

DANIEL McCOOL

Integrated Water Resources Management and Collaboration: The Failure of the Klamath River Agreements

Abstract: Integrated Water Resources Management (IWRM) is one of the most utilized models in water policy and administration. One of the crucial components in IWRM is collaboration, where multiple stakeholders negotiate solutions. This article explores the role of collaboration in one of the most contentious water conflicts in the nation—the Klamath River. The range of stakeholders is enormous and complex, including Indian tribes, farmers, fishermen, recreationists, environmentalists, advocates of endangered species, two states, and multiple federal agencies. The parties in the Klamath Basin negotiated three settlements to resolve many of the major issues. However, the U.S. Congress failed to approve the settlements in late 2015, effectively ending this long-term effort to resolve these vexing issues through collaborative negotiations. This conflict is analyzed using a multimethod approach, and discusses how the failure of the settlement process can provide insights into the role of collaboration in IWRM, and suggests refinements to the model.

Keywords: Integrated Water Resources Management (IWRM), Klamath River Basin, Klamath Bureau of Reclamation, Klamath Irrigation Project, Klamath Hydroelectric Settlement Agreement (KHSa)

Integrated Water Resources Management (IWRM) is an umbrella concept that encapsulates modern principles of water policy and administration.¹ A fundamental component of IWRM is collaboration among stakeholders, usually through a process of negotiation.² Indeed, collaborative negotiation is used to resolve most of the world's water conflicts and is “at the center of solving future water conflicts.”³ However, collaboration cannot be a panacea,

it may be difficult to achieve, and it may not, in the end, lead to a resolution of the conflict. That is precisely what happened in the Klamath River Basin, where years of collaborative negotiation yielded three agreements, only to be scuttled at the end of the process. This article analyzes the issues in the Klamath Basin and the role of collaborative negotiation in the effort to reach an agreement over water allocation. It concludes with a proposal to develop a more refined notion of collaboration in IWRM models and its effectiveness in solving water issues.

The bitter conflict over water in the Klamath Basin is one of the longest and most complex controversies in western history, appropriately characterized as a “water war.”⁴ The Klamath is an unusual river, draining 9.5 million acres and wandering through southern Oregon before heading into California on its way to the coast. The river feeds numerous sinks, wetlands, and lakes. The upper basin is home to the endangered short-nosed and Lost River suckers and six national wildlife refuges.⁵ The Klamath Tribes inhabit this area, and traditionally survived on sucker fish. The upper basin is also the location of the massive Klamath Bureau of Reclamation project, which provides water to about 210,000 acres of agricultural land.⁶

The lower basin, below Klamath Lake, historically supported salmon runs that exceeded a million fish—the third largest run on the West Coast. In recent years that run has dipped below 30,000, and current runs are threatened by prolonged drought and disease. There are four hydropower dams owned by a power company, PacifiCorp, on the lower river that block migrating fish from the upper section of the river. The Yurok, Karuk, and Hoopa Tribes—all salmon eaters—are located in the lower basin near the coast. It is the federal government’s unenviable task to provide water for the bureau’s irrigation project, meet its treaty obligations to the Indian tribes, protect endangered species, maintain area wildlife refuges, and regulate both sport and commercial fishing in the area. There is sufficient water for some, but not all, of these uses.⁷

In 2001, the government cut off the water supply to the irrigation project—in midsummer—to protect endangered species. That provoked a virtual uprising among local farmers, and they forced their way into the main headgate and opened the valve to illegally divert water. The following year, the government reversed priorities and gave the farmers all they wanted, but did not provide sufficient flow for anadromous fish. As a result, in excess of 33,000 adult salmon spawners died at the mouth of the river.⁸

Fishermen from dozens of coastal towns, Indian tribes, and environmental groups howled in protest.⁹

Anger against the bureau was so intense that, when one local man got a job with the bureau in 2006, he said he was “going to work for the bad guys.”¹⁰ In Klamath Falls, Oregon, after the water turnoff, that attitude was common. There is tremendous historical irony in that characterization. Over one hundred years ago, at the urging of the states of Oregon and California, the bureau came to this area three years after the passage of the 1902 Reclamation Act and began work on a massive project to drain lakes and wetlands, provide irrigation water for the reclaimed lands, and then pump the excess water back up to the Klamath River. To accomplish all of that, the bureau had to construct a very complex and expensive system of water conveyances. The federal government built this project to give families an opportunity to start a new life with free land, subsidized water, and a broad panoply of assistance programs. When the project was authorized, a local newspaper headlined: “Ranch Owners Falling All Over Each Other in Their Anxiety to Get Government Water.”¹¹ Another headline read: “The People of Klamath County Declare Unanimously in Favor of Government Irrigation. . . . The Eyes of the World are Upon Us.”¹²

In 2001, some of these same families were seriously talking about armed resistance against the same government agency that built their project. The confrontation became potentially violent, and the media descended on the little town of Klamath Falls. Once more, the eyes of the world were focused on the Klamath Project. To understand the complexity of the problem, it is necessary to understand the physical characteristics of the bureau project.

The Link River Dam, which stands athwart its namesake river, is not big, with a height barely topping twenty feet. But a big dam was not necessary here; a natural reef, now partially removed, impeded water passage at this site, just below the outlet of the Upper Klamath Lake. The dam was completed in 1921 by the local power company and later deeded to the bureau. Its purpose was to raise the level of Upper Klamath Lake a few feet and allow the bureau to divert its waters into a nearby canal.

As they stand today, the Link River Dam and the nearby diversion canal speak volumes about the conflicts and changes that have taken place in this small farming community over the last decade. The dam’s concrete is aging, as is a crumbling fish ladder, built in 1926. A \$3 million fish ladder was built in 2003 and specially designed for the slow-moving suckerfish. Just upstream of the dam is the A Canal, the primary conduit of water to the bureau’s project lands to the south. At the entrance to the canal, a \$17 million fish filter stands

guard in front of the headgates that control flow into the canal. The complex apparatus at the A Canal headgates, which includes multiple layers of filters, “fish friendly” pumps, a counting room, and a fully automated operating system, demonstrate the lengths to which the bureau is willing to go to solve its endangered species problems while maintaining water deliveries to its project. The bureau is bound by law to avoid jeopardizing the endangered short-nosed and Lost Lake suckerfish and coho salmon. But it is bound by politics to avoid repeating the high-profile conflict that occurred here in 2001, when the water wars of the West nearly erupted into bloodletting. The conflicts over endangered species, water quality, recreational benefits, and tribal rights had turned into a donnybrook, but that impasse eventually gave rise to an effort to reach an amicable settlement through negotiation.

KLAMATH IRRIGATION PROJECT HISTORY

Construction on the Klamath Project was initiated in 1906 by the nascent Reclamation Service and continued episodically for sixty years. Unlike most reclamation projects, this one was not just a matter of damming a river and diverting water into laterals. The Klamath Project is primarily a drainage system. The bureau dewatered two large lakes, Tule and Lower Klamath. The former was a terminal lake in a closed system that began with Clear Lake, meandered via the Lost River through two states, and dead-ended at Tule Lake. The Lower Klamath Lake was a natural overflow basin for the Klamath River. It is thirty feet lower in elevation than the river, so high spring flows in the river would spill into Lower Klamath Lake. These two lakes trapped a lot of water, and together they created a huge complex of wetlands. The bureau built the A Canal to deliver water from Upper Klamath Lake to the reclaimed lands in these basins, but that was only half of the engineering challenge.

Because Tule and Lower Klamath Lakes were in closed basins, the farm runoff had to be pumped uphill back into the Klamath River to the north. This complicated hydrologic situation required the construction of eight dams, 185 miles of canals, 490 miles of laterals, 545 miles of drains, and a system of electrical pumps. Some of the lowland areas could not be completely reclaimed and they served as sumps or overflow areas. For that reason, these lands retained most of their natural wetland characteristic and were designated as four national wildlife refuges between 1908 and 1928.¹³ Thus, the bureau’s project has the “dual purpose of serving agricultural uses and providing for the needs of wildlife.”¹⁴ This system worked well as long as there

were no other demands on the Klamath River system and the government supported the notion that farmers were more important than fishermen and Indians.

The irrigation project required a very complicated design with multiple features. This complexity allows the bureau to reuse water within the project and efficiently irrigate more than 200,000 acres of land. But it also meant that the project needed a lot of electricity to power the pumps, so the bureau negotiated a deal with the local power company in the early days of the project; the federal government would allow them to build a series of hydro-power dams on the Klamath River in exchange for providing electricity to the farmers at a price well below market value.¹⁵

To make sure there was sufficient water for project lands, the bureau filed claim to all the unappropriated waters in the project area in 1905. The states of Oregon and California passed legislation deeding land to the project under provisions of the Reclamation Act. The bureau then issued contracts—hundreds of them—to provide irrigation water to project farmers, subject to “the availability of water.” Today, that means that water may not be available to fulfill contract obligations “due to drought, a need to forego diversions to satisfy prior existing rights, or compliance with other federal laws such as the Endangered Species Act.”¹⁶ In short, the farmers are dependent on the bureau for their water, but the bureau’s water is subject to significant constraints and competing demands.

To make sure there were plenty of farmers for the project, the U.S. government opened the area to homesteading. The first lands were homesteaded in 1917, and the bureau continued to offer free homesteads until 1949. The water users were expected to repay the costs of the project, but as with all reclamation projects, the repayment provisions were weakened over time until they covered only a small portion of the actual costs of constructing and operating the projects. In other words, the Bureau of Reclamation lured people to the area by building an enormous, complex drainage and delivery project, offering free land, power at a fraction of market price, and very lucrative repayment terms. The lure worked; hundreds of families uprooted themselves and moved to the Klamath Basin. They believed in their government and its reclamation program—as long as it was handing out benefits. With the water-delivery contracts in place, farmers gradually forgot that their contracts guaranteed water only if it was legally available.

It is often said that “perception is reality.” This is especially true in politics, where hearing and seeing can be a very selective process. To the farmers on the Klamath Project, their future was secure, but in reality their existence

was much more precarious than they could have imagined because the government, in its zeal to attract and appease irrigation farmers, compromised two other groups of people: downstream fishermen, and Indian tribes.

SUCKERS AND COHO

Fish and rivers have the bad habit of repeatedly crossing jurisdictional boundaries of states, nations, or federal agencies. The Klamath River originates in central Oregon and then forms the massive Upper Klamath Lake. From there it flows generally south, then takes a hard right turn to the southwest, crosses into California, and picks up several tributaries, including the Shasta, Scott, and Salmon Rivers. Then, about forty-five miles from the ocean, the significant flows of the Trinity River come up from the south and join the Klamath for its run to the sea.¹⁷

In historic times the Klamath/Trinity Basin was hog heaven for salmon and steelhead, not quite on the scale of the Columbia/Snake, but still the third largest salmon producer in the Lower 48. The salmon could run up the Klamath beyond Upper Klamath Lake, a distance of more than 250 miles. But human settlement and resource development have not been kind to the salmon of this basin. Dams, diversions, impaired water quality, and habitat degradation have worked together to dramatically reduce salmon numbers. Especially hard hit was the coho salmon. By the 1980s their numbers had dwindled to the point where their future was in doubt. In 1997 the coho salmon was declared threatened under the Endangered Species Act. Because salmon are an anadromous commercial species, they fall under the jurisdiction of the National Oceanic and Atmospheric Administration's Fisheries, generally known as NOAA Fisheries (formerly called the National Marine Fisheries Service) in the Department of Commerce.¹⁸

At the upper end of the Klamath system, in the vicinity of Upper Klamath Lake, an entirely different kind of fish was undergoing its own drama. Two species of suckerfish, the short-nose and the Lost River, had been a principal source of food for Indians since time immemorial. It was so plentiful that the Klamath People, and other tribes in the area, worshiped the fish as a giver of life.¹⁹ The suckers lived most of their lives in the lakes in the Klamath and Lost River watersheds but moved up into springs and streams to spawn. But, like the coho, the suckers began to suffer from changes in the watershed, and in 1988 both species of suckers were declared endangered.²⁰ Because these fish live solely in fresh water, they fall under the jurisdiction of the U.S. Fish and Wildlife Service in the Department of the Interior.

Subsequent years saw even more problems for the salmon. In 2000, an estimated 300,000 juvenile salmon died in route to the sea. Fishermen and environmental groups filed a lawsuit, claiming the government was not enforcing the law. In March 2001, a federal judge agreed, and ordered the bureau to consult with NOAA Fisheries to develop a plan to save the salmon.²¹

The Endangered Species Act spells out a fairly precise procedure that federal agencies must follow. Because the operation of the Klamath Project had a direct impact on the threatened coho and two endangered suckerfish, in 2001 the Bureau of Reclamation was required to write a biological assessment for all three species. The bureau's assessment described the measures they felt were necessary to protect the fish while also serving the interests of the irrigators. NOAA Fisheries and the Fish and Wildlife Service then responded by issuing the required biological opinions as to whether the bureau's plan would jeopardize the fish. All of this occurred in a year of significant drought.

The biological opinions—NOAA Fisheries on the coho, and Fish and Wildlife Service on the suckers—disagreed markedly from the bureau assessment and determined that continued operations under the bureau plan would pose an immediate threat to the endangered species. The biological opinions, and the successful lawsuit filed by fishermen, left the Secretary of the Interior no choice but to declare that the needs of the fish must take priority. In the drought-plagued summer of 2001, the threat to the three endangered species forced the Bureau of Reclamation to conclude that insufficient water was available (remember that clause in the farmers' water contracts) to meet the needs of the irrigation project. The headgate on the A Canal was closed and the farmers did not receive most of their water allocations that summer. That provoked an angry and violent reaction from local farmers.

THE BUCKET BRIGADE

In the summer of 2001, crops in the Klamath Project withered in the field, and old hatreds, rage, and frustration grew like well-watered weeds. When people are faced with unattractive options, and life as they know it is threatened, there is a fairly predictable behavioral response. First, it galvanizes the victims, provides them with sympathetic media coverage, and pushes normally uninterested parties into their corner. Second, it gives credence and attention to more extreme elements and gives them a soapbox from which to push the debate in a radical direction. And third, it leads people to

look for scapegoats. All of these occurred in the Klamath Valley in the aftermath of the crisis of 2001.

After their irrigation water was shut off, eighteen thousand furious farmers and their friends came together in the streets of Klamath Falls and defiantly emptied symbolic buckets of water. Armed with rifles and shotguns, they marched to the headgates of the A Canal and illegally forced them open. Their cause immediately became known as the Bucket Brigade. Their effort was a symbolic act of defiance that captured media attention all over the world. Its leaders blamed Agenda 21 (a voluntary United Nations program), what they called “junk science” by federal agencies, environmental groups, and, most of all, Indian tribes.²²

Usually it is environmentalists who complain about junk science, especially during the George W. Bush administration. But the Klamath Project irrigators had a trump card in their pocket in the science debate. After NOAA Fisheries and the Fish and Wildlife Service issued the biological opinions that led to the water shutoff, the secretary’s office of the Department of Interior asked the National Science Academy’s National Research Council to evaluate those documents as well as the assessment done by the Bureau of Reclamation. A committee of scientists—and some nonscientists who were appointed for political reasons—was hastily pulled together.²³ In 2002 they issued an interim report with a strongly worded conclusion:

The committee concludes that there is no substantial scientific foundation at this time for changing the operation of the Klamath Project to maintain higher water levels in Upper Klamath Lake for the endangered sucker populations or high minimum flows in the Klamath River main stem for the threatened coho population. The committee concludes that the USBR (Bureau of Reclamation) proposals also are unjustified, however, because they would leave open the possibility that water levels in Upper Klamath Lake and minimum flows in the Klamath River main stem could be lower than those occurring over the past 10 years.²⁴

In other words, according to this study compiled by an ad hoc group of both scientists and policy advocates, nearly all the federal scientists and water bureaucrats got the numbers wrong.²⁵

This was powerful ammunition. Environmental and fisheries groups immediately prepared a response, relying on their own experts, and, like many modern-day environmental controversies, the debate bogged down into a war of scientific experts.²⁶ But something more was at work here, and it

had little to do with precision science and a lot to do with political reality. The federal agencies had to do something to save the endangered fish—that is required by law. But they had few options. In the Upper Klamath Valley, there are more acres irrigated outside the bureau project than within it. Downstream, there is considerable irrigation along the Klamath's tributaries, especially along the Scott and Shasta Rivers. But these are long-held private water rights. The bureau's Klamath project was the only place the agencies could force a sudden and dramatic reduction in water diversions. So, the only feasible place to cut water diversions was at the federal irrigation project. The 1,500 family farms that relied on project water bore the brunt of one hundred years of myopic development, poor fisheries management, and overappropriation of water.

That was the basic message of the Klamath Water Users Association. According to its former director, Greg Addington, there was no reason to make the project irrigators the losers in 2001. "You can't just look at the Klamath Project and say that's the source of the problem. Our dilemma is that at Klamath there is a spigot that you can turn off, because it is a federal project."²⁷ The Klamath Water Users Association argued that there are many reasons for the decline of the fisheries—a claim borne out by a Fish and Wildlife study completed in 2003 and the 2007 National Research Council study—and that the irrigation project has only a partial role in that demise. The project's water users like to point to others, especially downstream irrigators and overfishing, as the real culprits.²⁸ Another cause, which the farmers do not like to mention, are the four hydro dams further downstream—the source of their cheap electricity. I analyze each of these possible causes below.

The first factor was irrigation in the lower river in Siskiyou County, California, downstream from the Bureau of Reclamation project. That county's economy is still largely comprised of farming and related activities. County Board Supervisor Marcia Armstrong argued that they should not be blamed: "The Upper Basin always says, let's mitigate in the lower basin, but we have these very real constraints."²⁹ In an interview, Armstrong pointed out that her county had already invested a lot in, as she put it, "salmon friendly things," such as fish screens on the Scott River diversions, and building fences along the main stem of the Klamath to keep the livestock out of riparian vegetation. She also noted that the water diversion rights along these rivers are privately held by family farmers who, in some cases, have been farming here for five generations. Thus, although downstream farmers clearly have a negative impact on salmon, it would be nearly impossible to curtail diversions there.

A second possibility is that overfishing, by both recreational and commercial fishermen, could be the reason the salmon numbers are so low. The principal stakeholder group for fishermen is the Pacific Coast Federation of Fishermen's Associations. They, like the farmers, blame everyone's favorite bogeyman, the federal government. But unlike the farmers, they also blame water diversions for irrigation, poor water quality, and hydropower, for the near-total destruction of their industry: [Declining salmon runs were] "caused primarily by declining water flows and deteriorating water quality from the Upper Klamath Basin. In a very real way, the Bureau of Reclamation has put us out of business. Water needed to protect some of the West Coast's largest and most economically valuable salmon runs has been systematically shifted upriver to grow potatoes, sugar beets and onions in the middle of a desert."³⁰

It is true that the Klamath was once heavily fished. When the salmon runs were healthy, totaling a million fish per annum, a series of thriving fishing towns and canneries spread out along the coast of northern California and Oregon. The fish stocks are now about four percent of the natural run, and the Fishermen's Federation estimates that they have lost \$100 million in economic activity.³¹ Commercial fishing closures have become common since the early 1990s. If virtually no fishing is taking place, and overfishing was the best explanation of the salmon decline, then we could expect the runs to return to historic levels, but that has not happened.

Glen Spain, the director of the Pacific Coast Federation, points a finger directly at the Bureau's irrigation project. "It's a pretty far stretch to blame 'over-fishing' for federal Bureau of Reclamation actions, largely politically motivated, that cut water in the river to a warm trickle, killed off nearly 70,000 spawners and as a result seriously depleted fish runs in 2005 and 2006 to the point of near collapse."³² His bleak forecast proved to be correct; salmon fishing collapsed completely in both 2008 and 2009, closing the entire fishery along the Californian and Oregon coasts.³³ Recent years have seen increased runs, but there are significant problems with drought, low water flow, and disease.³⁴ To Mr. Spain, the solution to the problem is to shift attention to a different kind of overuse: "Over-fishing has not been a significant problem in recent decades. I only wish 'over-farming' and water diversions throughout the Klamath Basin were as well managed."

A third possible "culprit" that contributes to the demise of the salmon are the four PacifiCorp hydro dams in California. Copco 1 Dam was built in 1918 without fish passage, blocking the entire upper Klamath Basin. Copco 2 Dam was built just downstream in 1925, also without fish passage. In 1962 a much

larger dam, Iron Gate, was built further downstream, without passage but with a fish hatchery. As a result, more than three hundred miles of salmon habitat was blocked. In addition, these dams dramatically altered the flow regime; now river flows are adjusted to meet the needs of power users, not fish. These dams, along with four smaller dams upstream, produce only 151 megawatts of power out of a company portfolio of 8,400 megawatts.³⁵

There was considerable pressure on PacifiCorp to resolve the fish problems caused by the dams in order to renew its license with the Federal Energy Regulatory Commission (FERC), which expired in 2006. PacifiCorp estimated that it would cost over \$100 million to equip its dams with fish ladders. In its 2004 FERC application, PacifiCorp proposed to modify certain operations but did not consider removing the dams. The company also refused to consider adding fish passage, alleging that anadromous fish could not survive in the Upper Klamath due to “poor water quality; disease; predation; mortality through fish passage facilities, lakes and reservoirs; and unsuitable stock genetics.”³⁶ In effect, they blamed other water users for the salmon problems.

A number of interests arose in opposition to the PacifiCorp position. In 2004 the California Energy Commission proposed dam removal as a viable alternative, a position shared by the California State Water Resources Control Board: “The key to stopping the decline of salmon is the removal of dams and/or the protection and/or restoration of their spawning streams. Dam decommissioning, therefore, must be an alternative fully evaluated.”³⁷

A coalition of fishing associations, environmental groups, and Indian tribes began pushing hard to remove the four PacifiCorp dams. In 2003 the river-restoration advocacy group, American Rivers, listed the Klamath as the nation’s second-most endangered river. In 2006 the American Sportfishing Association and eleven other fishing groups began a concerted effort to remove the dams.³⁸ PacifiCorp resisted, and suggested that hauling fish around the dams might be a better alternative. However, the California Energy Commission argued that removal was the cheapest alternative available to the company. Removal of the PacifiCorp dams would alleviate some of the river’s problems, but not all of them; the issues of water quality, insufficient flow, and the survival of the suckerfish would remain.

These problems are all exacerbated by the irrigation project. Dam removal is part of a multipronged solution that includes changes to the Klamath Project. For those farmers in the bureau project, their view of the problem is shaped by the crisis of 2001 and a sense of being under siege from numerous adversaries. That has given rise to some unsettling finger pointing.

SCAPEGOATS

Clearly no one wants to accept responsibility for the declining fisheries in the Klamath River. Some in the basin blame all their problems on the federal government. That strategy would do nothing to solve the endangered-species problems, but it would allow irrigators to wash their hands of any responsibility for a solution. Also, the federal government delivers a lot of money to Klamath County. Another farmer, who asked not to be identified, opined that the federal government, in its zeal to make amends for the water shutoff, has spent more money on project farmers since 2001 than the farmers would have made if their crops had matured and gone to market. When a bureau official was asked about the subsidies going to project farmers, she said: "I'm not too forthcoming about that kind of thing."³⁹ The data to substantiate that claim is not available to the public, but it is clear that simply telling the world to go away is not a viable solution; it would cost the Klamath Basin its subsidies, fail to meet Indian trust obligations, and utterly devastate both the sport and commercial fishing industries.

Many other people blame their problems on the Indians, working in conjunction with environmental groups. According to Greg Addington of the Klamath Water Users Association, "If you'd asked any member of this organization in 2001 if Indian tribes were behind the whole problem, they would say yes, they caused the problems."⁴⁰

At one of the contentious water meetings in Klamath Falls, a Klamath Indian man rose from his chair. The meeting was almost over, and people were anxious to get home, but the man wanted to speak. He said he understood how the farmers felt. He did not want to see them lose their lands, their livelihood, their homes. He did not want to see them treated like second-class citizens, abandoned by a distant government. He understood why they did not want their children to move away, their community slowly suffocating, their families broken apart. He said he understood their anger, their depression, their frustration. Indeed, he understood these things all too well, because the Indian people had experienced all of these torments, and he did not wish such a fate on anyone.⁴¹

The Klamath Project is surrounded by Indian people, although some are at a considerable distance. Upstream, north and east of Upper Klamath Lake, are the Klamath Tribes—Klamath, Modoc, Yahooskin. The other tribes in the basin are far downstream along the coast—the Yurok, the Karuks, and on the Trinity River, the Hoopas. The Klamath traditionally relied on suckerfish for sustenance; the coastal tribes depended on the salmon. It is difficult

for non-Indians to understand that these fish are not just “food.” Rather, they are part of the Indians’ essential web of existence, part of their being. To rob them of fish is to steal their identity.

For the Klamath Tribes, the suckerfish play a central role in their culture. Elwood Miller, a tribal member, described the role of the two endangered suckerfish, using their tribal names: “One of our most important ceremonies celebrates the return of the *c’wam* and *kuptu* in the spring. The ceremony is central to the tribes’ beliefs and spiritual expressions regarding the cycle of life, and especially the renewal of life. It is also an important expression of our role as stewards of these resources that the Creator has provided.”⁴²

Troy Fletcher, executive director of the Yurok Tribe, made a similar observation in regard to 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.”⁴³

Many non-Indian people have been unable to understand the direct economic consequences that fish losses have caused tribes. The Native American Rights Fund, which represented the Klamath Tribes, criticized the National Science Foundation’s interim report, cited above, because it considered economic consequences to farmers but failed to mention the economic harm to Indian people:

The only “economic losses” referenced by the Interim Report are those incurred when “irrigators were deprived during a severe drought of traditionally available water” resulting in “severe economic consequences of this change in water management.” No equivalent awareness is expressed of the fact that the Klamath Tribes’ fisheries have been closed now for more than 15 years and that the economic and social consequences to the Tribes are as damaging, and of longer duration, than the 2001 losses to irrigators. That the Tribes used to harvest tens of thousands of pounds of fish but are now restricted to two fish a year for ceremonial purposes is a contextual fact readily available to, but not referenced by, the Committee.⁴⁴

To the Indian people of the Klamath Basin, their very survival as a distinct culture is at stake. But some non-Indian people in Klamath Falls have a distorted view of Indians that makes them a convenient scapegoat. A Bureau of Reclamation employee shared this opinion of the Indians: “The Indians

want control over our land and water. The whole thing in 2001 was about power and money for the Indians. I'm not racist—I grew up with them—but they don't care about the suckerfish. Suckers are trash fish and there's not an Indian up there who would eat one."⁴⁵ An area farmer blamed the "bad" science in the biological opinions on the Indians: "The Fish and Wildlife Service was relying on tribal biologists; they were doing the science via consultation, and the whole federal government was bowing down to them."⁴⁶ Barbara Hall and Bill Ransom of the Bucket Brigade also blamed the Indians, and tied the water issue to the Klamath Tribes' efforts to reestablish their reservation, which was terminated in the 1950s.⁴⁷ "They have used the water situation as a bargaining tool; give us our land back, and we'll back off on your water. They don't really care about the suckerfish. I've seen Indians throw the suckerfish up on the bank to get rid of them; they won't eat them. Their tribal chairman, Allen Foreman, said if they got their land back they would side with the farmers on water issues and forget about the suckerfish."⁴⁸

Mr. Foreman vehemently denied that. "They have their facts mixed up; those words never came out of my mouth. That is just wishful thinking on their part." When asked about allegations that tribal members never ate suckerfish and that they are just trash fish, he said: "That is totally erroneous propaganda. Those fish were a staple to the tribes since the beginning of time. The misconception about them being a bottom feeding trash fish was just put out by people trying to eliminate them. This is the only place where those fish live; they live to be 30 to 40 years old, they grow up to 3 feet in length and weigh up to 30 to 40 pounds. The fact is we depended on them for subsistence, and would today if they were still available. The same thing is true for the salmon."⁴⁹ To Mr. Foreman, the fish issue is simply part of a larger problem of mismanagement of resources on lands that once belonged to his people.⁵⁰

Another member of the Klamath tribal council, seventy-two-year-old Bob David, remembered when the tribe was terminated—how terrible the experience was for the Klamath as a people. He also remembered when the suckerfish ran thick in the rivers. "When I was young, we always ate dried suckerfish—it was one of our staples. These days we can only take two fish a year, due to Fish and Wildlife Service limits. We don't like the fact that the fish have been depleted but we can live with that limit to get the fish back. We are hopeful the day will come again when the suckers are back."⁵¹

In 2006 the Klamath Tribes filed a notice of intent to sue the Bureau of Reclamation, alleging that the water level in Upper Klamath Lake is at least one foot below that required by law. This lawsuit fed the racist fury that pointed to Indians as the culprits. The fact that the Indians have worked closely with

environmental groups made them even more suspect in the eyes of the local Anglo water users. But that did not deter tribal members. As former Tribal Chairman Foreman put it, “They don’t want to share the resources they acquired from us. They want us to vanish, but that’s not going to happen. We were here for the last millennium, and we are going to be here for the next millennium.”

THE EVERGLADES OF THE WEST

There was a time, before the Bureau built the Klamath Project, when the area along the Oregon-California border was a vast wildlife nirvana of freshwater marshes, shallow lakes, and wet meadows that stretched across 350,000 acres. Situated directly on the Pacific Flyway, the Upper Klamath Basin gave temporary respite to millions of birds that came here to feed on the rich cornucopia of water-borne flora and fauna. From the coast, a million wild salmon would migrate upstream, enriching the biological stew and providing sustenance for everything from bacteria to bears. The region became known as the Everglades of the West.⁵²

But the Bureau and the power company got there before the wildlife lovers, and no Marjory Stoneman Douglas [instrumental in establishing Everglades National Park] stepped forward to warn the world that this place should be a national park. Eighty percent of the region’s wetlands were drained. The irrigation project was built on the upper river; the hydro dams were built on the lower river. The chinook and coho runs plummeted, and the suckers nearly disappeared. The remaining wetlands—small remnants of the original wetlands—were protected in six national wildlife refuges.

The task of speaking out on behalf of fish and wildlife has fallen on a diverse set of groups that includes environmentalists, Indian tribes, and both commercial and sports fishermen. When talking with environmental groups, it is difficult to believe they are referring to the same irrigation project, even the same river, as the farmers of Klamath Falls. To them, “the project” *is* the problem: “The Klamath Irrigation Project is the single largest water user in the entire basin, and the single largest source of water pollution. Extremely polluted agricultural runoff from project operations is spilled back into the river . . . causing water pollution problems in the river all the way to the mouth.” In regard to inadequate flow, environmental groups see the project as the single biggest culprit: “In 2002 [the year of the big fish kill] more water was flowing down the main irrigation canal inside the Project than was being released in the river.”⁵³

The big fish kill of 2002 galvanized the proponents of restoration much as the 2001 water shutoff brought together the farmers. But the fish kill and

the water turnoff the previous year made people realize that some kind of solution had to be created to prevent successive disasters. In 2005, Greg Addington of the Klamath Water Users Association began working with Troy Fletcher of the Yurok Tribe to improve relations between the irrigators and the tribe. These talks eventually evolved into negotiations over a settlement. Some, but not all, stakeholders were sufficiently interested in working toward settlement that a series of meetings were held in an effort to hammer out an agreement. As they talked, the situation grew more pressing. PacifiCorp's FERC license to operate its four Klamath dams expired in 2006. The following year the California Energy Commission, NOAA, and the Interior Department expressed a collective demand that the four dams be removed. And all sides feared what would happen if the area was hit by another drought.

A tentative settlement agreement was announced in January 2008, and two settlement agreements were signed on January 7, 2010.⁵⁴ However, several important parties refused to sign the agreements. The stated goals of the Klamath Basin Restoration Agreement (KBRA) are to “restore and sustain natural production and provide for full participation in harvest opportunities and fish species through the Klamath Basin; establish reliable water and power supplies which sustain agricultural uses and communities and National Wildlife Refuges; contribute to the public welfare and the sustainability of all Klamath Basin communities.”⁵⁵ A second agreement, the Klamath Hydroelectric Settlement Agreement (KHSA), provided for the possibility of removing four dams owned by PacifiCorp, which would open 421 miles of salmon habitat.⁵⁶ This would eliminate hydropower and slightly diminish the overall hydropower capacity of PacifiCorp, but costs to power consumers would actually decrease.⁵⁷

These two agreements were only a starting point; both required congressional authorization. The deadline for congressional approval was originally set for 2012 (later extended to 2014, and then 2015). In the meantime, conflict spiked again when water levels fell dramatically in 2010 and then again in 2013, prompting the Klamath Tribes, which have senior rights to the river's water, to make a call on the river.⁵⁸ This infuriated farmers and ranchers, who protested. Klamath County pulled out of the settlement agreements. And the following year, 2013, the Department of the Interior issued its final technical overview report of the final Environmental Impact Statement, and again recommended that all four dams be removed.⁵⁹ These continuing controversies were dealt with in yet another settlement just for the upper basin, negotiated by an ad hoc committee called the Klamath Basin Task Force. The “Upper Klamath Basin Comprehensive Agreement,” finalized in March 2014, created

a water-use program, a riparian program, and an economic development program for the Klamath tribes.⁶⁰ The governor of Oregon declared the agreement “nothing short of historic.”⁶¹

It looked as though a resolution to the long and bitter conflict over the Klamath was about to be resolved, even though the region was hit by yet another drought in 2014. Oregon Democratic Senator Ron Wyden introduced a bill in Congress in 2014 to authorize all three settlements; it did not make it out of committee, so he reintroduced it in 2015 with an authorization deadline of December of that year.⁶² However, his counterpart in the House, Oregon Republican Congressman Greg Walden, was opposed to any settlement that included dam removals. So, he drafted a competing bill that did not include removal of the four dams, and added a totally unrelated provision that would have transferred national forest land to local counties.⁶³ These changes were characterized as “poison pills” and a “known non-starter” by many of the stakeholders, including Senator Wyden.⁶⁴ This impasse killed all three settlements, which fell victim to the polarized politics of the U.S. Congress. An editorial in a local paper described this as “throwing into the trash years of work and collaboration.”⁶⁵

But the failure of the settlement bill could not stop the FERC process.⁶⁶ In February 2016, the federal departments of Interior and Commerce, the states of Oregon and California, and PacifiCorp signed an agreement to remove the four dams on the Klamath River. This will be the largest dam removal and river restoration project in history.⁶⁷ For the other stakeholders who negotiated the three settlements, the future is uncertain, to put it mildly.

CONCLUSION: IWRM, COLLABORATION, AND THE KLAMATH RIVER

The failure of the three settlements has important implications for other efforts to resolve contentious issues via collaborative negotiation, and offers a lesson in how we can refine the role of collaboration in IWRM models. Negotiated settlements have proven to be very effective in resolving numerous conflicts over natural resources.⁶⁸ However, IWRM should be refined to identify the variables that affect the success of collaborative negotiations, in four ways.

First, stakeholders should be categorized as either endogenous or exogenous; the former are those that are actually at the table negotiating; the latter are those parties that are not directly involved in the negotiation but have the power to interfere with implementation. IWRM tends to focus on the first group, but must also consider the veto power and obstructive potential of exogenous groups.

Second, the success of collaboration is a function of the zero-sum nature of the resource. In a basin such as the Klamath, where there is simply not enough water to meet all demands, there is less potential for a negotiated settlement. IWRM should be refined to include scenarios and procedures for dealing with zero-sum conflicts that are not amenable to the “let’s sit down at the table and talk” approach to water resources.

Third, it is essential that *all* major stakeholders collaborate on a settlement. This was never achieved in the Klamath Basin. On one side, Siskiyou County, California, vehemently opposed dam removal (three of the dams are in that county).⁶⁹ On the other side, the environmental group, WaterWatch of Oregon, opposed the settlements because it felt there was not enough water in the river to meet the requirements of the settlements. Also, the Indian tribes varied greatly in their support of the settlements, with the Yurok Tribe completely pulling out in 2014.⁷⁰

And finally, collaboration may be oversold; negotiated settlements are often characterized as “win/win” solutions that can be worked out via a neighborly process of reasoned discussion. But when stakeholders realize that negotiation is much more of a “win some, lose some” proposition that requires sacrifices, they suddenly become less agreeable. IWRM must recognize that some problems simply cannot be resolved via collaboration. This is especially true when many stakeholders perceive of themselves as victims. There is a long tradition in the American West of a sense of entitlement, a result of one hundred years of public policy when the give-away of natural resources was the prevailing policy of the U.S. government, ranging from the Homestead Act of 1862, the Mining Act of 1872, to the policies of the Bureau of Reclamation. When additional claimants to these resources showed up, they were fiercely resented: “The more entrenched the initial entitlement, psychologically or legally, the greater the resistance to negotiations.”⁷¹ Perhaps the next stage in the development of IWRM will focus on psychological issues and “mind-set.”

University of Utah

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