Rivers of the Homeland: River Restoration on Indian Reservations

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INTRODUCTION: THE POLITICS OF RESTORATION

There has been a 500-year struggle in the United States between American Indians and the intruding settlers from other lands. While this conflict has primarily centered on land, the conflict over water is equally important because without water land is valueless.

Much of the struggle over Indian water has taken place in the courtroom. Historically, state governments did not recognize the water rights of Indian reservations. To the states, Indian tribes were no different than other water users and had to file for water rights like individuals or corporations. Until fairly recently, Congress also refused to acknowledge special water rights for Indian reservations. Accordingly, no statute has generally sanctioned the creation of water rights appurtenant to federally recognized Indian lands. The water rights of American Indian tribes are strictly the creation of federal courts. Beginning with the 1908 landmark case of Winters v. United States.1 and continuing through a long string of subsequent decisions, the courts have defined the doctrine of federally reserved water rights.2

The Indian water conflict began to change in the 1980s when the federal government started to emphasize negotiated settlements as an alternative to expensive and seemingly endless litigation.3 As a result, over twenty tribes have signed settlement agreements since 1980.4 At the same time, a major shift occurred in federal water policy as agencies placed greater emphasis on demand-control, ecosystem management, and more efficient allocations of both water and funding. One aspect of the settlement approach to water conflicts was the recognition that some

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1 207 U.S. 564 (1908).
4 See Bonnie Colby et al., Negotiating Tribal Water Rights (2005); Daniel McCool, Native Waters 82–86 (2002); John Thorson et al., Tribal Water Rights 133–195 (2006).
water development is not beneficial and that society is best served by the restoration of some streams and rivers.\textsuperscript{5}

Many of these restoration projects involve Indian reservations. In many ways, river restoration is even more important to native culture than water development. It is a way to maintain traditional homelands, exercise sovereignty and regain a sense of the past by reestablishing ties to the land and its waters. This article will explain the political and economic forces driving river restoration and will then examine four specific restoration projects that directly involve American Indian tribes. These four projects were selected to provide a broad overview of a variety of restoration projects involving Indian reservations. They vary across both restoration techniques and political strategies, thus providing an understanding of the diversity of these projects. They also cover a large geographic spectrum, ranging from coast to coast.

The United States has a long history of dam building and water development. For the first 200 years of this country’s existence, rivers were viewed in a strictly utilitarian sense, to be dammed, diverted, controlled and developed to serve the needs of the nation. In many ways, the development of our nation’s rivers contributed directly to the settlement of the country and its economic growth.\textsuperscript{6} Water projects also proved to be a useful source of government pork as politicians sought to funnel money to home districts and states.\textsuperscript{7} But there was virtually no recognition of the economic costs and environmental impact of this development.\textsuperscript{8}

As a result, the nation went on a binge when it came to water development. There are nearly 79,000 dams over twenty-five feet in height,\textsuperscript{9} and approximately 2.5 million dams have been built in total.\textsuperscript{10} The U.S. Army Corps of Engineers manages and maintains 8,500 miles of levees, 12,000 miles of navigation channels, 240 locks, 75 hydropower facilities,


\textsuperscript{6} See generally John A. Ferejohn, Pork Barrel Politics: Rivers and Harbors Legislation, 1947–1968 (1974); Lowry, supra note 5.


\textsuperscript{10} Nat’l Research Council, Restoration of Aquatic Ecosystems 26 (1992).
926 harbors, and 541 dams. The U.S. Bureau of Reclamation manages and maintains 472 dams, 58 hydropower facilities, and 56,000 miles of conveyance systems. The Tennessee Valley Authority alone constructed 49 dams. Much additional water development was done by state and local governments, special water districts, and by private interests. Development is so widespread that a study by the National Park Service found that only 2% of the nation’s river miles were in a state of “high natural quality.”

The massive level of river development has had a disproportionate impact on Indian reservations for four reasons. First, Indian reservations were primarily established as remnants of traditional homelands where most principal villages and settlements tended to be on major water courses. The more recent trend of locating major cities and suburbs without regard to a viable local water supply (Las Vegas, Phoenix, San Diego, Los Angeles) occurred after many reservations were already established. This invariably led to conflicts as growing cities claimed and diverted increasing amounts of water—water that was also coveted by Indian tribes. Thus, the development of rivers inevitably had a direct impact on Indian reservations where much of the settlement has occurred along major water courses.

The second reason I call the “Missouri River Syndrome.” When water developers looked for land to be flooded by a new reservoir, it was often politically expedient to flood Indian lands rather than lands held by influential non-Indians. Along the upper Missouri River the construction

of five enormous main-stem reservoirs by the Army Corps of Engineers flooded approximately 350,000 acres of prime reservation lands. The impact on the affected tribes was devastating. In Pennsylvania the Kinzua Dam inundated Seneca lands. Other federal dams have affected Crow Indian lands in Montana and part of the Winnebago Reservation in Nebraska. The Bureau of Reclamation attempted, without success, to flood nearly the entire Fort McDowell Indian Reservation in Arizona. In most cases, Indian people resisted the inundation of their land but lacked the political power necessary to fight against powerful federal water agencies and their local allies.

Third, most of the Bureau of Reclamation’s irrigation projects have diverted water away from Indian reservations. The Bureau has a long history of ignoring the needs of Indian reservations when planning and building large water projects. In some cases, the Bureau’s diversions have completely de-watered reservation rivers and streams.

The fourth reason concerns fish stocks. The construction of hundreds of dams has destroyed or greatly diminished the primary source of food for many tribes. This is especially true for the anadromous fishruns along both coasts. Anadromous fish, those that live in the sea but breed in freshwater, were more plentiful in the past and formed an essential part of traditional Indian culture and identity; they were not just sustenance, but shaped how tribes related to the natural world and how they viewed their relationship with the creator. The Columbia River Inter-Tribal Fish Commission expressed this sentiment in a recent report: “The Salmon’s spirit . . . is sacred life . . . [t]he salmon unselfishly gave

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20 Id.
21 McCool, supra note 2, at 175–80.
22 Id.
23 Id.
24 See id.; Lawson, supra note 19, at 27–67.
26 See sources cited supra note 25.
of itself for the physical and spiritual sustenance of humans." Many of the restoration efforts taking place today are focused on restoring fish runs that were the mainstay of so many tribes.

Given the enormous impact that water development has had on Indian people, it is not surprising that they would play a major role in efforts to restore rivers. Today there are hundreds of river restoration projects taking place across the nation.30 Many, but not all, of these involve dam removal. Since 1912 about 465 dams were removed in the United States.31 Since 1999, another 145 dams have been removed.32 However, dam removal is just one aspect of river restoration; many rivers are partially restored while dams on the same river are maintained. Indian tribes are the primary leaders of some of these restoration efforts, but the more typical modus operandi is for tribes to participate in a broad coalition of stakeholder groups that work together to restore rivers. In the following section, this article briefly describes four restoration efforts involving Indian tribes.

I. FOUR CASE STUDIES

A. THE PENOBSCOT RIVER

Every major river in Maine has been dammed in multiple locations for hydropower and to power paper mills, including the Penobscot, which flows through the center of the state.33 As a result, the great fish runs that used to course up Maine’s rivers each year have virtually disappeared.34 The loss of the great Atlantic salmon runs was a significant economic loss to the state, but it had an even greater impact on the Indian

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tribes that depended on the salmon and other anadromous fish for their livelihood.\textsuperscript{35} One of the hardest hit tribes was the Penobscot Nation.\textsuperscript{36}

Advocates of river restoration did not have a fighting chance to remove some of the dams until the 1980s, when Congress amended the enabling act for the Federal Energy Regulatory Commission (FERC).\textsuperscript{37} Maine made news in 1999 when it removed Edwards Dam on the Kennebec River—the first time in America that a dam was removed against the wishes of its owner.\textsuperscript{38} The restorationists then turned their attention to the Penobscot River, which drains most of central Maine. After years of haggling, a multi-party agreement was signed in 2003; it promises the removal of two dams on the Penobscot River, the modification of others, and the opening up of 500 miles of salmon habitat.\textsuperscript{39}

The Penobscot Tribe played a major role in the negotiations and was a signatory to the agreement.\textsuperscript{40} Barry Dana, the Chief of the Penobscot Nation at that time, described what the historic settlement meant to his people:

\begin{quote}
Words may not describe what this restoration project means to me and my people . . . . We are inextricably tied to the Penobscot River through a cultural, physical, and spiritual relationship that runs in our veins as the original inhabitants of this region. . . . It is time that we, as a society, begin to repay the Penobscot River for all that she has provided for such a long time.\textsuperscript{41}
\end{quote}

Maine’s rivers have always been viewed as one of its greatest natural resources. Native Americans in this region thrived on the fishing and wildlife found in and around the rivers. The Penobscot River alone supported salmon runs estimated at 50,000 to 70,000.\textsuperscript{42} In the early days of European settlement, rivers were used to float giant log rafts were dammed to power sawmills and gristmills.\textsuperscript{43} Later, rivers were dammed

\begin{footnotes}
\textsuperscript{35} \textsc{Butch Phillips}, \textit{A River Runs Through Us} 1–4 (Penobscot River Restoration Trust 2006), \textit{available at} http://www.penobscotrivers.org/assets/river_BP06_blue.pdf.
\textsuperscript{36} Id.
\textsuperscript{38} \textsc{Me. State Planning Off., Kennebec River Resource Management Plan} 196 (1993), \textit{available at} http://www.maine.gov/sos/ccc/rules/07/105/105c001.doc.
\textsuperscript{40} \textsc{Penobscot River Restoration Trust, http://www.penobscotrivers.org/} (last visited June 6, 2007).
\textsuperscript{41} Statement of Barry Dana, Chief of the Penobscot Nation, Office of the Governor and Council, in Indian Island, Me. (2003).
\textsuperscript{42} \textsc{Penobscot River Restoration Trust, supra note 40}.
\textsuperscript{43} Watts, \textit{supra} note 39, at 29.
\end{footnotes}
to generate electricity. The rivers also proved useful as a dump for polluted refuse from pulp mills. Today, the Penobscot people and the rest of the state’s residents must contend with the legacy of these uses.

The two dams on the Penobscot slated for removal are the result of a carefully negotiated collaboration between the power company, interest groups, the state, and the Penobscot Nation. The two dams are just downstream from the reservation. The first is the Great Works Dam, which is owned by PPL, the local power company. A few miles below Great Works Dam is the Veazie Dam. It is the first dam on the river, and stops most anadromous fish from continuing upstream. There is a narrow, aging fish ladder near the center of the dam, but few salmon manage to climb it. The fish ladder is even less effective in assisting other species of fish over the dam, such as alewives and sturgeon. It is instructive that the clubhouse for the Veazie Salmon Club sits on a bluff overlooking the river just downstream from the dam. However, this section of the river is now closed to all fishing due to a lack of fish.

Much of the controversy over dams has centered on Atlantic salmon, but the objectives of the Tribe are much greater. John Banks, the director of Natural Resources for the Penobscot Nation, explained that:

> Until recently, people didn’t see the relationship between alewives and other species, but they play a large ecological role in the ecosystem. We need to focus on all species, not just the Atlantic salmon. It’s the game fish that get all the attention due to [Endangered Species Act] issues, but we try to look beyond salmon and look at the river as a whole.

To the Penobscot people, the restoration of the river is a cultural necessity, not just an economic or ecological amenity. Tribal Elder Butch Phillips recently explained the connection:
I am reminded that the bones of my ancestors are buried here and their spirits are still here all around us. It creates a very special feeling, a feeling of spiritual connectedness with my ancestors and the river. The People of the Penobscot have always believed that this river was our lifeblood. In honor of our ancestors, and for the protection of the future generations, we must continue the efforts to restore the sacredness to the river.\footnote{Phillips, supra note 35, at 3.}

Restoring the Penobscot meant that the Tribe had to oppose two powerful elements of Anglo-American society—the paper and hydroelectric companies. Early on, in the 1980s, the Penobscots realized that they could not win this battle alone, so they sought out allies, and became part of an alliance called the Penobscot Partners.\footnote{Interview with Nick Bennett, Staff Scientist, Natural Resources Council of Maine, in Augusta, Me. (May 18, 2004); Penobscot River Restoration Trust, supra note 40.} As with most negotiated settlements, this one took years to work out, tested everyone’s patience and tolerance, and created some unusual partnerships. In many ways it became a model of how to create a successful agreement. The current Chief of the Penobscots, James Sappier, recently explained what the Nation hopes to achieve with the settlement: “The Penobscot Nation looks forward to the day we celebrate the return of the fish along with the hydropower generation on the river, and participate in the revitalization of our culture that will follow.”\footnote{Penobscot River Restoration Trust, Vision of the Penobscot River Once Again Teeming with Life While Continuing to Generate Energy Is Closer to Becoming a Reality, \textit{Natural Res. Council of Me.}, May 31, 2006, http://www.nrcm.org/news_detail.asp?news=758.}

\section*{B. The Elwha River}

The Elwha River originates on the flanks of Mount Olympus on Washington’s Olympic Peninsula.\footnote{Fed’l Energy Regulatory Comm’n, \textit{Final Environmental Impact Statement, Elwha Dam} (1996).} It was once home to massive salmon and steelhead runs each year, estimated at 380,000.\footnote{Id. at 4.} The Elwha is unique in the Columbia River Basin in that it empties directly into the Strait of Juan de Fuca.\footnote{See Elwha River Education, http://www.elwharivereducation.org/about.php (last visited Mar. 29, 2008).} Unlike the other rivers in the Columbia River system that drain into the Columbia upstream of dams, there are no main-stem dams between the mouth of the Elwha and the open sea.\footnote{See Freeing the Elwha: Restoration in Olympic’s Largest Watershed, Olympic (Olympic Nat’l Park), May 2007, at 1, http://www.nps.gov/olym/naturescience/upload/elwharestoration.pdf.}
Because of the river's unique habitat, the Lower Elwha River Klallam Tribe has lived at the mouth of the river for centuries.60

In 1912 when the Olympic Power Company closed the gates on its new Elwha Dam the fortunes of the Lower Elwha River Klallam tribe changed dramatically.61 Fifteen years later, another hydropower dam, the Glines Canyon dam, was built further upstream.62 In addition to the dams, there were other threats: the river descended through forests that were heavily impacted by clear-cutting; the dams and other impacts effectively eliminated the native fish species and deprived the Elwha Klallam of their livelihood.63

Over time other sources of electricity were developed and people began to appreciate the value of intact rivers. Also, the nation's treatment of Indians began to change as tribes developed their own political presence—assisted by various court victories and the occasional supportive congressman. For the Elwha Klallam, these new trends culminated in the 1992 Elwha River Ecosystem and Fisheries Restoration Act, which authorized the purchase and removal of both dams and the restoration of the fishery.64 Tribal members played a leading role in the effort to restore the river.65

The National Park Service has also been a central player because Glines Canyon is within Olympic National Park.66 The dam was there first, but the National Park Service still intends to restore the river channel, including the anadromous fish runs, to a relatively pristine condi-

62 See Elwha Ecosystem Restoration, supra note 61.
63 See id.
64 Pub. L. No. 102-495, 106 Stat. 3173 (1992); see also Adam Burke, River of Dreams, HIGH COUNTRY NEWS, Sept. 24, 2001, at 1, 8–11; Lower Elwha Band of Klallam, supra note 60. See generally LOWRY, supra note 5.
65 Interview with Robert Elofson, Coordinator, Elwha River Restoration Program, Lower Elwha Klallam Tribe, in Lower Klallam Village (June 24, 2004).
It is one of the largest ecosystem restoration projects ever attempted by the Park Service. There are seven distinct runs of anadromous fish that are native to the Elwha; planners hope to re-establish all seven. To accomplish this, the Lower Elwha Tribe will use its existing fish hatchery and build a new one to increase the number of smolts—juvenile salmonids—it releases into the Strait. The idea is to flood the area with fish to help these native species re-establish themselves in the Elwha River after nearly a hundred years of blockage. To accomplish this task the tribe has created the Elwha River Restoration Program.

The removal of the Elwha River dams has been a long political odyssey. Senator Slade Gorton, who was the state’s attorney general during the famous Washington fisheries case, was in Congress when the dam removal legislation was passed. He opposed appropriations for the restoration project as part of a larger effort to stop other dam removals. The small town of Port Angeles, at the mouth of the river and adjacent to the Lower Klallam Reservation, initially opposed dam removal, and a local group called SEAL (Save Elwha and Aldwell Lake) lobbied against it. But their efforts came to naught as town officials, including the mayor, saw dam removal as a way to bring new life to what was essentially a dying town. As with many restoration projects, the Elwha project brought together an odd assortment of stakeholders. The Surfriders Foundation (a group that represents the interests of surfers) joined the coalition. And even the James Paper Company—the primary customer for the dams’ power—eventually came to the table. This odd mixture includes two federal agencies that are not usually viewed as friends of

69 Id.; Nat’l Park Serv., supra note 67.
70 Interview with Robert Elofson, supra note 65.
71 Id.
72 Id.
74 Lowry, supra note 5, at 146–47.
75 Id.
76 Id.
77 Id.
78 Interview with Russell Veenema, Executive Director, Port Angeles Chamber of Commerce, in Port Angeles, Wash. (June 25, 2004).
either Indian tribes or dam removal; the Bureau of Reclamation is in charge of the physical removal of the dams, and the Army Corps of Engineers is building the flood control levee around the Lower Klallam village.79

The tremendous variety of supportive groups is a reflection of the breadth and diversity of the restoration; it is an effort to restore an entire ecosystem, not just a river. Tribal member George Bolstrom succinctly described the mission: “It’s not just about taking the dams out, or even just putting the fish back. It’s about the whole picture, the human population, marine predators, over-fishing, the works. If the whole system is addressed, then maybe restoration will work.”80

C. THE KLAMATH RIVER

The Klamath River Basin stretches out like a giant hand across northern California and southern Oregon. Its hydrology and geography is unusually complex, which explains in part why the politics of the river are so byzantine. The Klamath is virtually a microcosm of western water issues; every major issue presents itself in this one river basin.81 There is so much conflict in the region that a recent opinion piece issued jointly by the Klamath Water Users Association, the Karuk and the Yurok Tribes began with this phrase: “The Klamath Basin has become famous for conflict.”82

When the upper basin was in relatively pristine condition, it was a maze of wetlands, terminal lakes, and swift-running streams that were ideal habitat for anadromous fish and two species of suckerfish.83 The Klamath Tribes, consisting of the Klamaths, Modocs, and Yahooskin peoples, lived in the upper basin and relied heavily on suckerfish for their sustenance.84 The Karuk and Yurok tribes inhabit the lower ba-

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79 NAT’L PARK SERV., supra note 67.
81 See William Yardley, Climate Change Adds Twist to Debate over Dam, N.Y. TIMES, Apr. 23, 2007, at A12.
The Klamath Tribes' federal recognition was terminated in 1954, and they lost their reservation lands but retained their hunting and fishing rights. In 1986, the Tribes regained federal recognition but not their reservation lands.

The upper Klamath River basin is also home to a massive federal irrigation project begun in 1905 that waters 200,000 acres of land. The project was primarily a drainage and pumping project because most of the project lands were around terminal lakes that were below the level of the Lower Klamath River. The Bureau drained these low areas, built thousands of miles of irrigation canals to water them, and put in place a complex pumping system to pipe the runoff into the Lower Klamath River. As a result, the project uses a considerable amount of water and consumes an enormous amount of power, and the runoff into the Lower Klamath is laden with agricultural chemicals. The Klamath Tribes live upstream from the project, but the habitat of the suckerfish was greatly impaired by the project. Two species of the suckerfish were declared endangered in 1988. The Klamath Tribes, which had enjoyed the bounty of the suckerfish catch for generations, were told they were allowed to harvest only two fish per year for ceremonial purposes.

The lower half of the Klamath River, in California, consists of several major tributaries, with the Trinity River being by far the largest. However, 90% of the Trinity was diverted by another Bureau of Reclamation project into the central valley of California, primarily to flood-irrigate rice. In addition, seven private power dams were built on the Klamath by PacifiCorp and its predecessors between 1908 and 1962. None of these dams were built with fish passage, and they slowed the flow of water in the lower reaches, increased water temperature, and re-

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86 Klamath Tribes History, supra note 84.
87 Id.
89 See id. at 1–9.
90 Id.
91 See PERKINS, KANN & SCOPPETTONE, supra note 83.
94 Id.
95 PacifiCorp, Executive Summary of Application for New License for Major Project: Klamath Hydroelectric Project (FERC Project # 2082), 2004 (on file with the author).
duced water levels.\textsuperscript{96} This had a devastating impact on salmon and steelhead runs. The Coho salmon runs in the river were declared threatened in 1997.\textsuperscript{97} Indian tribes and environmental groups began agitating for the removal of the four lowest power dams when their license came up for renewal in 2000.\textsuperscript{98}

The loss of salmon runs in the Trinity and Klamath Rivers was especially difficult for the tribes that had depended on these runs for their livelihood. The Hoopa Valley Indian Reservation straddles the Trinity River and follows much of its course.\textsuperscript{99} After the Trinity joins the Klamath, the river flows sixty miles to the sea past the Yurok Tribe reservation.\textsuperscript{100} The Karuk people also live along the lower river.\textsuperscript{101} These tribes were greatly affected in 2002 when 65,000 fish died just outside the reservation.\textsuperscript{102}

The effort to restore the anadromous fish runs and suckerfish to the Klamath River Basin has been extremely contentious. The tribes and their allies in the fishing industry and environmental groups have won a string of court victories forcing federal agencies to meet the requirements of the Endangered Species Act and protect the fish.\textsuperscript{103} These court cases forced the Bureau of Reclamation to curtail water deliveries to the Klamath Irrigation Project in the summer of 2001.\textsuperscript{104} The result was a virtual armed revolt among farmers, who illegally forced open the project’s main head gates and diverted water to their crops.\textsuperscript{105} Many people in the Klamath farming community blamed Indian people for the water shut-
The tribes have been a party to the numerous lawsuits and have played a leading role in the political conflict. The tribes are quick to point out that Indian people did not cause the decline of the fish; rather, they are the victims of that decline.

An essential component of the tribal perspective is that the endangered fish were more than a source of food. A member of the Klamath Tribes described the cultural significance of the suckerfish:

Each spring the Tribes hold a “Return of c’waam [Lost River suckers] Ceremony” as they have for hundreds of years. These fish are of enormous importance to the physical and spiritual well being of the Klamath people. The closure of the fishery has worked a great hardship on the Indian people who have lost this food source.

The Yurok Tribe has a similar relationship to the salmon:

Our people and our culture are tied to the Klamath River in ways that are sometimes difficult for outsiders to understand. We rely on the River for the anadromous fish it supplies for our food, for the spiritual meaning that comes from ceremonies based on the River, and for the ultimate cultural significance as Yurok people. As one of our elders put it, the Klamath River is our identity as Yurok people. This has been true since time immemorial.

These long-held traditions, and the tribes’ dependency on the fish, give rise to substantial issues of federal trust responsibility. The federal government’s failure to support adequately the recovery of endangered fish species could provoke legal action based on treaty claims and other trust commitments. These reservations were established to allow the Indians to continue with their traditional fishing activities. A spokesperson for the Hoopa Valley Tribe made this point in recent congressional

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106 Interview with Greg Addington, supra note 104.


108 Telephone Interview with Allen Foreman, Chairman, Klamath Tribes (Sept. 11, 2006).


hearings: "The Hoopa Valley Tribe has rights that have been affirmed by Congress . . . [We have] been affected by the status of the Klamath/Trinity Basin fish stocks. In recent years, because of the low abundance of Klamath/Trinity fall chinook salmon, [we have] had to reduce fishing opportunities for fisheries under [our] authority." A spokesperson for the Yurok Tribe, speaking at the same congressional hearing, pointed out that the entire raison-d'être of her reservation was to enable the tribe to fish:

As the Department of the Interior stated in 1904, "(t)here is little question that the prevailing motive for setting apart the reservation was to secure to the Indians the fishing privileges of the Klamath River." . . . As Justice Blackmun stated in Mattz v. Arnett, the original Klamath River Reservation "abounded in salmon and other fish" and was in all ways "ideally selected for the Yuroks."

The role of the federal government in the Klamath Basin is incredibly complex. In overseeing the operation of the Klamath Irrigation Project, the Federal Energy Regulatory Commission licenses hydro-dams, and together the U. S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration respectively protect endangered freshwater and anadromous or commercial sea fish. At the same time, the federal government must meet its trust responsibilities to Indian tribes. To call this a delicate balancing act is a decided understatement. The most likely outcome of this political struggle over the next few years is the removal of the private hydro-dams on the lower Klamath. Also, the Bureau of Reclamation is currently exploring ways to reduce water usage and improve water efficiency on its irrigation project.

It is hazardous to predict the course of future political events in the Klamath Basin given the great number of stakeholders, the long history of conflict, and the hydrological realities in the basin. But there are enormous political and legal forces that are pushing for the removal of dams and the improved water quality, increased water flows, and protection of endangered species that will result. The tribes in the Basin will undoubtedly continue to play a prominent role in this debate; their existence de-
pends on a return of the fish species that, for thousands of years, gave them their identity and their sustenance.

D. THE COLUMBIA AND SNAKE RIVERS

When Lewis and Clark journeyed down, and then up, the Northwest's Columbia River in the early nineteenth century they endured many hardships. Scholars have often described their experience as a great adventure full of peril. But to the tens of thousands of people living along the river, who moved freely up and down the valley, Lewis and Clark must have looked more like a couple of foreign tourists out of their element. The native peoples in this basin lived off the bounty of salmon and steelhead runs estimated at 10 to 16 million, and life was quite good—hardly a place of desperate survival. A century and a half later, the massive salmon runs had all but disappeared, and the tribes have but one choice: they must save the salmon to save themselves.

The fish wars of the Columbia River Basin involve a complex array of stakeholders, issues, court cases, government agencies, and proposed solutions. This long, bitter struggle cannot be adequately summarized here, but it is important to understand that tribes have played a leading role in the effort to restore parts of the Basin and bring back the salmon. In part, their efforts rely on a set of treaties negotiated by Isaac Stevens, known collectively as the Stevens Treaties, that ceded 35 million acres of tribal lands to an alien race of people but specifically retained for tribal members "the exclusive right of taking fish in the streams running through and bordering said reservation . . . and at all other usual and accustomed stations." This language was interpreted in a series of court cases to mean that the tribes have a right to half of the Columbia River Basin salmon harvest. These rights are, of course, meaningless if there are no fish in the rivers.

With the passage of the Bonneville Project Act in 1937, the federal government began a new era on the Columbia River characterized by the construction of massive dams. The Army Corps of Engineers con-

116 Mighetto & Ebel, supra note 28, at 5.
constructed four dams on the lower Columbia between 1938 and 1968.\footnote{Id.} All of these dams had fish ladders, which allowed migrating anadromous fish to travel upstream to spawning beds.\footnote{Id.} But dam builders gave no thought to how the dams and reservoirs would affect the downstream passage of smolts. The Bureau of Reclamation’s Grand Coulee Dam was completed in 1941 without fish passage and thus blocked the entire upper reaches of the Columbia River to downstream passage.\footnote{See generally Fed. Columbia River Power Sys., supra note 28.} Six more main-stem dams were constructed upstream of the Snake River and below Grand Coulee. Thousands of additional dams were built on tributaries.\footnote{Idaho Dep’t of Fish and Game, Report to the Director, Idaho’s Anadromous Fish Stocks (May 1, 1988).} But the proverbial straw that broke the camel’s back was the construction of four dams on the lower Snake River.\footnote{U.S. Army Corps of Eng’rs, Feasibility Report, supra note 126.} Between 1961 and 1975 the Corps constructed four dams on the Snake River in Washington for the purposes of generating electricity and extending the Columbia River navigation channel to the town of Lewiston, Idaho.\footnote{See Save Our Wild Salmon, A Vision for the Future: Restoring Snake and Columbia River Basin Salmon and the Communities That Depend Upon Them (pamphlet on file with the author). The term “breaching” is used because the proposal is to remove only the earthen portion of each dam, not the entire dam. See Editorial, Dollars, Sense, and Salmon: An Argument for Breaching Four Dams on the Lower Snake River, The Idaho Statesmen, Sept. 22, 1997 (special reprint of July 20, 1997 edition), at 108.}

An entire panoply of mitigation techniques, termed the “adaptive migration approach” by the Corps, are now being implemented in the Columbia River Basin.\footnote{Id.} But by far the most controversial proposal is to breach the four dams on the lower Snake River—an idea that was first proposed by the Corps and then abandoned in favor of the adaptive migration.\footnote{Interview with Greg Graham, Chief of Planning, U.S. Army Corps of Engineers, Walla Walla District, in Walla Walla, Wash. (Aug. 8, 2006).} However, fish proponents are convinced that the only way to save the salmon runs is to breach these dams.\footnote{See Save Our Wild Salmon, A Vision for the Future: Restoring Snake and Columbia River Basin Salmon and the Communities That Depend Upon Them (pamphlet on file with the author). The term “breaching” is used because the proposal is to remove only the earthen portion of each dam, not the entire dam. See Editorial, Dollars, Sense, and Salmon: An Argument for Breaching Four Dams on the Lower Snake River, The Idaho Statesmen, Sept. 22, 1997 (special reprint of July 20, 1997 edition), at 108.}
The effort to breach the dams has been led by a coalition of fishers’ organizations, environmental groups, and American Indian tribes.\textsuperscript{131} Although there are dozens of tribes in and near the basin that have been involved in the fishing rights issue, one of the most organized and effective voices has been the Columbia River Inter-Tribal Fish Commission (the Commission), which includes four of the Stevens Treaty tribes: Warm Springs, Umatilla, Yakama, and Nez Perce.\textsuperscript{132} Members of these tribes brought many of the court cases alluded to above, beginning 100 years ago with the \textit{Winans} case.\textsuperscript{133} The tribes opposed the construction of the big dams without success before switching to a strategy of pressuring federal agencies to operate the river in such a way that it improved the survival rates for the remaining fish stocks.\textsuperscript{134} The Commission was formed in 1977, based on a traditional inter-tribal organized called the Celilo Fish Committee.\textsuperscript{135} Its mission is to coordinate the work of the fisheries departments of the four tribes, counteract the decline in the salmon fishery, and to “protect [the four tribes’] treaty-reserved property and sacred salmon heritage.”\textsuperscript{136}

In 1995 the Commission produced its own two-volume plan for restoring the salmon called “Spirit of the Salmon.”\textsuperscript{137} This ambitious and comprehensive effort was the first to examine the basin holistically as an entire ecosystem, using what the plan calls a “gravel to gravel approach,” which “focuses on the tributary, mainstem, estuary, and ocean ecosystems and habitats where anadromous fish live.”\textsuperscript{138} This focus on passage, habitat, harvest and production required specific actions and substantial changes in current practices in order to allow the river to recover from historical destructive impacts.\textsuperscript{139} The Tribes’ concern for the entire ecosystem encompasses multiple species, not just salmon. In addition to the Chinook, Coho, Sockeye, and Chum, the four species of salmon that are native to the Columbia, the plan includes the White Sturgeon, Pacific Lamprey, and Steelhead.\textsuperscript{140} Such a comprehensive ap-

\textsuperscript{131} \textit{See generally} \textit{Save Our Wild Salmon, supra} note 130.
\textsuperscript{133} \textit{See United States v. Winans, 198 U.S. 371} (1908).
\textsuperscript{134} \textit{See, e.g., Roberta Ulrich, Empty Nets} (2007).
\textsuperscript{137} \textit{See Columbia River Inter-Tribal Fish Comm’n, Spirit of the Salmon: The Columbia River Anadromous Fish Restoration Plan of the Nez Perce, Umatilla, Warm Springs and Yakama Tribes} (1995).
\textsuperscript{138} \textit{Id.} at 5.
\textsuperscript{139} \textit{Id.}
\textsuperscript{140} \textit{See generally id.}
proach is especially relevant, given that the entire fishery is in danger; thirteen different stocks of fish in the Columbia Basin are either endangered or threatened.\textsuperscript{141}

Following the release of the plan, the Commission began a four-part strategy of coalition-building, research, public information and on-the-ground restoration work.\textsuperscript{142} With regard to coalition-building, the Commission has worked in conjunction with both environmental and fishing interests.\textsuperscript{143} This required a considerable degree of diplomacy, given that tribes and non-Indian fishermen were often in conflict in the 1970s at the height of the controversies over the \textit{Boldt} decision.\textsuperscript{144} The Commission has learned to work closely with fishing groups such as Salmon for All, the Northwest Steelheaders Association, and the Northwest Sportfishers Association.\textsuperscript{145} They also work with a wide variety of local and national environmental organizations.\textsuperscript{146} The attention generated by proposals to breach the four Snake River dams gave additional impetus to the Tribes’ efforts to work with other groups. In their 2000 report, the Commission noted that they had “reached out to local, regional, and national environmental and fishing organizations to promote aggressive mainstem Columbia and Snake River passage actions, including the proposal to breach the four lower Snake River dams.”\textsuperscript{147}

The second part of the Inter-Tribal Commission’s strategy is to conduct research. In the past, Tribes complained that hydropower interest groups controlled the research on fish passage.\textsuperscript{148} The Commission sought to remedy this by doing their own research. A unit within the Commission, the Fish Science Department, employs “geneticists, hydrologists, fish biologists, meteorologists, and other scientists dedicated to studying salmon and their ecosystem.”\textsuperscript{149} In 2000, the Commission entered into an agreement with the University of Idaho to build and jointly


\textsuperscript{142} Interview with Jeremy Fivecrows, Public Relations, Columbia River Inter-Tribal Fish Commission, in Portland, Or. (Aug. 11, 2006); Telephone Interview with Jeremy Fivecrows, Public Relations, Columbia River Inter-Tribal Fish Commission (Jan. 19, 2007).

\textsuperscript{143} Id.

\textsuperscript{144} United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974).

\textsuperscript{145} Interview with Jeremy Fivecrows, supra note 142.

\textsuperscript{146} See sources cited supra note 142.

\textsuperscript{147} Id.

\textsuperscript{148} Columbia River Inter-Tribal Fish Comm’n, supra note 118, at 21.

\textsuperscript{149} Miglietto & Ebel, supra note 28, at 174.

operate the Collaborative Center for Applied Fishery Studies.\textsuperscript{151} The Commission’s scientists have published dozens of research papers, many of them in revered science journals,\textsuperscript{152} and the Commission’s newsletter runs articles featuring research by tribal scientists.\textsuperscript{153} The Commission’s research staff produced a companion study to the Spirit of Salmon that offered an in-depth analysis of how fishery restoration would affect hydropower usage.\textsuperscript{154} And most recently, the Commission developed its own River Operations Plan in 2005 as a supplement to the Spirit of the Salmon.\textsuperscript{155}

The third prong of the Commission’s strategy is public information. In addition to its newsletter, \textit{Wana Chinook Tymoo} ("Columbia River Salmon Stories" in Sahaptin, the member tribes’ common language),\textsuperscript{156} the Commission produced a set of three videos titled the "Chinook Trilogy."\textsuperscript{157} The Commission worked with other fishing interests to produce a provocative ad campaign, including full-page advertisements in the \textit{New York Times} that compared the disappearance of the buffalo with the impending doom of the salmon, using the caption, "We decimated a species in less than 50 years. We’re on the verge of doing it again."\textsuperscript{158} The Commission also plays a prominent role in an annual salmon festival that includes a model of a traditional tribal village and information about salmon culture.\textsuperscript{159}

A fourth activity of the Commission is to assist tribes with individualized restoration projects, including fish hatcheries, stream restoration, and water quality projects.\textsuperscript{160} Most such projects are funded by the Bonneville Power Authority, the Pacific Coastal Salmon Recovery Fund or the Pacific Salmon Commission’s Southern Fund.\textsuperscript{161} One of the more

\begin{itemize}
\item \textsuperscript{151} \textit{Columbia River Inter-Tribal Fish Comm’n}, supra note 118, at 52.
\item \textsuperscript{152} See Columbia River Inter-Tribal Fish Comm’n, Technical Reports and Research, http://www.critfc.org/tech/tech_rep.html (last visited Apr. 7, 2008).
\item \textsuperscript{154} \textit{See Columbia River Inter-Tribal Fish Comm’n, Tribal Energy Vision 5–8} (May 2003), http://www.critfc.org/legal/tev.pdf.
\item \textsuperscript{155} \textit{See generally Columbia River Inter-Tribal Fish Comm’n, 2005 River Operations Plan} (Mar. 24, 2005), www.critfc.org/legal/riverops05.pdf.
\item \textsuperscript{157} Videotape: Matter of Trust (Wild Hare Media, Portland, OR 1995); Videotape: My Strength is from the Fish (Wild Hare Media, Portland, OR 1994); Videotape: Empty Promises, Empty Nets (Wild Hare Media, Portland, OR 1994).
\item \textsuperscript{158} \textit{Columbia River Inter-Tribal Fish Comm’n}, supra note 118, at 49.
\item \textsuperscript{159} Interview with Jeremy Fivecrows, supra note 142.
\item \textsuperscript{160} \textit{Id.}
\item \textsuperscript{161} \textit{Id.}
\end{itemize}
ambitious projects undertaken is the restoration of salmon runs on the Umatilla River. Two dams, built in 1910 and 1914, effectively eliminated anadromous fish from the river. The Umatilla Tribe and the Inter-tribal Commission negotiated a series of agreements that allowed increased water flows and the removal of impediments. It took ten years of work, but by 2000, seventy years after they disappeared, salmon began to return to the Umatilla in significant numbers.

It is important to note that, in addition to the four tribes in the Commission, many other tribes in the Basin are also involved in salmon restoration efforts. The Northwest Indian Fisheries Commission is a coalition of twenty tribes in western Washington. These tribes are outside the Columbia River Basin, but they all depend on a healthy Columbia River fishery. The Upper Columbia United Tribes represents five reservations in the upper reaches of the river, and has been particularly vocal about mitigation for the “blocked areas,” a reference to the Columbia River above Grand Coulee Dam, and the Snake River above Hells Canyon Dam, where anadromous fish runs were extirpated by the construction of dams without fish passage.

Private interests and state and federal agencies have gradually accepted the tribes as partners in the management of the river. Even the Bonneville Power Authority (BPA), the premier advocate for unbridled hydropower in the basin, recognizes tribal interests and includes the tribes as one of the “three sovereigns” along with state and federal interests. Furthermore, BPA has funded tribal research. A recent report by three federal agencies (BPA, the Army Corps of Engineers, and the Bureau of Reclamation) included a section titled “The Sacredness of the Natural World,” which explains the native perspective. The inclusion of this section contrasts with the numerous photographs included in the publication that depict heavy equipment and large dams, which are typically accompanied by glowing reports of “progress” conquering the river. That contrast is testament to the dramatic scope of conflict over

162 Id.
163 Id.
164 See Two Worlds, supra note 153, at 8.
166 See id.
168 Idaho Dep’t of Fish and Game, supra note 125.
170 Id.
171 Id. at 4–17.
the Columbia River today. The tribes are fighting for their survival by fighting for the restoration of the salmon. But they are just one of many powerful interests in the basin, and the conflict between the competing interests promises to continue into the future—unless the salmon do not survive, and there is nothing left to fight over.

CONCLUSION

These four case studies illustrate the breadth and diversity of restoration projects that involve American Indian tribes. They are part of a larger effort on the part of both tribal and non-Indian interests to return rivers to a more natural state. For example, in the Missouri River Basin, there are close to thirty tribes, many of them negatively affected by the river’s development, that are working with the U.S. Army Corps of Engineers to improve the natural function of the river, protect wetlands, and improve water quality.\(^{172}\) Also, the Miccosukee and Seminole Tribes are involved in the effort to restore the Florida Everglades.\(^{173}\) The Columbia River fishing tribes were part of the coalition that convinced Pacificorp to remove Condit Dam on the White Salmon River.\(^{174}\) The Pueblos along the Rio Grande River have been instrumental in forcing improved water quality in that river, and have supported efforts to restore the endangered silvery minnow.\(^{175}\) And three tribes, the Hualapai, Colorado River, and Cocopah Tribes, are participating in a multi-agency effort to restore riparian habitat along the lower Colorado River.\(^{176}\)

The effort to restore tribal rivers also played a role in negotiated Indian water rights settlements. Some tribes included river restoration or protection in their settlement agreements. The Northern Ute settlement provided for the restoration of lower Rock Creek.\(^{177}\) A provision in the Shoshone-Bannock settlement allowed the tribes to restore wetlands along the Snake River at Fort Hall Bottoms.\(^{178}\) And the Pyramid Lake


\(^{174}\) COLUMBIA RIVER INTER-TRIBAL FISH COMM’N, supra note 118, at 33.


\(^{177}\) McCool, supra note 4, at 150.

\(^{178}\) Id. at 153–58.
Paiute settlement was premised almost entirely on the goal of restoring natural flows to the Truckee River and preventing Pyramid Lake and its unique fish species from disappearing.\textsuperscript{179}

In a larger sense, these river restoration projects are really tribal restoration projects; they are part of an effort to restore cultural tradition, sovereignty, and self-reliance. It is clear in the long run—seven generations—that tribes must save rivers in order to save themselves. The land is incomplete without its rivers, and thus it cannot effectively serve as a homeland, or even a habitat for all living creatures—including humans—absent river restoration. For two-hundred years the unbridled policy of the United States was to dam and divert rivers. Nearly all of America’s rivers have been dammed, diverted, leveed, or channeled. Bringing a portion of them back to life will serve the long-term interests of society, but it is critical to the survival of those Indian tribes that have been relegated to a tiny portion of their ancestral lands; they cannot afford to degrade what little they have left. For that reason, tribes stand to gain the most from a new era in national water policy that emphasizes river restoration.

\textsuperscript{179} Id.