 2004) ("Here, the artificial mechanism of the dam was used to convey pollutants into the Fawn River, a navigable waterway. Consequently, we believe that the dam constitutes a 'point source.'").

⁷² *Gorsuch*, 693 F.2d at 175.

⁷³ See *id.* at 165. While the Supreme Court would not decide *Chevron U.S.A., Inc. v. Natural Res. Defense Council*, 467 U.S. 837, 844–45 (1984), for another two years, the D.C. Circuit correctly anticipated its holding that if a statute is silent or ambiguous on a specific topic, courts should defer to an agency's reasonable interpretation.

⁷⁴ "'Pollutant' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." Federal Water Pollution Control Act, 33 U.S.C. § 1362(6) (2000). Somewhat strangely, even after noting rules of statutory construction and legislative history suggesting an exclusive list, the court still found ambiguity, allowing deference to EPA's reasonable interpretation. *Gorsuch*, 693 F.2d at 171–74.

⁷⁵ *Gorsuch*, 693 F.2d at 173–74.

⁷⁶ *Id.* at 174 ("Given this focused legislative intent concerning deference to EPA's interpretation of these definitional provisions, we must accept that interpretation unless it is manifestly unreasonable. . . . In fact, EPA has given the statute a natural reading, both on its face and in light of the legislative history."). The court was careful to point out that it did *not* decide "whether the statutory list necessarily excludes low dissolved oxygen, cold, and supersaturation, only whether EPA can reasonably so interpret it." *Id.* at 174 n.56. In fact, conditions like these, including temperature, are "pollutants" in some contexts. See, e.g., 33 U.S.C. § 1362(6) (2000) (including heat in statutory definition of "pollutant");

the court concluded that both the National Wildlife Federation's⁷⁷ and the EPA's⁷⁸ interpretations were permissible constructions of the statute, but deferred to the agency's interpretation that any pollution either already existed in the reservoir or did not exist until water had already passed through a dam.⁷⁹ Unfortunately, additional circuits have adopted the reasoning of the Gorsuch court.⁸⁰

Since Gorsuch, however, EPA has changed course, advocating an expansive meaning of "addition," particularly in the wetlands context.⁸¹ While section 404 of the CWA, not section 402, governs the dredge and fill permit program, the programs share the section 301(a) "discharge of a pollutant" requirement. The resulting dichotomy between programs relying on the same statutory language and EPA's own inconsistent stance has led some to advocate challenging EPA's position.⁸² For the time being though, dams are exempt, via judicial determination, from the effluent limitation requirements of the NPDES program.⁸³

EPA TEMPERATURE GUIDANCE, *supra* note 5, at 42–44 (describing how to address heat in NPDES permits).

⁷⁷ National Wildlife Federation argued that an "'addition . . . from a point source' occurs when (1) a dam causes pollutants to enter the reservoir and (2) the polluted water subsequently passes through the dam—the point source—into the formerly unpolluted river below." *Gorsuch*, 693 F.2d at 174 (alteration to the original in the quoted text).

⁷⁸ EPA's construction was based on timing, consisting of two parts for the two types of pollution involved in the case. EPA argued

the point or nonpoint character of pollution is established when the pollutant first enters navigable water, and does not change when the polluted water later passes through the dam from one body of navigable water (the reservoir) to another (the downstream river). As for supersaturation, which does not exist in the reservoir, EPA argue[d] that it occurs downstream, *after* the water is released from the dam.

Id. at 175.

⁷⁹ *Id.*

⁸⁰ *See, e.g.*, *Nat'l Wildlife Fed'n v. Consumers Power Co.*, 862 F.2d 580 (6th Cir. 1988) (holding hydroelectric pumped storage plant that killed and dumped dead fish and fish remains into Lake Michigan exempt from NPDES permit requirements because there was no "addition"). *But cf.* *Catskill Mountains Chapter of Trout Unlimited v. City of New York (Catskill Mountains)*, 273 F.3d 481, 489 (2d Cir. 2001) (holding interbasin water transfer from reservoir to creek required NPDES permit after according EPA lesser degree of deference and distinguishing case on the facts).

⁸¹ *See* Blumm & Warnock, *supra* note 66, at 88–89.

⁸² *Id.* at 92–93, 111 n.208 (emphasizing *Catskill Mountains* court's determination that EPA's stance in *Gorsuch* was a litigation position, which receives lesser degree of deference).

⁸³ A caveat is that some dams, including Bonneville Dam on the Columbia River, have NPDES permits for discharges of storm water and oily process wastewater. *See, e.g.*, Or. Dep't of Env'tl. Quality, Status of Permit Application for Bonneville Lock and Dam, <http://www.deq.state.or.us/permittracker/StatusOfPermitApplicationResults.aspx?facilityID=112236> (last visited Oct. 13, 2008) (indicating permit renewed Jan. 24, 2008); OREGON DEQ, PROPOSED RENEWAL OF NPDES PERMIT FOR BONNEVILLE LOCK AND DAM, FILE ID 112336 1 (2007), *available at* http://www.deq.state.or.us/news/publicnotices/uploaded/071211_255_Bonneville-PN-07-WQ.pdf.

B. Enforcing Water Quality Standards Against Dams

Although dams are not currently subject to the effluent limitation provisions of the Clean Water Act, they still must comply with water quality standards, just like any other source treated as nonpoint.⁸⁴ As noted previously, direct enforcement of water quality standards through the Clean Water Act remains elusive for sources not subject to the NPDES program,⁸⁵ so alternative mechanisms are necessary. Historically, the CWA mechanisms for enforcing water quality standards at dams have been divided along ownership lines. In practice, privately owned dams are subject to section 401's requirement that a state certify a dam's compliance with water quality standards essentially because private dams require a FERC license.⁸⁶ In contrast, federal dams are merely subject to section 313—which requires federal agencies to comply with state water quality standards, but does not require state certification of compliance⁸⁷—because they do not require a FERC license. This Comment asserts that such a rigid bifurcation of enforcement mechanisms based on dam ownership is conceptually inappropriate and statutorily indefensible because ownership does not provide a rational distinction between the water quality impacts caused by privately and federally owned dams.

1. Section 401: State Certification of Private Dams

For privately owned dams, states enforce water quality standards through section 401 of the Clean Water Act. Section 401 requires any applicant for a federal license or permit, whose activities may result in a discharge, to obtain state certification that the activity will comply with applicable effluent limitations and water quality standards.⁸⁸ Without the certification or a waiver from the state, no federal license or permit can issue.⁸⁹

a. S.D. Warren: Of Dams and “Discharges”

Section 401 sets up a three-prong test to determine whether state certification is necessary. There must be 1) “a [f]ederal permit or

⁸⁴ While courts generally agree that dams are point sources, *see supra* note 71 and accompanying text, the fact that they do not require NPDES permits means that they are subject to only those requirements to which nonpoint sources must adhere. *Nat'l Wildlife Fed'n v. U.S. Army Corps of Eng'rs*, 92 F.Supp.2d 1072, 1075 (D. Or. 2000) (“Dams have been treated by the courts as a nonpoint source under the Clean Water Act and are not subject to NPDES permit requirements.” (citing *Gorsuch*, 693 F.2d at 175)).

⁸⁵ *See supra* notes 65–70 and accompanying text.

⁸⁶ *See infra* notes 88–90 and accompanying text (explaining elements of section 401).

⁸⁷ Federal Water Pollution Control Act, 33 U.S.C. § 1323 (2000).

⁸⁸ *Id.* § 1341(a)(1).

⁸⁹ *Id.*

license,” 2) the potential for “any discharge into the navigable waters,” and 3) an applicable effluent limitation and/or water quality standard.⁹⁰ Because all dams are subject to water quality standards, and the Federal Power Act⁹¹ requires private hydroelectric dam operators to obtain a license from FERC,⁹² for private dams, the only element to satisfy is the presence of a discharge.

In 2006, the Supreme Court confirmed in *S.D. Warren* what the states had long assumed—that dams do indeed produce discharges within the meaning of the Clean Water Act.⁹³ *S.D. Warren Company*, a paper manufacturer, operates several hydroelectric dams along a 25-mile stretch of the Presumpcot River in Maine to run its paper mill.⁹⁴ In 1999, the company sought to renew the FERC licenses for five of its dams. In doing so, it applied, under protest, for water quality certification from the Maine Department of Environmental Protection (DEP), the state agency charged with Maine’s 401 certifications.⁹⁵ *S.D. Warren* maintained that its dams did not result in a “discharge into” (i.e., did not add anything to) the Presumpcot, and therefore did not trigger section 401.⁹⁶ Nevertheless, the state DEP delivered certifications requiring the company to maintain minimum stream flow and to facilitate migratory fish and eel passage at the dams.⁹⁷ FERC accordingly included these requirements in the dam licenses’ terms and conditions.⁹⁸ Continuing to deny that state certifications were compulsory, *S.D. Warren* appealed to Maine’s administrative appeals tribunal, and then made its way through the

⁹⁰ *Id.* (“Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 1311 [effluent limitations], 1312 [water quality related effluent limitations], 1313 [water quality standards and implementation plans], 1316 [national standards of performance], and 1317 [toxic and pretreatment effluent standards] of this title.” (emphasis added)).

⁹¹ 16 U.S.C. §§ 791a–828c (2006).

⁹² *Id.* § 808. Note, too, that the Federal Power Act imposes an independent duty on FERC to consider harm to fish and their habitat before issuing a license. *Id.* § 797(e) (“In deciding whether to issue any license under this Part for any project, the Commission, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.” (emphasis added)). It also requires FERC to consult with wildlife protection agencies and to include license conditions to protect fish and wildlife. *Id.* § 803(j)(1).

⁹³ See *S.D. Warren v. Me. Bd. of Env’tl. Prot.*, 547 U.S. 370, 387 (2006) (affirming Supreme Judicial Court of Maine’s decision). But see *North Carolina v. Fed. Energy Regulatory Comm’n*, 112 F.3d 1175, 1187 (D.C. Cir. 1997) (holding a “discharge” requires an addition).

⁹⁴ See *S.D. Warren*, 547 U.S. at 373.

⁹⁵ See *id.* at 374–75.

⁹⁶ See *id.* at 375.

⁹⁷ See *id.*

⁹⁸ See *id.*

state courts, losing at every level.⁹⁹ Eventually, the United States Supreme Court granted certiorari to decide the issue once and for all.¹⁰⁰

The case turned on the meaning of the word “discharge.” Writing for a unanimous Court, Justice Souter described the term as “the key to the state certification requirement under section 401.”¹⁰¹ The Clean Water Act defines “discharge” and “discharge of a pollutant” separately. As noted previously,¹⁰² “discharge of a pollutant” means the “addition of any pollutant to navigable waters from a point source.”¹⁰³ The CWA does not define the term “discharge” directly, but notes “[t]he term ‘discharge’” when used without qualification includes a “discharge of [a] pollutant, and . . . [a] discharge of pollutants.”¹⁰⁴ Based on this statutory definition, the Court concluded that the term “‘discharge’ presumably is broader [than ‘discharge of a pollutant’], else superfluous.”¹⁰⁵ Since the statute did not define “discharge,” and the Court concluded that it was not a term of art, the Court interpreted the term “in accordance with its ordinary or natural meaning.”¹⁰⁶

According to the opinion,¹⁰⁷ the common meaning of “discharge,” as applied to water, is a “flowing or issuing out,” a turn of phrase the Court borrowed from Webster’s New International Dictionary.¹⁰⁸ After consulting the dictionary definition, Justice

⁹⁹ *Id.* See also *S.D. Warren Co. v. Me. Dept. of Envtl. Prot.*, No. Civ.A. AP-03-70, 2004 WL 1433675, at *3 (Me. Super. Ct. May 4, 2004) (deferring to Board of Environmental Protection’s interpretation of CWA after concluding that S.D. Warren’s dams caused “discharges” because dams reroute water from its natural course and later add it back to the river), *aff’d sub nom.* *S.D. Warren Co., v. Me. Bd. of Envtl. Prot.*, 868 A.2d 210 (Me. 2005) (same), *aff’d on other grounds*, 547 U.S. 370 (2006).

¹⁰⁰ *S.D. Warren Co. v. Me. Bd. of Envtl. Prot.*, 868 A.2d 210 (Me. 2005), *cert. granted in part*, 546 U.S. 933 (2005) (granting certiorari as to “Question 1” presented by petition); see also *Petition for Writ of Certiorari, S.D. Warren*, 546 U.S. 933 (No. 04-1527), 2005 WL 1170408 (presenting “Question 1” for review, “Does the mere flow of water through an existing dam constitute a ‘discharge’ under Section 401 . . . ?”).

¹⁰¹ *S.D. Warren*, 547 U.S. at 375.

¹⁰² See *supra* note 42 and accompanying text.

¹⁰³ Federal Water Pollution Control Act, 33 U.S.C. § 1362(12) (2000).

¹⁰⁴ *Id.* § 1362(16) (emphasis added).

¹⁰⁵ *S.D. Warren*, 547 U.S. at 376.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 373. Justice Scalia was the only Justice who did not join the opinion in its entirety; he joined as to all but Part III.C, which examined the legislative history of the CWA. Justice Scalia does not believe legislative history is an acceptable tool in statutory interpretation. See, e.g., Michael H. Koby, *The Supreme Court’s Declining Reliance on Legislative History: The Impact of Justice Scalia’s Critique*, 36 HARV. J. ON LEGIS. 369, 373 (1999) (describing Justice Scalia as a “fervent detractor of the reliance on legislative history”).

¹⁰⁸ *S.D. Warren*, 547 U.S. at 376. This broad definition is different from the Maine and other courts’ analysis of why dams caused “discharges.” Those courts determined that when dams rerouted water through their tailraces, the water “lost [its] status as waters of the United States” because the dam operator “exercise[d] private control over the water and then [added] the water back into the river.” *S.D. Warren*, 868 A.2d 210, 216 (Me. 2005) (emphasis omitted). In contrast, the Supreme Court’s definition relies in no way on an “addition,” which is one of the requirements for “discharge of a pollutant” but not

Souter examined the Court's prior water decisions from the past seventy years, and concluded that prior uses of "discharge" were consistent with this understanding.¹⁰⁹ The opinion highlighted Public Utility District No. 1 of Jefferson County v. Washington Department of Ecology (PUD No. 1),¹¹⁰ the only other Supreme Court case focusing on section 401. In that case, although state certification of a hydroelectric dam was at issue, neither the parties nor the Court doubted that water discharges from the dam were discharges within the meaning of section 401.¹¹¹ In fact, the dam operator conceded that the dam would result in at least two possible discharges—dredge and fill material during construction and "the discharge of water at the end of the tailrace after the water has been used to generate electricity."¹¹² In view of the dictionary definition, prior case law, and agency understanding, the S.D. Warren Court decided "discharge" should be read in its ordinary sense.¹¹³ Therefore, the water issuing or flowing out of S.D. Warren's dams' tailraces were in fact discharges, triggering section 401.

Accusing S.D. Warren of "miss[ing] the forest for the trees," the opinion stressed the broad purpose of the Clean Water Act to restore and maintain the Nation's waters and its fishable/swimmable goal, as well as the states' interest in achieving both.¹¹⁴ On the purpose of the Act, the Court emphasized, "the Act does not stop at controlling the 'addition of pollutants,' but deals with 'pollution' generally . . . , which Congress defined to mean 'the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.'"¹¹⁵ Unanimously, the Court thus concluded that

"discharge" in the CWA. Compare 33 U.S.C. § 1362(12) (2000) (defining "discharge of a pollutant"), and *id.* § 1362(16) (defining "discharge").

¹⁰⁹ *S.D. Warren*, 547 U.S. at 376. ("[T]his ordinary sense has consistently been the meaning intended when this Court has used the term in prior water cases." (citing *Marsh v. Or. Natural Res. Def. Council*, 490 U.S. 360, 364 (1989)); *Arizona v. California*, 373 U.S. 546, 619 n.25 (1963) (Harlan, J., dissenting in part); *United States v. Arizona*, 295 U.S. 174, 181–82 (1935)).

¹¹⁰ 511 U.S. 700 (1994).

¹¹¹ *S.D. Warren*, 547 U.S. at 377 (citing PUD No. 1, 511 U.S. at 711).

¹¹² *Id.* (citing PUD No. 1, 511 U.S. at 711). S.D. Warren's dams, like the dams on the lower Snake and Columbia Rivers, are run-of-the-river dams. Unlike impoundment dams, which store water in reservoirs, run-of-the-river dams divert water directly from the river into a penstock, a channel for conveying water to a turbine, where the water gains greater velocity before it runs through the turbine. Once the water runs through the turbine, it enters a tailrace, a channel below the turbine, from which it is released—or "discharged"—into the river downstream of the dam. See Christopher J. Eggert, *The Scope of State Authority Under Section 401 of the Clean Water Act after PUD No. 1 v. Washington Department of Ecology*, 31 WILLAMETTE L. REV. 851, 853–54 (1995) (describing dam workings).

¹¹³ Before the Court dismissed each of S.D. Warren's arguments for construing the term "discharge," the Court drew attention to EPA's and FERC's consistent understanding that releases from hydroelectric dams fall under the plain meaning of "discharge," highlighting an EPA water quality handbook and a recent FERC adjudication. *S.D. Warren*, 547 U.S. at 377 (citing EPA, WATER QUALITY STANDARDS HANDBOOK § 7.6.3, at 7-10 (2d ed. 1994) and FPL Energy Maine Hydro LLC, 111 FERC ¶ 61,104, ¶ 61,505 (2005), 2005 WL 904387).

¹¹⁴ *S.D. Warren*, 547 U.S. at 384–86.

¹¹⁵ *Id.* at 385 (citations omitted).

“limiting river flow and releasing water through turbines” inherently alters water quality and falls within the scope of “pollution.”¹¹⁶ The opinion went on to underscore the states’ “legitimate legislative business” in protecting water quality, as well as the CWA’s cooperative federalism framework, which evidenced Congress’s “respect[] [for] States’ concerns.”¹¹⁷ In order to protect those interests, Congress provided the states with an oversight mechanism in section 401, so that, to quote the Act’s principal architect, Senator Edmund Muskie,¹¹⁸ “[n]o polluter [would] be able to hide behind a Federal license or permit as an excuse for a violation of water quality standards.”¹¹⁹ The Court maintained that interpreting “discharge” in section 401 according to its ordinary meaning safeguarded the states’ interests, which was likely an important consideration for justices with a states’ rights bent, and which meant S.D. Warren’s FERC licenses were subject to the terms and conditions Maine imposed.¹²⁰ The decision left no question regarding the application of section 401 as to private dam operations. But whether section 401 exposes federal dam operations to the certification requirement remains untested.¹²¹

b. The Effect of the State Certification Requirement

State water quality certification is a powerful tool. Section 401 provides the state in which the discharge occurs three choices: it can 1) waive its certification right through inaction for a period of one year, 2) deny certification, or 3) certify the applicant’s activities, imposing terms and conditions as necessary to ensure compliance with state water quality standards.¹²² If a state denies certification,

¹¹⁶ *Id.* In support of this conclusion, the Court relied on S.D. Warren’s own brief, amici briefs, and the Maine Department of Environmental Protection’s findings, which indicated dam operations change water flow, movement, and circulation, which produce less dissolved oxygen (needed for fish respiration), excessive dissolved nitrogen (lethal to fish), decreased habitat (i.e., dry riverbeds), blocked fish passage, and fewer fishing and recreational opportunities. *Id.* at 385–86.

¹¹⁷ *Id.* at 386.

¹¹⁸ For a summary of Senator Muskie’s role in bringing about the Clean Water Act, see Robert F. Blomquist, *In Search of Themis: Toward the Meaning of the Ideal Legislator—Senator Edmund S. Muskie and the Early Development of Modern American Environmental Law, 1965–1968*, 28 WM. & MARY ENVTL. L. & POL’Y REV. 539 (2004).

¹¹⁹ *S.D. Warren*, 547 U.S. at 386 (quoting Senator Muskie).

¹²⁰ *See id.* at 387.

¹²¹ *See infra* Part IV (arguing CWA calls for state certification of federal dams).

¹²² Federal Water Pollution Control Act, 33 U.S.C. § 1341(a)(1) (2000) (“If the State, interstate agency, or Administrator, as the case may be, fails or refuses to act on a request for certification, within a reasonable period of time (which shall not exceed one year) after receipt of such request, the certification requirements of this subsection shall be waived with respect to such Federal application. No license or permit shall be granted until the certification required by this section has been obtained or has been waived as provided in the preceding sentence. No license or permit shall be granted if certification has been denied by the State, interstate agency, or the Administrator, as the case may be.”). As a practical matter, the terms and conditions a state imposes may be sufficiently stringent as to effect a veto.

that is the end of the matter, and no federal permit or license can issue.¹²³ If the state waives certification, the federal agency may issue the license or permit, imposing conditions independent of those the state would have supplied.¹²⁴ If a state certifies, the federal agency must include the terms and conditions of the state certification in the license or permit it issues.¹²⁵ In other words, the certification is no mere “non-binding recommendation;” instead, the state has what effectively “amounts to a veto authority.”¹²⁶ Further, section 401 affords the public a role in making these important decisions on water quality.¹²⁷

i. On the State’s Terms

Since the federal agency issuing the license may not review the basis for, weaken, or set aside the terms and conditions laid out in the state certification,¹²⁸ a state is largely free to impose as stringent of terms and conditions as its water quality standards allow.¹²⁹ Writing

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.* § 1341(d) (“[Certification’s terms and conditions] shall become a condition on any Federal license or permit subject to the provisions of this section.” (emphasis added)); *U.S. Dep’t of the Interior v. Fed. Energy Regulatory Comm’n*, 952 F.2d 538, 548 (D.C. Cir. 1992) (“[T]he license need not expressly adopt the terms and conditions of such certification; they become terms and conditions of the license as a matter of law.”); see Andrew H. Sawyer, *Rock Creek Revisited: State Water Quality Certification of Hydroelectric Projects in California*, 25 PAC. L.J. 973, 995 (1994) (“So long as the state acts within the time limitations set by Clean Water Act, the federal agency issuing the permit or license has no authority to review the basis for a state’s decision to deny certification, or to modify or set aside conditions of certification as unnecessarily stringent.”).

¹²⁶ See Sawyer, *supra* note 125, at 996.

¹²⁷ See *infra* Part III.B.1.b.ii (discussing public participation requirements in section 401).

¹²⁸ 33 U.S.C. § 1341(d) (2000). See also, e.g., *Mobil Oil Corp. v. Kelley*, 426 F.Supp. 230, 234 (D. Ala. 1976) (“[C]ertification under Section 401 is set up as an exclusive p[er]ogative of the state and is not to be reviewed by EPA or any agency of the federal government.”); *Keating v. Fed. Energy Regulatory Comm’n*, 927 F.2d 616, 622–23 (D.C. Cir. 1991) (“We recognize the authority of states to impose express conditions upon the issuance of a particular certification. When states make compliance with specified conditions a prerequisite to the effectiveness of a certification, the federal Government has been prepared to enforce those conditions.”); *United States v. Marathon Dev. Corp.*, 867 F.2d 96, 102 (1st Cir. 1989) (“Permitting states to impose, in the context of a federal law, their own more stringent environmental standards is not unique and has never been held to be irrational or unconstitutional. . . . Far from being irrational, such provisions enable a state to assess its need for stronger environmental policies in the context of its own unique environmental problems.”).

¹²⁹ In fact, in order to avoid a lawsuit in state court, the state must present terms and conditions that will at least satisfy its WQs and any other state water protection laws. 33 U.S.C. § 1341(d) (2000) (stating state certification will set forth requirements necessary to “comply with any applicable effluent limitations and other limitations [under the CWA] . . . and with any other appropriate requirement of State law set forth in such certification.” (emphasis added)). *But cf.* Eggert, *supra* note 112, at 869 (suggesting scope of state laws that may form basis for terms and conditions might be more limited than some state courts indicate). Typically, section 401 claims are raised in state court because state laws are at issue. See, e.g., *Mobil Oil Corp. v. Kelley*, 426 F.Supp. 230, 235 (D. Ala. 1976) (“Since EPA was not intended to exercise any review over State action on certification and since no other federal agency may exercise such review under the National Environmental Policy Act, it follows that the proper forum for

for the majority in PUD No. 1, Justice O'Connor firmly upheld this principle, stating "States may condition certification upon any limitations necessary to ensure compliance with state water quality standards or any other 'appropriate requirement of state law.'"¹³⁰ Justice O'Connor explained that a state may condition certification based on any aspect of a state water quality standard, including maintenance of a designated use, even when the state has not previously set the criteria necessary to protect that use.¹³¹

In PUD No. 1, the Washington Department of Ecology (DOE) had conditioned certification for the City of Tacoma and a local utility district's Elkhorn Hydroelectric Project on minimum stream flows in order to protect the Dosewallips River's designated use of "salmonid migration, rearing, spawning, and harvesting."¹³² However, DOE had not previously set a flow criteria to maintain this designated use.¹³³ The city and utility district argued that DOE could only protect designated uses through requiring compliance with "specific numerical 'criteria,'" and could not condition certification on operating the dam "in a manner [merely] consistent with a designated 'use.'"¹³⁴ Despite the fact that DOE only established the minimum stream flow in response to the 401 application, the Court majority determined that the flow requirement was an acceptable condition of section 401 certification because water quality standards consist of designated uses and criteria, both of which independently require compliance.¹³⁵ As PUD No. 1 affirmed, the scope of a state's authority to set terms and conditions on 401 certifications is extremely broad, and it provides the states' legal basis for preventing water quality degradation.¹³⁶

judicial review of state certification is in state court."); *State Dep't of Ecology v. PUD No. 1*, 849 P.2d 646 (Wash. 1993), *cert. granted*, PUD No. 1 v. Wash. Dep't of Ecology, 510 U.S. 810 (1993) (reviewing state 401 certification decision).

¹³⁰ *PUD No. 1*, 511 U.S. 700, 713-14 (1994) (emphasis added).

¹³¹ *Id.* at 714-15 ("We think the language of § 303 is most naturally read to require that a project be consistent with *both* components, namely the designated use *and* the water quality criteria. Accordingly, under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards."). Justice O'Connor also quickly dismissed the idea that WQSs promulgated pursuant to section 303, a section number unlisted in section 401, were not covered by section 401; she determined that section 301, which section 401 does explicitly mention, incorporated section 303 by reference. *Id.* at 712-13.

¹³² *Id.* at 706 n.1.

¹³³ *See id.* at 709.

¹³⁴ *Id.* at 714.

¹³⁵ *Id.* at 723.

¹³⁶ The dissent by Justice Thomas, joined by Justice Scalia, asserted that the majority's opinion was too sweeping, opining "[i]n the end it is difficult to conceive of a condition that would fall outside a State's § 401(d) authority under the Court's approach." *Id.* at 732 (Thomas, J., dissenting). He declared that the majority's interpretation of section 401 "disrupt[ed] the careful balance between state and federal interests that Congress struck in the Federal Power Act." *Id.* (Thomas, J., dissenting). For an alternative view of the federalism issue, see *supra* notes 117-20 and accompanying text.

ii. The Public's Influence

The public has the opportunity to influence a state's decision to grant or deny certification, as well as the nature of the terms and conditions set forth in the certification. Section 401 requires states to allow public participation in the certification process by establishing procedures for public notice of all applications for certification, and "to the extent the State deems appropriate, [it may set] procedures for public hearings in connection with specific applications."¹³⁷ While the provision does not require particular procedures, and the level at which a state provides opportunities for public participation is discretionary, at a minimum, the state must provide public notice of an application.¹³⁸ Even with no further opportunities for public involvement, public knowledge of an application gives interested parties the chance to influence the process through unsolicited commenting, communications strategies (including press releases, earned media, and editorial board visits), lobbying elected officials, and, perhaps, bringing timely court suits. Depending on the certifying agency's willingness to engage the public, the provision offers a potentially powerful means by which the public can shape a pending certification. Between the state's and the public's ability to shape water quality compliance through state certification, section 401 offers a notable opportunity to influence dam operations.

2. Federal Dams: Polluters In Need of Enforcement

Unlike private dams, federally owned and operated dams do not require FERC licenses, so historically they have not been subject to 401 certification. The resulting lack of oversight has been a mistake, largely unremedied by alternative means of water quality enforcement. This section examines the two primary avenues by

¹³⁷ Federal Water Pollution Control Act, 33 U.S.C. § 1341(a)(1) (2000).

¹³⁸ Significantly, a federal agency may not issue a permit or license unless the state has provided public notice, so completely avoiding the minimal public participation requirements of section 401 is not an option for a state. In *City of Tacoma, Washington v. Federal Energy Regulatory Commission (Tacoma v. FERC)*, the Skokomish Tribe argued that FERC violated the Clean Water Act by issuing two licenses for the Cushman Project, based on a state certification by the Washington Department of Ecology, because the state could offer no evidence that it gave public notice or held a hearing with respect to the certifications. 460 F.3d 53, 67 (D.C. Cir. 2006). After opining that most challenges to 401 certifications should be brought in state court, since states have primacy in "block[ing] . . . local water projects" through stringent state water quality standards, the D.C. Circuit determined that FERC must at least address whether a state certification satisfies the requirements of section 401. *Id.* The court determined FERC must "confirm that the state has facially satisfied the express requirements of section 401." *Id.* at 68. The court concluded that where a state has enacted public participation procedures for the certification process, FERC has the added obligation to "obtain some minimal confirmation" that the state complied with its own procedures because section 401 impliedly requires a state to comply with the procedures it enacts. *Id.* In response to FERC's argument that the state was "no longer troubled by the issue," the court found the point to be "without legal significance," but decided not to vacate the licenses on other grounds. *Id.*

which the public has attempted to ensure federal dam compliance with the Clean Water Act: section 313 of the CWA and the ESA.

a. Section 313: Federal Duty to Comply with Clean Water Act?

Section 313 compels federal agencies with jurisdiction over a facility or engaged in an activity “resulting, or which may result, in the discharge or runoff of pollutants” to comply with all water pollution control and abatement laws “in the same manner, and to the same extent as any nongovernmental entity.”¹³⁹ Although it might seem as though applying this provision would be straightforward, it has proven largely useless in the federal dam context.¹⁴⁰ As described previously,¹⁴¹ water quality enforcement for private dams has relied on meeting the elements of section 401. Unlike private dams, federally owned and operated dams do not require FERC licenses,¹⁴² so they have not been subjected to the same state oversight. Instead, section 313 litigation has focused on attempting to directly enforce water quality standards through altered dam operations or dam removal, a strategy that has flatly failed.

Unlike in the section 401 context, in which a court defers to the state’s certification or veto when attempting to enforce water quality standards and the antidegradation policy against federal agencies, through section 313, plaintiffs confront the reality that courts afford great deference to a federal agency’s technical expertise and judgment.¹⁴³ For example, as long as the United States Army Corps of Engineers (Corps) “articulate[s] a rational connection between the fact found and the conclusions made,” a reviewing court will not find the choice of dam operations arbitrary and capricious.¹⁴⁴ In *National Wildlife Federation v. United States Army Corps of Engineers*, environmental plaintiffs claimed that the Corps’s operation of the four lower Snake River dams violated water quality standards because they caused excessive water temperatures.¹⁴⁵ The Corps argued that, although the dams’ construction and existence

¹³⁹ 33 U.S.C. § 1323(a) (2000).

¹⁴⁰ Section 313 has been useful in other contexts though, like curtailing discharges from mining operations. *See, e.g., Hells Canyon Pres. Council v. Haines*, No. CV 05-1057-PK, 2006 U.S. Dist. LEXIS 54884, at *16 (D. Or. Aug. 4, 2006) (holding “Forest Service’s decision to allow new mining operations on § 303(d)-listed streams arbitrary and capricious”).

¹⁴¹ *See supra* Part III.B.1.

¹⁴² *See* Michael C. Blumm & Viki A. Nadol, *The Decline of the Hydropower Czar and the Rise of Agency Pluralism in Hydroelectric Licensing*, 26 COLUM. J. ENVTL. L. 81, 85 (2001) (“The FPA, as implemented by FERC, governs the siting and operation of non-federal hydroelectric projects.”).

¹⁴³ *See, e.g., NWF v. Corps*, 384 F.3d 1163, 1174 (9th Cir. 2004) (citing *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983)). In *Baltimore Gas & Electric Co.*, the Supreme Court stated, “[w]hen examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.” 462 U.S. at 103.

¹⁴⁴ *NWF v. Corps*, 384 F.3d at 1170 (citations omitted).

¹⁴⁵ *Id.* at 1168–69.

contributed to water temperatures that exceeded the state of Washington's water quality standards, the federal agency had implemented all the operational changes it could—short of dam removal—that would decrease water temperature.¹⁴⁶ The Ninth Circuit accepted as reasonable the Corps's contention that the existence of the dams, not the discretionary operation of the dams, caused water quality violations.¹⁴⁷ Because the Corps convinced the court that 1) no additional operational changes would reduce the water temperature, 2) dam removal required congressional authorization, and 3) the agency acted in good faith, the court declined to hold the Corps in violation of the CWA for failing to meet Washington's water quality standards.¹⁴⁸ As a result of this highly (perhaps unnecessarily) deferential review,¹⁴⁹ federal dams in the West essentially have been exempted from complying with water quality standards.

Conversely, when a state certifies or fails to certify agency actions through section 401, the state certification's terms and conditions or veto is the beneficiary of a reviewing court's deference. In *S.D. Warren*, the Supreme Court made clear that section 401 preserves the state's legitimate interest in protecting water quality by giving it an oversight role, so that “[n]o polluter will be able to hide behind a Federal license or permit as an excuse for a violation of water quality standards.”¹⁵⁰ PUD No. 1 advanced the idea by recognizing broad state authority over the terms and conditions that are necessary to protect and maintain state water quality standards.¹⁵¹ Consequently, in the section 401 context, the deference a court affords a state in certifying that a private dam complies with state water quality standards is great. In contrast, in the section 313 context, because federal agencies have discretion over dam operations and courts afford agencies great deference, federal dams are effectively exempt from a state's water quality standards. The

¹⁴⁶ *Id.* at 1169.

¹⁴⁷ *Id.* at 1178.

¹⁴⁸ *Id.* at 1178–79. In a fairly scathing dissent, Judge McKeown wrote the majority's improper framing of the case “as a choice between compliance with the [CWA] and tearing down the dams along the Snake and Columbia Rivers” dictated its result, but that dam removal was a “lighting rod [the court] need not strike” because “[c]ompliance with the CWA and the continued presence of the dams are not mutually exclusive options.” *Id.* at 1180–81 (McKeown, J., dissenting). He indicated that the “actual legal issue” was whether the record supported the Corps's “decision that the *sole* cause of temperature exceedences [was] the existence—and not the operation—of the dams,” and that because the Corps did not provide “operational alternatives aimed at CWA compliance,” he would have held that the Corps's decision did not comply with the Administrative Procedure Act. *Id.* at 1180–81 (McKeown, J., dissenting).

¹⁴⁹ See Blumm et al., *supra* note 30, at 784 n.425 (noting that the Ninth Circuit's decision effects an “implicit judicial exemption from the CWA, despite the fact that the statute contains an express presidential exemption for water projects, 33 U.S.C. § 1323(a) (2000), which might have been interpreted to be the exclusive means of relief”).

¹⁵⁰ *S.D. Warren*, 547 U.S. 370, 386 (2006) (quoting Senator Muskie).

¹⁵¹ See *PUD No. 1*, 511 U.S. 700, 714 (1994).

difference in treatment based on ownership is stark, and it has led to manifestly uneven Clean Water Act enforcement.

b. The Endangered Species Act: Roundabout Water Quality Enforcement

Since the Clean Water Act has proven largely useless in enforcing water quality standards at federal dams, the public has employed the Endangered Species Act to achieve a kind of water quality enforcement.¹⁵² While successful ESA litigation does not result in strict adherence to state water quality standards, it achieves a similar result because water quality standards are set, in part, to protect aquatic species that inhabit a water body, including endangered species.¹⁵³ The ESA requires at least the level of water quality necessary to achieve an endangered species's "conservation,"¹⁵⁴ so to some extent, ESA litigation regarding salmon is about enforcing water quality standards.¹⁵⁵ After providing a brief overview of the ESA's consultation requirement and take prohibition, this section examines ESA litigation on salmon and dams and identifies the considerable limits to this approach in achieving adequate water quality.

i. Overview of the Endangered Species Act: Consultation and the Take Prohibition

The Endangered Species Act's purpose is to conserve endangered and threatened species and the ecosystems on which they depend.¹⁵⁶ The ESA defines "conserve" as "to use and the use of all methods and procedures which are necessary to bring any endangered or threatened species to the point at which [ESA protection is] no longer necessary."¹⁵⁷ In other words, the ESA requires both survival and recovery of a listed species.¹⁵⁸ To that end, Congress imposed

¹⁵² See *infra* Part III.B.2.b.ii (describing ESA litigation regarding dams and salmon).

¹⁵³ See *supra* Part II.B for explanation of water quality standards and how they are set.

¹⁵⁴ See *infra* note 157 and accompanying text. As the Supreme Court made clear in *PUD No. 1*, water quality includes the amount and velocity of water needed to protect designated uses of a water body, like salmon migration and spawning. *PUD No. 1*, 511 U.S. 700, 719 (1994) ("In many cases, water quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses . . . [such] as a fishery.").

¹⁵⁵ Of course, this litigation also seeks to limit the direct harm dams do to salmon, such as juvenile mortality at turbines and insufficient adult passage.

¹⁵⁶ Endangered Species Act of 1973, 16 U.S.C. § 1531(b) (2006).

¹⁵⁷ *Id.* § 1532(3) (defining "conserve," "conserving," and "conservation" the same).

¹⁵⁸ *Sierra Club v. U.S. Fish & Wildlife Serv.*, 245 F.3d 434, 441–42 (5th Cir. 2001) ("'Conservation' is a much broader concept than mere survival. The ESA's definition of 'conservation' speaks to the recovery of a threatened or endangered species."); *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004) ("[T]he ESA was enacted not merely to forestall the extinction of species (i.e., promote a species survival), but to allow a species to recover to the point where it may be delisted.").

substantive and procedural requirements on federal agencies. Substantively, section 7—which applies only to federal agencies, licensees, and permittees—requires all federal agencies to use their authority “in furtherance of the . . . conservation of endangered species and threatened species . . . ;”¹⁵⁹ and it prohibits any action that is likely to jeopardize a species or its critical habitat.¹⁶⁰ Procedurally, in order to determine whether an agency action—including how an agency operates dams—will jeopardize a listed species, the action agency must consult with NOAA.¹⁶¹ When formal consultation is necessary,¹⁶² the consultation agency must issue a biological opinion (BiOp).¹⁶³ If NOAA concludes that the agency’s action will result in jeopardy to the species or adverse modification to or destruction of critical habitat, the BiOp must provide “reasonable and prudent alternatives” (RPAs) to the proposed action that will avoid that consequence.¹⁶⁴

When a BiOp determines that no jeopardy or adverse modification will result from the agency’s action, or when it provides reasonable and prudent alternatives, NOAA must also issue an incidental take statement (ITS) if the agency authorizes any take at all, specifying the terms and conditions under which the action agency may take a species.¹⁶⁵ Section 9 of the ESA—the take prohibition—is generally applicable,¹⁶⁶ stating that it is “unlawful . . .

¹⁵⁹ 16 U.S.C. § 1536(a)(1) (2006).

¹⁶⁰ *Id.* § 1536(a)(2). Critical habitat is “the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection” *Id.* § 1532(5)(A). Jeopardy is “action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers or distribution of that species.” 50 C.F.R. § 402.02 ().

¹⁶¹ 16 U.S.C. § 1536(a)–(d) (2006). NOAA Fisheries, in the Department of Commerce, is the consultation agency for listed marine and anadromous species, while the Fish and Wildlife Service, in the Department of the Interior, consults on listed terrestrial and inland aquatic species. This Comment refers to NOAA because it is the agency that deals with Pacific salmon.

¹⁶² Formal consultation is necessary when informal consultation determines a federal action is likely to adversely affect a listed species. For helpful flowcharts on the informal and formal consultations processes, see U.S. FISH & WILDLIFE SERV. & NAT’L MARINE FISHERIES SERV., ENDANGERED SPECIES CONSULTATION HANDBOOK: PROCEDURES FOR CONDUCTING SECTION 7 CONSULTATIONS AND CONFERENCES 3-3, 4-3 (1998), available at http://www.nmfs.noaa.gov/pr/pdfs/laws/esa_section7_handbook.pdf.

¹⁶³ 16 U.S.C. § 1536(b)(3)(A) (2006).

¹⁶⁴ *Id.*; 50 C.F.R. § 402.02 (2007) (“Reasonable and prudent alternatives” are “alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction, that is economically and technologically feasible, and that the Director believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat.”).

¹⁶⁵ 16 U.S.C. § 1536(b)(4) (2006). In appropriate circumstances, an ITS may permit a party that is not a federal agency or applicant to engage in limited take if the ITS clearly contemplates the action. *Ramsey v. Kantor*, 96 F.3d 434, 442 (9th Cir. 1996).

¹⁶⁶ Courts have held the take prohibition applies with equal force to federal agencies as it does to private actors. *See, e.g., Defenders of Wildlife v. EPA*, 882 F.2d 1294, 1303 (8th Cir. 1989)

to take [any listed species].”¹⁶⁷ Although the term “take” has been construed broadly to include both direct harm to a species and significant habitat destruction,¹⁶⁸ the ESA provides a safety valve to this expansive interpretation of take through incidental take statements.¹⁶⁹ An ITS is a safe harbor; so long as the agency complies with its terms and conditions, the ITS protects the agency and its employees from criminal and civil liability for the taking of a species.¹⁷⁰ To gain exemption from the take prohibition through an ITS, the take must be incidental to, and not the purpose of, the otherwise lawful action.¹⁷¹ In the ITS, the consultation agency must specify 1) the effect of the incidental take on the species, 2) reasonable and prudent alternatives needed to minimize that effect, 3) terms and conditions with which the action agency must comply, and 4) procedures for handling and disposing of the individual members of the species actually taken.¹⁷²

ii. Using the ESA to Enforce Water Quality Standards: An Imperfect Approach

Even without section 401 certification, BiOps should ensure dam operators’ compliance with water quality standards.¹⁷³ NOAA conducts section 7 consultation when EPA approves states’ water

(determining EPA registration of pesticides was a take because the pesticides were killing endangered species).

¹⁶⁷ 16 U.S.C. § 1538(a)(1)(B) (2006). “[T]ake means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” *Id.* § 1532(19).

¹⁶⁸ In *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, the Supreme Court deferred to the Department of the Interior’s broad construal of the term “harm,” used in an exclusive list in the statutory definition of “take,” to include direct harm to the species as well as indirect harm through habitat destruction and degradation. 515 U.S. 687, 703 (1995). Interior’s regulation states, “[h]arm in the definition of ‘take’ in the Act means an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. § 17.3 (2007).

¹⁶⁹ Section 10 contains a similar exemption—called an incidental take permit—for nonfederal actions resulting in incidental take, although the process for obtaining one is much more onerous than the process for obtaining an incidental take statement. 16 U.S.C. § 1539(a) (2006).

¹⁷⁰ *Id.* § 1536(o)(2); 50 C.F.R. § 402.14(i)(5) (2007) (“Any taking which is subject to [an ITS] and which is in compliance with the terms and conditions of that statement is not a prohibited taking under the Act, and no other authorization or permit under the Act is required.”). Section 11 authorizes criminal and civil penalties for take of a listed species. 16 U.S.C. § 1540 (2006).

¹⁷¹ 50 C.F.R. § 402.02 (2007) (“‘Incidental take’ refers to takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant.”).

¹⁷² 16 U.S.C. § 1536(b)(4) (2006); 50 C.F.R. § 402.14(i) (2007). “The measures may not alter the project’s scope, but should be ‘minor changes’ to the project aimed at minimizing take, as required by § 7 of the ESA.” *Or. Natural Res. Council v. Allen*, 476 F.3d 1031, 1039 n.7 (9th Cir. 2007) (explaining 50 C.F.R. § 402.14(i)(2)).

¹⁷³ See *supra* Part III.B.2.b.i and accompanying text (describing ESA’s consultation procedure).

quality standards,¹⁷⁴ so one would think NOAA's consultation on other agencies' activities, like the Corps's dam operations, would result in a similar level of water quality protection. Ultimately, water quality standards seek to protect uses, including maintaining habitat needed by aquatic endangered species.¹⁷⁵ Since a federal agency's actions may not jeopardize a listed species's survival or recovery, regardless of whether the action on which NOAA consults directly implicates the Clean Water Act and the WQSs it requires, a BiOp's RPAs ought to achieve water quality protective enough to conserve an endangered species and its habitat, much like a WQS.¹⁷⁶ However, the dam operations prescribed by BiOps have not always resulted in the level of water quality protection they would if they were required to incorporate states' water quality standards because courts have deferred to federal agencies in Clean Water Act actions.¹⁷⁷

In response, environmentalists have attempted to achieve a level of water quality indirectly through Endangered Species Act litigation focused on improving dam operations that will ensure endangered species' conservation.¹⁷⁸ Because dam operations are federal actions that may affect listed species, federal dam operators are subject to section 7 consultation, which results in BiOps on hydropower operations.¹⁷⁹ In the Columbia Basin, salmon advocates have repeatedly challenged NOAA's BiOps as violating the ESA, and they have usually won.¹⁸⁰ As a result of this litigation, they have achieved a measure of improved water quality through, for example, holding

¹⁷⁴ Memorandum of Agreement Between the Environmental Protection Agency, Fish and Wildlife Service, and National Marine Fisheries Service Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act, 66 Fed. Reg. 11,202, 11,202 (Feb. 22, 2001).

¹⁷⁵ See *PUD No.1*, 511 U.S. 700, 713–20 (1994) (holding Washington could impose minimum stream flow requirements necessary to protect salmonid habitat on 401 certification to maintain designated use).

¹⁷⁶ The goal of the reasonable and prudent alternatives is to avoid jeopardy and destruction or adverse modification of critical habitat. 16 U.S.C. § 1536(b)(3)(A) (2006); 50 C.F.R. § 402.02 (2007). For definitions of “jeopardy” and “reasonable and prudent alternatives,” see notes 160–64 and accompanying text.

¹⁷⁷ See *supra* Part III.B.2.a (describing attempts to use section 313 of the CWA to enforce WQS's and courts' willingness to allow lesser water quality in the federal dam context).

¹⁷⁸ While these cases have not explicitly addressed water quality standards—focusing instead on consultation problems like flawed jeopardy analytical frameworks, insufficient reasonable and prudent alternatives, uncertain mitigation measures, and improper environmental baselines—at least one of the plaintiffs' implicit purposes is to achieve greater water quality. This is evident through challenges to augment flow, which improves degraded water quality resulting from unnatural temperature and dissolved gas levels. See Blumm et al., *supra* note 30, at 734–63, 774–94 (describing litigation over the FCRPS BiOps); *id.* at 795–97 (describing challenge to flow regime); *id.* at 730–32 (describing benefits of flow augmentation). Additionally, salmon advocates have encouraged cold-water releases from reservoirs in the Columbia Basin, which address the temperature needs of salmon. See *infra* note 185 and accompanying text.

¹⁷⁹ See *supra* Part III.B.2.b.i (outlining implementation of ESA).

¹⁸⁰ See generally Blumm et al., *supra* note 30, at 734–97 (describing BiOp litigation in detail).

the agencies' feet to the fire with regard to increased flow,¹⁸¹ which aids not only in juvenile salmon's downstream migration, but also improves water temperature.¹⁸² Additionally, the listings have forced releases from the Dworshak Dam on the Clearwater River in Idaho, which have cooled summer temperatures in the Lower Snake River.¹⁸³ However, this indirect mechanism of water quality enforcement is a poor substitute for directly enforcing WQSs through Clean Water Act litigation or requiring WQS compliance through section 401 certification because it 1) does not necessarily result in the same level of protection as a state WQS,¹⁸⁴ and 2) can be employed only when there is an endangered or threatened species present.¹⁸⁵ Still, the Endangered Species Act does offer a means for

¹⁸¹ Indeed, the government's failure to provide adequate flow for salmon helped prompt petitions to list runs of Columbia Basin salmon in the first place. Michael C. Blumm, *Beyond the Parity Promise: Struggling to Save Columbia Basin Salmon in the Mid-1990s*, 27 ENVTL. L. 21, 38–39 (1997) [hereinafter Blumm, *Beyond the Parity Promise*]. Litigation over NMFS's first FCRPS BiOp (the 1993 BiOp), which Judge Malcolm Marsh determined "cried out for a major overhaul," led to changes in the 1994–1998 BiOp, which called for increased spill and flow in its RPA. *Idaho Dep't of Fish & Game v. Nat'l Marine Fisheries Serv.*, 850 F.Supp 886, 900 (D. Or. 1994); Blumm, *Beyond the Parity Promise, supra* at 62–63. While that and subsequent BiOps established flow "targets," rather than enforceable requirements, there is little question that litigation has improved flow in the basin overall, even if not at optimal levels for salmon. *See, e.g.,* Blumm, *Beyond the Parity Promise, supra* at 29 (describing settlement assuring "flow and spill measures called for by the NMFS plan would be satisfied"); *id.* at 85 (noting discretion flow targets afford agencies). *But see,* Blumm et al., *supra* note 30, at 731 (indicating "the Columbia Basin hydropower BiOps have secured only minimal flow augmentation, often subject to emergency exceptions that can curtail implementation"); *id.* 795–97 (describing injunction ordering spill but not flow).

¹⁸² *See* Blumm et al., *supra* note 30, at 730 n.114 (describing benefits of increased flow); Blumm, *Beyond the Parity Promise, supra* note 181, at 30–31 (same).

¹⁸³ Cold water releases from Dworshak Reservoir help cool the Snake River downstream of the reservoir where there are few thermal refuges (i.e., cold-water tributaries); in turn, the cooler water aids adult and juvenile salmon migration. MANAGING THE COLUMBIA RIVER, *supra* note 15, at 84; TAMI S. CLABOUGH ET AL., ASSOCIATIONS BETWEEN ADULT SALMON AND STEELHEAD BODY TEMPERATURE DURING UPSTREAM MIGRATION AND ESTIMATED WATER TEMPERATURES IN LOWER GRANITE RESERVOIR DURING COLD WATER RELEASES FROM DWORSHAK RESERVOIR 1, 34–36 (2004); EPA, A Retrospective Analysis of Water Temperature Management in the Lower Snake River Using Coldwater Release from Dworshak Dam (2000), <http://yosemite.epa.gov/r10/water.nsf/59f3b8c4fc8c923988256b580060f5d9/0b791d15aa01034988256a7300605adf?OpenDocument> (last visited Oct. 14, 2008) ("[R]elease of cold water from Dworshak Dam reduces water temperatures in the Lower Snake River during the summer and early fall months. Lower water temperatures during this period may be desirable, even essential, for both juveniles and adult migrating salmon."). There is some evidence that cold water releases prior to mid-July inhibit the growth of fall chinook juveniles and disrupts their downstream migration, but the cooler temperatures are beneficial to the runs on balance. *Id.*

¹⁸⁴ For example, the Snake River remains section 303(d)-listed for temperature. *See supra* notes 10–12 and accompanying text. That the Columbia and Snake Rivers do not attain state water quality standards as a result of BiOp litigation is implied anecdotally through the very existence of *NWF v. Corps*, the complaint for which National Wildlife Federation filed several years after salmon advocates started winning FCRPS BiOp cases. *See supra* Part III.B.2.a (discussing attempt to enforce water quality standards in the Columbia Basin in *NWF v. Corps*).

¹⁸⁵ Endangered Species Act of 1973, 16 U.S.C. §§ 1536(a)(2), 1533(a) (2006). While the strategy described in Parts IV and V is susceptible to the same criticism that it depends on the presence of a listed

effectively achieving water quality standards: the incidental take statement.

IV. INCIDENTAL TAKE STATEMENTS: A PERMIT BY ANY OTHER NAME

What's in a name? That which we call a rose

By any other name would smell as sweet.¹⁸⁶

With private dams subject to potentially rigorous state oversight and federal dams left largely unchecked, securing the same sort of certification for federal dams as there is for private dams is necessary if dam-caused pollution is to meet water quality standards, especially on “federalized” stream reaches like the lower Columbia and Snake Rivers. This oversight is necessary not only because federal dams impair water quality in these rivers,¹⁸⁷ but also because the divergent approaches to water quality enforcement is conceptually dissatisfying. Subjecting private dams to section 401 certification while exempting federal dams makes no sense from a water quality perspective. Whether it is the Corps or a private utility operating a dam, all dams produce discharges and the attendant mischief to water quality, like severe temperature and dissolved gas fluctuations.¹⁸⁸ In other words, dam ownership has no effect on the notion of discharge or its adverse effects on water quality. Since all dams are subject to water quality standards and all dams cause discharges, all dams should be subject to section 401 if they meet its federal license or permit requirement.¹⁸⁹ The requirement of a federal license or permit has been the stumbling block as to federal dams, but the courts

species, it would expand actual compliance with water quality standards to any river with federal dams where listed species exist.

¹⁸⁶ WILLIAM SHAKESPEARE, *THE TRAGEDY OF ROMEO AND JULIET* act 2, sc. 2.

¹⁸⁷ See *supra* notes 4–14 and accompanying text (explaining dams’ effects on water quality in Columbia Basin).

¹⁸⁸ See *supra* note 4 and accompanying text.

¹⁸⁹ One should note that the Supreme Court’s decision in *S.D. Warren* did not add anything to this analysis; it merely confirmed that dams cause discharges, something many states already assumed as evidenced through the issuance of section 401 certifications in the private dam context. See *S.D. Warren*, 547 U.S. 370, 373 (2006). What *S.D. Warren* did do was raise the possibility that section 401’s universe of application might be broader than many had previously thought. See, e.g., *Or. Natural Desert Ass’n v. U.S. Forest Serv.*, No. 07-634-AS, findings and recommendations at 8–10 (D. Or. Nov. 30, 2007) (collaterally estopping plaintiffs’ claim that *S.D. Warren*’s definition of “discharge” as a flowing or issuing out encompassed runoff from grazing), *adopted by Or. Natural Desert Ass’n v. U.S. Forest Serv.*, No. 07-634-AS, slip op. at 3 (D. Or. Jan. 10, 2008); *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 963–64 (2006) (opining that *S.D. Warren* does not require states to regulate water withdrawals). While attempts to broaden the scope of section 401 jurisdiction have been unsuccessful thus far, the case for state certification of federal dams is much more straightforward than in the grazing and mining contexts because the Supreme Court already spoke on the issue of dams. The Court’s definitive answer to the discharge question should embolden environmental litigators to explore the use of section 401 in the federal dams context, which is, ultimately, the goal of this Comment.

provided the answer long ago through their construal of incidental take statements.¹⁹⁰

Since the ESA remains the most powerful mechanism salmon advocates have to cabin the harm done to water quality by federal dams, it is appropriate to examine the products of ESA consultation to determine whether there may be a federal “license or permit” that would necessitate section 401 certification.¹⁹¹ Fortunately, a license or permit is readily found in the incidental take statement itself, which is embedded in the BiOp. While Congress confused matters slightly by providing for both incidental take statements and incidental take permits in the ESA,¹⁹² the two produce the same result—take that would otherwise be illegal. What matters is how the incidental take statement functions, not what it is called.

An incidental take statement is plainly a permit or license. The Supreme Court’s favorite dictionary for Clean Water Act cases, Webster’s New International Dictionary,¹⁹³ defines a permit as “[a] written license or permission given by a person . . . having authority.”¹⁹⁴ The dictionary provides several definitions for license, the most appropriate being “a formal permission from the proper authorities to perform certain acts . . . which without such permission would be illegal.”¹⁹⁵ An ITS is a permit or license by the plain meaning of these words because an ITS allows a federal agency to take an endangered species. Without an ITS, a federal agency cannot lawfully take an endangered species; but through an ITS, the

¹⁹⁰ See *infra* notes 196–201 (discussing courts’ interpretation of ITSs); see also *supra* Part III.B.2.b.ii (describing incidental take statements).

¹⁹¹ The Clean Water Act does not define “license or permit.”

¹⁹² Endangered Species Act of 1973, 16 U.S.C. § 1536(b)(4) (2006) (incidental take statement); *id.* § 1539(a) (incidental take permit (or ITP)). ITSs and ITPs function in the same way—they allow take that will not jeopardize a species. The major difference is that ITSs apply to federal agencies, permittees, and licensees, while ITPs apply to private landowners who, except that their otherwise lawful activities result in the take of endangered species, would not need a federal permit of any variety. Congress added the ITP provision to provide a safe harbor from ESA liability for this latter group. See H.R. REP. NO. 97-567, at 31 (1982), reprinted in 1982 U.S.C.C.A.N. 2807, 2831 (“This provision addresses the concerns of private landowners who are faced with having otherwise lawful actions not requiring federal permits prevented by the Section 9 prohibitions against taking.”).

¹⁹³ WEBSTER’S NEW INTERNATIONAL DICTIONARY (2d ed. 1960) [hereinafter WEBSTER’S]; see *S.D. Warren*, 547 U.S. at 376 (illustrating Justice Souter’s reliance on Webster’s definition for expansive interpretation of term “discharge”); *Rapanos v. United States*, 547 U.S. 714, 716 (2006) (illustrating that, one month after *S.D. Warren*, Justice Scalia narrowly interpreted “waters of the United States” using Webster’s definition of “waters”); DAVID A. SCHULTZ & CHRISTOPHER E. SMITH, THE JURISPRUDENTIAL VISION OF JUSTICE ANTONIN SCALIA 71–72 (1996) (questioning the wisdom and consistency of Justice Scalia’s dictionary usage in statutory interpretation). Like the term “discharge” at issue in *S.D. Warren* and “waters” at issue in *Rapanos*, the Clean Water Act does not define “license or permit.” Fortunately, dictionaries, the Administrative Procedure Act, and Justice Scalia’s own opinions limit the license a judge can take in interpreting “license or permit.” Note that the dictionary quoted is the same edition but a different publication year than the 1954 copy used by the Supreme Court.

¹⁹⁴ WEBSTER’S, *supra* note 193, at 1824.

¹⁹⁵ *Id.* at 1425. Similarly, according to *Black’s Law Dictionary*, a “permit” is a “certificate evidencing permission; a license”; a “license” is “a permission, [usually] revocable, to commit some act that would otherwise be unlawful.” BLACK’S LAW DICTIONARY 1176, 938 (8th ed. 2004).

consultation agency can give permission to an action agency to take a certain number of a species, incidental to the agency's actions and pursuant to the ITS's terms and conditions. In other words, agency actions that harm or kill an endangered species but for the ITS are illegal. Hence, ITSs satisfy the ordinary understanding of permits or licenses. Further, both Supreme Court and lower court cases confirm this understanding.

For over a decade, the courts have concluded that ITSs are permits or licenses. Most notably, in *Bennett v. Spear*,¹⁹⁶ the Supreme Court squarely addressed the issue.¹⁹⁷ The case involved ranchers' and irrigation districts' allegation that a BiOp's imposition of minimum water levels in a reservoir to protect two species of endangered fish would unlawfully reduce the amount of water available to them for irrigation.¹⁹⁸ Deciding that the plaintiffs satisfied the injury element of standing, Justice Scalia determined "the Biological Opinion's Incidental Take Statement constitutes a permit authorizing the action agency to 'take' the endangered or threatened species as long as it respects the Service's 'terms and conditions.'"¹⁹⁹ But even before the Supreme Court spoke on the issue, lower courts had concluded ITSs were permits. For example, in *Ramsey v. Kantor*,²⁰⁰ the Ninth Circuit Court of Appeals concluded "the incidental take statement . . . is functionally equivalent to a permit because the activity in question would, for all practical purposes, be prohibited but for the incidental take statement."²⁰¹

¹⁹⁶ 520 U.S. 154 (1997). *Bennett v. Spear* is most well known for its explication of the zone-of-interests test. *Id.* at 162–63.

¹⁹⁷ *Id.* at 170.

¹⁹⁸ *Id.* at 159–60.

¹⁹⁹ *Id.* at 170 (emphasis added). Justice Scalia pointed out that, although an action agency can ignore a BiOp and continue with the proposed action, "it does so at its own peril" due to the consequent criminal and civil penalties. *Id.* Further, he highlighted that the consultation agency is keenly aware of the ultimatum: "The Incidental Take Statement at issue in the present case begins by instructing the reader that any taking of a listed species is prohibited unless 'such taking is in compliance with this incidental take statement,' and warning that '[t]he measures described below are nondiscretionary, and must be taken by [the Bureau of Reclamation].'" *Id.* (quoting U.S. FISH & WILDLIFE SERV., U.S. DEP'T OF THE INTERIOR, FORMAL CONSULTATION ON THE EFFECTS OF THE LONG-TERM OPERATION OF THE KLAMATH PROJECT ON THE LOST RIVER SUCKER, SHORTNOSE SUCKER, BALD EAGLE, AND AMERICAN PEREGRINE FALCON (1992), available at *Bennett v. Plenert*, 1996 WL 33414150 (U.S.), at *84a (U.S. May 23, 1996)).

²⁰⁰ 96 F.3d 434 (9th Cir. 1996).

²⁰¹ *Id.* at 444 (emphasis added). Courts routinely cite *Bennett v. Spear* and *Ramsey v. Kantor* for the proposition that ITSs are permits. *See, e.g.*, *Cal. Sportfishing Prot. Alliance v. Fed. Energy Regulatory Comm'n*, 472 F.3d 593, 596 (9th Cir. 2006) ("The 'incidental take' statement constitutes a permit for the agency or licensee to take endangered species, so long as they implement the reasonable and prudent alternatives and comply with the conditions of the incidental take statement."); *Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fisheries Serv. (PCFFA v. NMFS)*, 482 F.Supp.2d 1248, 1263 (W.D. Wash. 2007) (same). *But cf.* *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, No. C04-04324 WHA, 2005 WL 2000928, at *12 (N.D. Cal. Aug. 19, 2005) (distinguishing section 4(d) regulations required at species listing from ITS on basis of permit status; "*Ramsey* held that the incidental take statement was the functional equivalent of a permit. . . . This order holds, in contrast, that a Section 4(d) rule is not the functional equivalent of a permit. The issuance of a permit under the ESA

Consequently, there is little question that an ITS is, in fact, a “permit or license” within the meaning of section 401 of the CWA.

The permit status of ITSs means that section 401 certification is necessary for federal dams.²⁰² To reiterate, before section 401 applies, three elements must be satisfied: 1) an applicable water quality standard, 2) a discharge, and 3) a federal permit or license. An ITS satisfies the final element, triggering 401 certification. Currently, no federal dam has 401 certification, meaning that every ITS for a dam that NOAA or the Fish and Wildlife Service has issued, and under which the U.S. Army Corps of Engineers or Bureau of Reclamation operates, is illegal. The ramifications are obviously considerable, but the language of section 401 is clear: “No license or permit shall be granted until the certification required by this section has been obtained or has been waived”²⁰³ Moreover, section 313’s directive that federal agencies are subject to the same water protection laws as nongovernmental entities, and the CWA’s intent that states retain broad authority to prevent water quality impairment, buttress the claim that the federal government has been remiss in failing to secure section 401 certification for its hydroelectric dams.²⁰⁴

V. ENSURING COMPLIANCE WITH THE WATER QUALITY STANDARD FOR TEMPERATURE IN THE COLUMBIA BASIN: STATE CERTIFICATION OF FEDERAL DAMS

If incidental take statements are indeed permits or licenses, and there is every indication that they are, NOAA (and the Corps) have violated the Clean Water Act by not obtaining section 401 certifications prior to issuing (and operating under) ITSs for past Federal Columbia River Power System (FCRPS) BiOps. Consistent

entails a wholly different set of procedures than the issuance of a Section 4(d) rule. *Compare* 16 U.S.C. 1533(d) *with* 16 U.S.C. 1539(a).”).

Further, the consultation agencies consider ITSs to be permits or licenses. For example, in *PCFFA v. NMFS*, NMFS argued that “an ITS authorizing a take of endangered species is tantamount to a license for the purposes of the APA.” 482 F. Supp. 2d at 1263. Under the Administrative Procedure Act (APA), a license “includes the whole or a part of an *agency permit*, certificate, approval, registration, charter, membership, statutory exemption or *other form of permission*.” 5 U.S.C. § 551(8) (2006) (emphasis added). While the definition is circular as to “permit,” the “permission” language is consistent with the analysis in the text accompanying this footnote. Finally, NMFS’s implementing regulations for section 7 consultation suggest that an ITS is a permit or license, as well. In explaining that take in compliance with an ITS’s terms and conditions is not prohibited, the regulation continues “no other authorization or permit under the [ESA] is required.” 50 C.F.R. § 402.14(i)(5) (2007). Seemingly, in using the word “other,” the provision is referencing the ITS, indicating the agency considers the ITS to be a permit itself.

²⁰² In dicta, Justice O’Connor intimated as much in *PUD No. 1* when she wrote “[w]e are unwilling to read implied limitations into § 401” because the certification requirement applied generally to permitting and licensing schemes under a variety of statutes. *PUD No. 1*, 511 U.S. 700, 723 (1994).

²⁰³ Federal Water Pollution Control Act, 33 U.S.C. § 1341(a)(1) (2000) (emphasis added).

²⁰⁴ See *supra* notes 139–42 (on section 313), 114–20 (on role of states in *S.D. Warren*) and accompanying text.

with its past practices, NOAA did not seek section 401 certification for federal dam operations prior to finalizing the 2008 FCRPS BiOp and its ITS either.²⁰⁵ This failure²⁰⁵ has become a significant issue in the 2008 FCRPS BiOp litigation,²⁰⁶ and a successful section 401 claim promises to be a boon to Pacific salmon.

The argument for state certification is compact and elegant. Section 401 requires “any applicant for a Federal license or permit” whose activities “may result in a discharge” to obtain state certification that those activities will not violate water quality standards.²⁰⁷ First, as S.D. Warren instructs, dams cause discharges because water used in power generation issues or flows out of a dams’ tailrace.²⁰⁸ Second, the Corps cannot legally operate dams without an incidental take statement from NOAA,²⁰⁹ and according to

²⁰⁵ See NOAA’S NAT’L MARINE FISHERIES SERV., NW. REGION, CONSULTATION ON REMAND FOR OPERATION OF THE FEDERAL COLUMBIA RIVER POWER SYSTEM, 11 BUREAU OF RECLAMATION PROJECTS IN THE COLUMBIA BASIN AND ESA SECTION 10(A)(1)(A) PERMIT FOR JUVENILE FISH TRANSPORTATION PROGRAM (2008), available at https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts_upload.summary_list_biop?p_id=27149.

²⁰⁶ In the notice and comment period, some environmental groups appeared to contemplate this litigation strategy, and are currently pursuing it in the United States District Court for the District of Oregon. See Letter from Save Our Wild Salmon et al. to D. Robert Lohn, Nw. Reg’l Adm’r, NOAA Fisheries 8 (Jan. 4, 2008) (on file with author) (“[A]s a result of this consultation, NOAA will issue an incidental take permit and incidental take statement, both of which require state certification under section 401 of the CWA.”) [hereinafter Save Our Wild Salmon Comment]; Fifth Supplemental Complaint for Declaratory & Injunctive Relief at 66–68, 71, Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv., No. 01-0640-RE (D. Or. Sept. 12, 2008); Redden Approves Adding Clean Water Act Issues to Columbia/Snake BiOp Lawsuit, THE COLUMBIA BASIN FISH & WILDLIFE NEWS BULLETIN, Sept. 19, 2008, <http://www.cbbulletin.com/296195.aspx> (last visited Nov. 1, 2008).

Such a tactic might prove especially useful in the current climate. Judge James Redden’s frustration with the federal government’s approach to the salmon crisis is well-known and growing. See Letter from James A. Redden, U.S. District Judge, to Counsel of Record in Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv., CV 01-640 RE, and Am. Rivers v. NOAA Fisheries, CV 04-00061 RE 1 (Dec. 7, 2007), available at http://www.wildsalmon.org/library_files/2007/Redden%20letter1.pdf (expressing frustration that draft BiOps “fail to satisfy the biological and legal requirements of the [ESA], its implementing regulations, and the relevant case law”); Michael Milstein, Judge Says Court Could Take Over Dams, OREGONIAN, Dec. 11, 2007, at A1 (describing federal agencies as “close to fumbling [their] last chance”); Blumm et al., *supra* note 30, at 802–04 (relating Judge Redden’s frustration over 2004 FCRPS BiOp and his characterizations of the BiOp as “a shameless assault on the Endangered Species Act” and “an exercise ‘more in cynicism than sincerity’” (citations omitted)). Despite Judge Redden’s aggressive tone of late, in the past, he has expressed reluctance to “run the river.” Blumm et al., *supra* note 30, at 796 (opining Judge Redden’s failure to grant full injunctive relief evidenced unwillingness to control dam operations himself). Offering a new way to mitigate dams’ effects on salmon might be appealing to a federal judge whose patience has been tried. See Ken Olson, Salmon Justice, HIGH COUNTRY NEWS, Jan. 22, 2007, at 8, 12 (quoting Judge Redden as saying “The Snake River salmon are truly endangered. . . . We can’t continue to go in circles.”). Further, the cooperative federalism bent might be attractive to a judge who has repeatedly stressed the need for cooperation during remands he has ordered. See Blumm et al., *supra* note 30, at 796–97 (indicating Judge Redden urged cooperation and consensus between parties on spill for salmon passage); *id.* at 804–05 (recording Judge Redden’s call for “cooperation and assistance” in the 2004 BiOp remand).

²⁰⁷ 33 U.S.C. § 1341(a) (2000) (emphasis added).

²⁰⁸ S.D. Warren, 547 U.S. 370, 376 (2006); see also *supra* notes 108–13 and accompanying text (describing Supreme Court’s decision on the meaning of “discharge”).

²⁰⁹ See *supra* Part III.B.2.b.i (describing section 7 consultation under the ESA).

the Supreme Court, an ITS “constitutes a permit authorizing the [the Corps] to ‘take’ [listed salmon] as long as it respects [NOAA]’s ‘terms and conditions.’”²¹⁰ Because dams cause discharges and require a federal permit to operate, dam operators must obtain section 401 certification. Failure to do so represents a violation of section 401.²¹¹ Therefore, the Corps and NOAA are currently in violation of the Clean Water Act because they have never obtained state certification that dam operations will not violate the water quality standards of the Columbia and Snake Rivers.

A successful section 401 claim could produce extraordinary benefits for Columbia Basin salmon, provided state political leaders muster the audacity to harness the full power of their certification authority.²¹² As discussed,²¹³ section 401 provides a federal agency

²¹⁰ Bennett v. Spear, 520 U.S. 152, 170 (1997).

²¹¹ 33 U.S.C. § 1341(a)(1) (2000) (“No license or permit shall be granted until the certification required by this section has been obtained or has been waived No license or permit shall be granted if certification has been denied by the State, interstate agency, or the Administrator . . .”).

²¹² In particular, over the last few years, the state of Oregon has shown a willingness to confront the federal government’s inertia as far as mitigating the FCRPS’s damage to salmon runs, which suggests the state might be prepared to exercise this authority. For example, Oregon intervened on the side of environmental plaintiffs in the 2004 BiOp litigation. Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Service, 481 F.3d 1224, 1232 (9th Cir. 2007). More recently, the state sent NOAA strongly worded comments on the draft 2008 FCRPS BiOP, particularly focusing on the agency’s failure to adequately address Oregon’s water quality standard for temperature in its BiOp.

The Columbia River is currently listed as a water quality limited water body on Oregon’s 303(d) list of impaired water ways for not meeting the [WQS] for temperature . . . [, which impacts] several beneficial uses including anadromous fish passage, and salmon and steelhead migration.

. . . .

With respect to water temperature, the [BiOp] does not identify measures to identify and maintain cold water refugia in the Columbia River and its tributaries (OAR 340-041-0028 (4)(d)). The [BiOp] also does not address the effects hydropower operations have had and continue to have on the “natural seasonal thermal pattern” in the Columbia and Snake rivers. This pattern (defined in OAR 340-041-0028 (4)(d)) has shifted and may continue to shift because of hydropower system operations. This shift may alter the timing of salmonid spawning and the emergence and out-migration of juveniles. It may also have other adverse effects such as reducing the available food supply. The [BiOp] should include measures that expand cold water refugia and improve thermal conditions to meet temperature criteria.

Comments on Draft BiOp from State of Or. to NOAA Fisheries (Jan. 4, 2008), at 46–47 (on file with author); Letter Regarding Draft BiOp from Michael Carrier, Natural Res. Dir., State of Or., to Robert Lohn, Nw. Reg’l Adm’r, NOAA Fisheries 5 (Jan. 4, 2008) (on file with author) (recommending NOAA incorporate “clear links, goals, and implementation strategies that will improve the impaired water quality parameters” and “direct the Action Agencies to work with state, tribal and federal water quality agencies to annually review and implement water quality improvement projects”). Since sending those comments, the state has also intervened in the 2008 FCRPS litigation. *Oregon Says Plan for Dams Lacks Salmon Protection*, SEATTLE POST-INTELLIGENCER, July 22, 2008, http://seattlepi.nwsource.com/local/371852_salmon23.html (last visited Oct. 23, 2008).

As Oregon’s fishing-dependent communities face a second nearly coast-wide salmon fishery closure in three years—due to the collapse of the Klamath and Sacramento Rivers’ salmon runs in 2006 and 2008, respectively—and likely severe restrictions on harvest in the Columbia River, perhaps the state would be motivated to impose strict terms and conditions on the federal dams’ ITSs if given the opportunity. See

with no authority to reject or weaken the terms and conditions a state imposes in its certification. Therefore, the Pacific Northwest states could impose terms and conditions as protective as their water quality standards and other state water protection laws allow.²¹⁴ As a start, the states could require that federal dam operations achieve compliance with the water quality standard for temperature, which, for example, was exceeded on at least sixty-seven days in the lower Columbia River during the summer and fall of 2001 alone.²¹⁵ To date, the FCRPS BiOps have allowed these violations,²¹⁶ but the Pacific Northwest states could prevent future violations by setting minimum flow requirements, as opposed to targets, just as Maine's Department of Environmental Protection did in S.D. Warren²¹⁷ and Washington's own Department of Ecology did in PUD No. 1.²¹⁸ Additionally, the states could call for mandatory cold-water releases from Dworshak Reservoir and other upper basin reservoirs every time water temperature in stretches of the mainstem Columbia and Snake Rivers exceed a predetermined temperature. The variety of strategies the states, unfettered by federal agency inertia, could explore with regard to each water quality standard is quite staggering, and provides them a genuine opportunity to mitigate the harm the hydropower system has done to water quality and, in turn, the salmon.

Moreover, the public could influence the stringency of the state's certification. Section 401 requires at least notice of applications for state certification,²¹⁹ but both Oregon and Washington require significantly more.²²⁰ In addition to the required notice, both states'

Susan Chambers, *State Aid in Works for Salmon Disaster*, THE WORLD (Coos Bay, Or.), Apr. 12, 2008, <http://www.theworldlink.com/articles/2008/04/13/news/doc4800300f49583430176034.txt> (last visited Oct. 23, 2008) (reporting on fishery closures and Oregon Governor Ted Kulongoski's declaration of a state of emergency and request for emergency federal funds); Lisa Stiffler, *Restrictions Tightening on Columbia*, SEATTLE POST-INTELLIGENCER, Apr. 9, 2008, at A7, available at 2008 WLNR 6688238 (describing wildlife managers' expectations that "fishing for some Columbia stocks to hit near-record lows"). *But cf.* Erik Robinson, *Salmon Runs Forecast to be Stronger*, THE COLUMBIAN (Vancouver, Wa.), Aug. 29, 2008, at A1, available at 2008 WLNR 16384987.

²¹³ See *supra* notes 128–29 and accompanying text (describing authority of state and federal governments in section 401 certification).

²¹⁴ 33 U.S.C. § 1341(d) (2000) (stating state certification will set forth requirements necessary to "comply with any applicable effluent limitations and other limitations [under the CWA] . . . and with any other appropriate requirement of State law set forth in such certification."). See also *supra* notes 128–29 and accompanying text.

²¹⁵ Or. Dep't of Env'tl. Quality, Water Quality Assessment Database, <http://www.deq.state.or.us/wq/assessment/rpt0406/search.asp> (last visited Oct. 14, 2008) (choose "Columbia River" as water body and "Temperature" as parameter).

²¹⁶ See *supra* Part III.B.2.a (describing judicial deference to the Corps's decision not to operate dams so as to avoid state water quality standard violations).

²¹⁷ 547 U.S. 370, 375 (2006).

²¹⁸ 511 U.S. 700, 708–14 (1994).

²¹⁹ 33 U.S.C. § 1341(a)(1) (2000).

²²⁰ The additional public participation requirements are enforceable. *Tacoma v. FERC*, 460 F.3d 53, 68 (D.C. Cir. 2006).

administrative codes require an opportunity for public comment, as well as a public hearing if the public shows sufficient interest.²²¹ Significant segments of the citizenry in both states, indeed nationally, concern themselves with the salmon's welfare, as evidenced through the makeup of plaintiffs engaged in litigation over the FCRPS BiOps alone.²²² Consequently, the states would assuredly encounter and benefit from active public participation, and the public would have ample opportunity to shape the direction the states take in certifying and imposing terms and conditions upon NOAA's ITSs. Further, interested parties would have the opportunity to enforce adherence to these procedures and challenge the adequacy of the terms and conditions resulting from state certification in state court.²²³ In essence, section 401 certification would provide both the states and the public much more oversight authority over the federal government, which simply lacks the political will to issue protective, let alone legally sufficient, FCRPS BiOps.²²⁴ In the end, this type of state and public supervision might be imperative if the salmon are to avoid extinction.

VI. CONCLUSION

Pacific salmon have been listed under the Endangered Species Act for nearly two decades.²²⁵ In that time, their populations have continued to decline,²²⁶ and the specter of climate change promises to

²²¹ OR. ADMIN. R. 340-048-0027 (2008); WASH. ADMIN. CODE § 173-225-030 (2007). Both the Oregon Department of Environmental Quality (DEQ) and the Washington Department of Ecology can provide a public hearing at their discretion, but DEQ is required to provide such a hearing if 10 or more people or an organization representing 10 or more members so request within 20 days of the public notice. OR. ADMIN. R. 340-048-0027(1).

²²² See *Save Our Wild Salmon Comment*, *supra* note 206, at 1 (describing membership as composing over six million people, consisting of "businesses, commercial and sport fishing associations, conservation organizations, taxpayer advocates, clean energy proponents, and others joined in a single unifying mission: restoring self-sustaining, harvestable populations of wild salmon to the rivers and streams of the Pacific Northwest" and the harmful effects of the FCRPS on salmon). On the other hand, pro-dam advocates are also numerous and active. For example, Northwest RiverPartners describes itself as "an alliance of farmers, electric utilities, ports and large and small business owners" who are dedicated to the preservation of the Columbia Basin dams. Northwest RiverPartners, Home Page, <http://www.nwriverpartners.org> (last visited Oct. 14, 2008).

²²³ See *supra* notes 129, 138 (describing ability to enforce water quality standards and public participation provisions in state court).

²²⁴ This assessment of the federal government is eminently fair. Federal judges have given NOAA, both during Presidents Bill Clinton's and George W. Bush's administrations, many opportunities to (and guidance on how to) draft a FCRPS BiOp that would satisfy the ESA. Both Administrations have simply been unwilling to do it. See generally Blumm et al., *supra* note 30 (providing history of FCRPS BiOp litigation).

²²⁵ See Blumm, *Beyond the Parity Promise*, *supra* note 181, at 38–39 (indicating first Pacific salmon run listed in 1991).

²²⁶ See Blumm et al., *supra* note 30, at 720–24 (describing status of runs); Roger Phillips, *Idaho Chinook Still in Trouble*, IDAHO STATESMAN, July 29, 2007, available at 2007 WLNR 14523563 (exploring Idaho salmon returns).

further decimate the runs.²²⁷ Salmon advocates, and even Pacific Northwest states, have challenged the federal government's biological opinions for the Federal Columbia River Power System multiple times.²²⁸ The plaintiffs have prevailed in almost every instance, and Judge James Redden has criticized NOAA's efforts as exercises "more in cynicism than sincerity."²²⁹ Despite having every opportunity to do so, the federal government simply has not made a good faith effort to ensure the survival and recovery of these fish, which are exceptionally important to the economy, ecology, and ethos of the inhabitants of the Pacific Northwest.

As stocks dwindle to the point where salmon-dependent communities face the prospect of yearly fishery closures²³⁰ and runs fade into oblivion one by one,²³¹ the Pacific Northwest and the salmon need leadership. Ignobly, the federal government has chosen not to provide that leadership, but section 401 and the broad authority it affords states to force federal dams' compliance with state water quality standards²³² offer the states the opportunity to make up for the federal government's failure. The legal argument establishing that federal dams require state certification is simple, but it has not yet been tried. Section 401 requires state certification that an activity requiring a federal permit or license that may result in a discharge will not impair state water quality standards.²³³ The Supreme Court has made clear that dams cause discharges²³⁴ and that incidental take statements are permits.²³⁵ Thus the requirements of section 401 are satisfied. Hopefully, this Comment will encourage practitioners to use the argument because one can only believe the salmon will be the better off for it.

²²⁷ See *supra* notes 14–17 (describing climate change's predicted effects on salmon).

²²⁸ See generally Blumm et al., *supra* note 30 (providing full history of FCRPS litigation).

²²⁹ See *id.* at 802 (quoting Judge Redden).

²³⁰ See *supra* note 212 (describing recent fishery closures).

²³¹ See *supra* note 1 and accompanying text (discussing extinctions). Many runs face extinction, but the nearest to it is the Snake River sockeye. See Blumm et al., *supra* note 30, at 721–24 (“[A]ll listed salmon runs in the Columbia Basin face the likelihood of endangerment, if not extinction, within the foreseeable future.”). Snake River sockeye were formerly abundant throughout the Snake River Basin, but, in 2007, only four sockeye completed the return journey to Idaho's Red Fish Lake to spawn. See Save Our Wild Salmon, Only Four Snake River Sockeye Return in 2007, <http://wildsalmon.org/library/2007-sockeye-watch.cfm> (last visited Oct. 14, 2008). Thankfully, the sockeye are returning in much greater numbers in 2008, though they are still but a shadow of their former abundance. See The Associated Press, *More Than 500 Sockeye Return to Central Idaho Mountains*, SEATTLE TIMES, Aug. 28, 2008, at B7, available at 2008 WLNR 16323434.

²³² See *supra* Part III.B.1.b.i (explaining state's authority under section 401).

²³³ Federal Water Pollution Control Act, 33 U.S.C. § 1341(a) (2000).

²³⁴ See *supra* Part III.B.1.a (reviewing *S.D. Warren* decision).

²³⁵ *Bennett v. Spear*, 520 U.S. 154, 170 (1997). See also *supra* Part IV (exploring ITSs' permit status).