Reservations and Reservoirs:

Deferred Tribal Justice on the Columbia and Colorado River

by Emelie Frojen, 2016-17 State of the Rockies Project Fellow

This paper will analyze Native American water injustice, as well as representation in river policy and management in the Columbia and Colorado River basins. In recent years, water justice in these two basins has become a pressing issue. However, the means by which Native American water rights and representation are actualized from paper rights to wet water rights varies dramatically between the two western river basins. Despite the differences between the two basins, there is a strong commonality in that all Tribes experience a form of deferred justice, meaning there is a lag time between when the courts declare Native American water rights and when, if ever, those rights are tangibly quantified. Here, I analyze three Tribes as case studies: the Southern Ute Indian Tribe (Colorado), the Confederated Tribes of the Colville Reservation (Washington), and the Nez Perce (Idaho). This paper will examine the means of achieving water justice on the two rivers, and the issue of deferred justice, by seeking to answer the primary questions of: what is the cause of deferred water justice? What can be done to diminish it? How does settler-colonialism contribute to deferred justice? What does modern water justice look like, and what are some challenges and solutions to achieving it?

Introduction

West of the 100th meridian lies two great river basins that facilitates prosperity for half of the United States: the Colorado and Columbia Rivers. The Colorado River flows from its headwaters in the Rocky Mountains southwest through high desert plains to the Gulf of California. Colorado, Wyoming, Utah, New Mexico, Arizona, Nevada, and California all hold rights to some Colorado River water, and the 1922 Colorado River Compact is the main governing document that divides up the river water. The Columbia River headwaters lie in the Canadian Rockies, and flows southwest to meet the Pacific Ocean on the Oregon-Washington border. Seven states also have claims on this river—Washington, Oregon, California, Montana, Idaho, Wyoming, and Nevada—as well as Canada. The Columbia River is governed by the international 1964 Columbia River Treaty. The Treaty is currently in a ten-year review process to renegotiate the treaty's terms.

A commonality between both rivers and most waterways in the West is that a user's water right is determined by the process of prior appropriation. Rather than in the East, where users have a water right if their property borders a waterway, the concept of first-come first-serve rules in the west. The first party to divert the water from the stream and apply it to a beneficial use has the right to that much water indefinitely. The next to divert has the second highest priority right.

Although the Colorado and Columbia River basins are both west of the 100th meridian and are ruled by prior appropriation, they differ in many ways. The Colorado basin is defined by aridity that, through ambitious engineering projects, the federal government turned into prosperous farmland and sources of hydropower. Fights over Colorado water quantity rights are as old as the first settlers, and the stakes have only grown with time. In the Columbia basin, hydropower is the main use for the river.

Emelie Frojen is a 2016-2017 State of the Rockies Student Fellow. Emelie is from Corona del Mar, California and developed a passion for the outdoors through her childhood summers spent backpacking and rock climbing in the Eastern Sierra Nevada mountains. She will graduate from Colorado College in 2017 with an Environmental Policy degree and a double minor in Journalism and Resource Systems in the American West.

Run-of-the-river dams are used on the Columbia and its tributaries to produce up to 80% of the Pacific Northwest's electricity. The federal government, or private entities, can own dams, which makes regulating them a challenge. In addition, dams make it challenging for salmon, a source of sustenance for the physical and spiritual health of the Pacific Northwest Tribes, to return to their runs to spawn. Despite these seemingly different water issues, the legal system that resolves them is identical.

My research focused on three case studies pertaining to Tribal water justice. Each Tribe had water quantity rights issues as well as additional water related injustices. My first case study is the Southern Ute. Their water rights were adjudicated in the Colorado Ute Settlement Act; however, the Tribe still faces issues with how they can put that water to use. My next case study is the Confederated Tribes of the Colville reservation. The Confederated Tribes of the Colville Reservation pioneered Tribal water rights. Yet, the reservation suffers from serious water quality issues related to mining waste and the Grand Coulee Dam. The last case study is the Nez Perce, major stakeholders in the 2005 Snake River Basin Adjudication. The Nez Perce struggle to use water rights for instream flows to benefit endangered salmon. These three different Tribes face a variety of issues, however, they all face challenges in the ways that water rights issues continue to structure their futures.

All Tribes affected by prior appropriation law experience a deferred justice, meaning that there is a lag time between when the courts declared Native American water rights and when, if ever, those rights are tangibly quantified and delivered. I frame the experience of these three Tribes—the Southern Ute Indian Tribe, the Confederated Tribes of the Colville Reservation, and the Nez Perce—to argue that deferred justice in Tribal water rights is best explained by past legacies of settler-colonialism in resource access and alienation.

Tribal water rights are important because water settlements "are like modern day treaties" and they will affect the future generations of Indigenous and non-Indigenous people alike (R. Anderson, personal communication 2016). Executive Director of the Nez Perce, Rebecca Miles, said, "the courtroom is the modern-day battlefield," and the outcome of this new battle is paramount because "among all Tribes, water is the most sacred thing. Above food, water always comes first" (R. Miles, personal communication 2016).

Colorado Basin

The Colorado River Basin is governed by the Colorado River Compact and it is comprised of two basins. The Upper Basin includes Wyoming, Utah, Colorado, and New Mexico; while the Lower Basin has California, Arizona, and Nevada (see **Figure 1**). The compact was signed in 1922, a year with abnormally high flows for the river that has rarely been reached since. In its natural state, the river would flow through Mexico to the Gulf of California. A treaty was signed in 1944 that sets out water delivery requirements from the U.S. to Mexico. The United States, however, does not have to comply with the treaty in cases of extreme shortage, which is ill defined (Christensen, 2004).

In their 2004 paper, Christensen explains, "the Colorado River has the most complete allocation of its water resources of any river in the world and is also one of the most heavily regulated." Since the river is the main source of water for the most arid places in the United States, the value of that water is tremendously high. This, paired with extensive storage infrastructure, has led to the over allocation of the river. With over 90 reservoirs on the Colorado River and its tributaries, the infrastructure can store up to four times the river's average annual flow (Christensen, 2004). In times of drought, however, the current storage infrastructure loses more water to evaporation than water replenishing the reservoir.

Storage is essential on the Colorado River because the river supplies water to millions of people for various uses. While some of that use is for municipal or industrial purposes, most of the Colorado River's water is used for crop irrigation. The river irrigates approximately 2 million acres of land (MIT, 2012). In addition to these uses, the river is also valued for hydropower production and recreational opportunities, among other uses (MIT, 2012).

With use comes over use. The storage capacity on the Colorado River is facing a structural deficit. This economic term describes the current state of the Colorado River.

Figure 1: Colorado River Basin

The Colorado River Basin covers seven states, as well as parts of Mexico, and hosts one of the highest concentrations of tribal lands in the United States. Source: ESRI, Bureau of Indian Affairs, National Watershed Boundary Dataset, National Inventory of Dams, National Elevation Dataset, Pacific Institute.

If the river and its subsequent reservoirs are a bank account, then more money is being taken out in withdrawals than deposited. Use, evaporation, and diminished flows due to drought are to blame, and these combine to form the "structural deficit," complicating the future of the river.

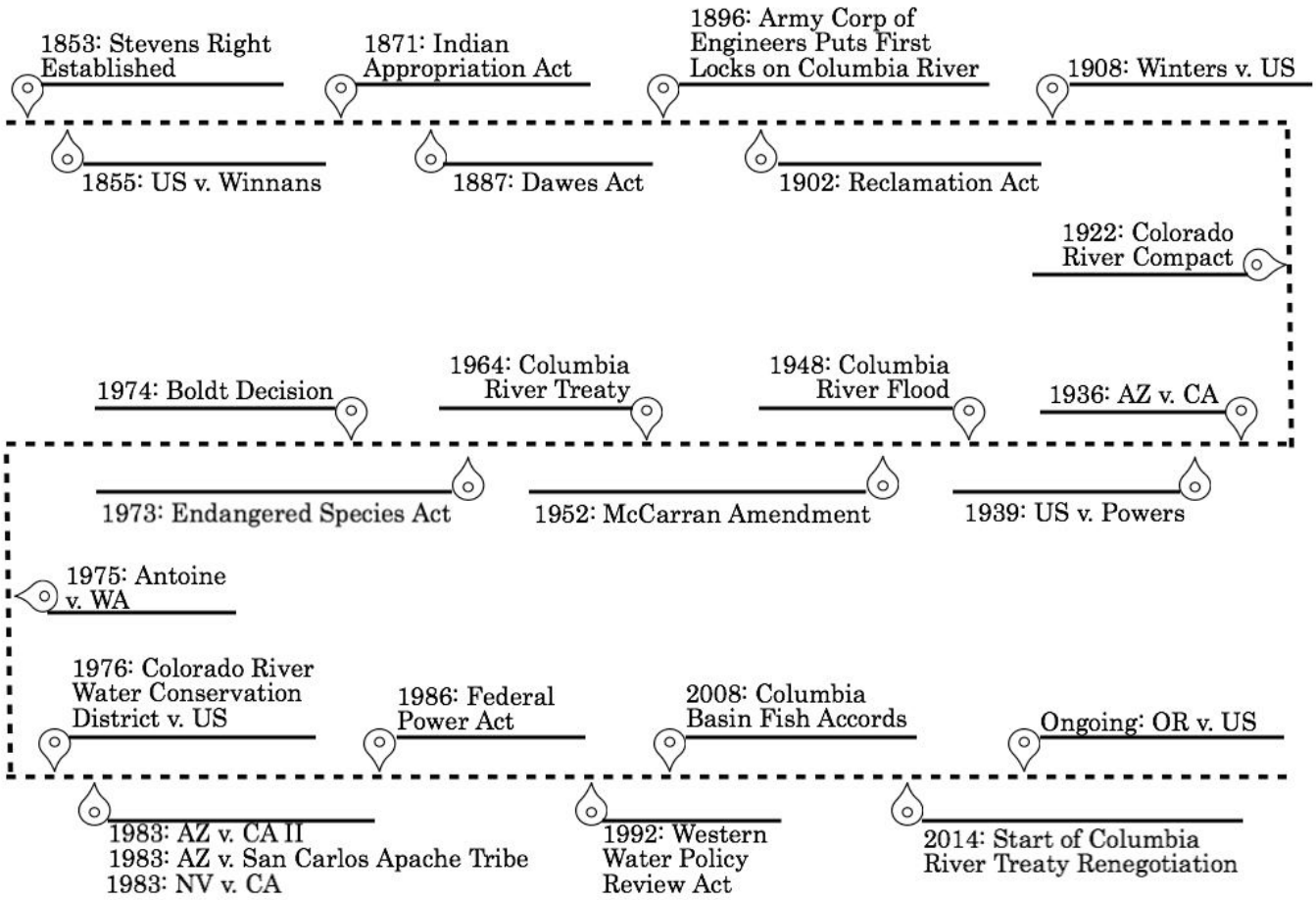
Within the basin, there is the Colorado River Basin Tribes Partnership, which is composed of 10 federally recognized Tribes: Ute Indian Ute, Ute Mountain Ute, Southern Ute Indian Tribe, Jicarilla Apache Nation, Navajo Nation, Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Quechan Indian Tribe, and the Cocopah Indian Tribe. Their mission statement reads:

> "The ten member Tribes formed the Partnership for the purpose of strengthening Tribal influence among the seven Basin States over the management and utilization of Colorado River water resources. Specifically, the Partnership intended to assist member Tribes to develop and protect Tribal water resources and to address technical, legal, economic and practical issues related to the management and operation of the Colorado River" (CRWUA, 2016).

Despite this it is often "difficult to find common voice because [the] upper and lower basins have different priorities as well as Tribes having different values," as one river stakeholder put it recently (S. McElroy, personal communication 2016). Although these Tribes have different values and political power, they share a common experience with settler-colonial attitudes that shaped Native American federal policies.

The historical setting to understand Tribal water rights and deferred justice through a settler-colonial lens is imperative. For most Tribes, the historical trauma of past federal policies and actions is still relevant today. Additionally, these old laws and court cases set important precedents that continue to have relevance. Most significant federal policies, acts, and ideals that govern the west started in the mid to late nineteenth century through the promotion of non-Tribal industry in the western half of the United States (see **Figure 2**). Treaties were and still are the primary source of Tribal sovereignty and rights in America. Yet the roots of most federal policy started as early as 1778, and by 1871 with the Indian Appropriation

Figure 2: Timeline of Native American Water Law



Act, "the United States negotiated and ratified 367 Treaties with Indian Tribes" (Anderson, 2000). These structured the pathways and dependencies of many Tribal entities for water in the American West. The Indian Appropriation Act of 1871 prohibits the United States from making any new treaties with Tribes. The constitutionality of this act is up for debate since Tribal rights and sovereignty comes from treaties. However, the act has yet to be challenged directly in the Supreme Court. "Since…[1871], Indian policy has been created and implemented through the legislative process and executive agreements" (Kannan, 2008).

A little over a decade later came the Dawes Act of 1887, which was the most prominent of the western policy acts geared towards transforming Indians into American citizens. Known as the General Allotment Act, it promoted the development of non-Indigenous water-intensive economies, such as agriculture and mining, through parceling out property to those who first journeyed out west (Anderson, 2015). Specifically, "the Dawes Act intended to fragment Native American reservations into individual land holdings that broke up the collective land and weakened power of the Tribes as sovereign, diverse bodies" (Semlow, 2015). With that, "the surplus lands within reservation boundaries were opened to homesteading and other forms of use under the laws encouraging settlement of the public domain" (Ibid.). Thus, Dawes would act in concert to transform identity and re-regulate property under simple fee title ownership in accordance with other settler-colonial acts (like the Homestead Act of 1862).

With the promotion of agriculture in the west, there was a dramatic increase in demand for irrigation infrastructure. The Reclamation Act of 1902 began to establish a fund and a department of the federal government for just that—the Bureau of Reclamation. The fund was backed by the sale of public lands, and it "unambiguously emphasized the primary congressional objective of encouraging development of arid western land" (Burness, 1980).

It wasn't until 1908 that the land and water rights of Tribes were considered in the precedent setting case *Winters v. United States*. On January 6th, 1908 the Supreme Court came to an eight-to-one decision in favor of the Fort Belknap Native American Indian Reservation (Hundley, 1982). With regards to future rights, the Winters decision promulgated that "the Supreme Court has implied reserved Tribal rights to water when construing treaties and other legal instruments establishing Tribal reservations when water is necessary to fulfill the purposes behind establishing the reservation" (Anderson, 2010). However, what was left implicit in Winters was "the precise scope and extent of these rights in any treaty are unknown until quantified by a court ruling or an agreement ratified by Congress" (Anderson, 2010). One of the main purposes or values of the resulting *Winters Doctrine* was "basically to interject some equity into federal-Tribal relations in which Indian reservations were being "pulverized" by Dawes Act allotments" (Blumm, 2006). Although *Winters* was more of an exception rather than the rule, it established a solid future foundation for Tribes to reclaim lost water rights. However, during this time and after the *Winters Doctrine*, the federal government was spending exuberant amounts of money on western water developments for non-Tribal use, specifically on the Colorado River through the Bureau of Reclamation.

What was allocated to Tribes was specifically intended for agriculture, and contributed to promoting the government's ideal of Native American living a stationary agrarian lifestyle. This is specifically seen in the example of the Colorado River Indian Tribe (CRIT). "The government alternated between promising irrigation to incentivize Indian settlement, and threatening that if the CRIT did not take steps to increase their Indian population, the promised irrigation would never be completed and/or the land would be opened for white settlement" (Krakoff, 2013). With this, Krakoff outlines the two major themes of western development, "one is that desert lands had no greater use than to be irrigated and farmed. The other, a companion to the first, is that the solution to the West's 'Indian problem' lay in concentrating as many Indians as possible on small patches of their former aboriginal territories, and converting them to a sedentary and agricultural existence" (Krakoff, 2013). Due to this settler-colonial policy, settlements favor consumptive use over instream flows (R. Anderson, personal communication 2016). Tribal water rights perpetuated the ideal of stationary, agrarian people, "irrigation was imposed on the Colorado River Tribes as the colonial ideal of what water and water rights should be used for" (B. Cosens, personal communication 2016).

The 1952 McCarran Amendment created one of the

largest obstacles for Tribes today and notion of sovereign water rights. The amendment itself does not specifically address Tribes or water rights, yet the "U.S. Supreme Court ruled that the McCarran Amendment waived the federal government's sovereign immunity defense and gave consent for the government to be joined in state court suits determining the water rights of all users within a river basin, the Court ruled that reserved rights were subject to state adjudications. The Court then twice ruled that Indian reserved rights were subject to McCarran Amendment adjudications" (Blumm, 2006). Specifically, "Over two decades ago, in 1983, Justice William Brennan assured Indian Tribes that their reserved water rights would not be compromised by subjecting them to state court adjudications under the so-called McCarran Amendment, an appropriations rider given expansive interpretation by the Supreme Court in the 1970s and 1980s" (Ibid.).

In a greater sense, "The Supreme Court has interpreted the McCarran Amendment broadly to provide state courts with the authority to adjudicate federal and Indian reserved water rights" (Krakoff, 2013). The McCarran Amendment is challenging because, Tribes who are theoretically treated as sovereign, and who had no say in where the United States put their reservation, are forced to go through the politicized courts of the state(s) in which their reservation boundaries fall. With some states being much more receptive to Tribal sovereignty, rights, and jurisdiction than others, this amendment creates political inconsistency, reflecting the tension of unequal state treatment towards sovereign Tribes in the West.

Outside the walls of the courtroom, the Bureau of Reclamation and the Army Corps of Engineers were at work creating the plumbing infrastructure for western water. This infrastructure contributed to the unequal distribution of power over water. "Consider, for example, how the provision of water to large cities often implies carrying water over long distances from other places or regions. The mobilization of water for different uses in different places is a conflict-ridden process and each techno-social system for organizing the flow and transformation of water (through dams, canals, pipes, and the like) shows how social power is distributed in a given society" (Swyngedouw, 2009). Additionally, continuous infrastructure development led to the over-appropriation of water and shaped new perceptions of water scarcity.

After the Winters doctrine came a series of court cases attempting to deal with Tribal water rights issues in a settler-colonial legal system. "Some early to mid-20th century cases in lower federal courts also recognized implied Indian reserved water rights but similarly did not quantify the amount reserved with any finality" (Anderson, 2010). Cases dealing with the "nature and scope of Indian Reserved water rights" are *Winters v. United States*, mentioned above, and *Arizona v. California* (Anderson, 2010). The latter case dealt mainly with the original allocation and division of water between the upper and lower basins defined in the Colorado River Compact. However, the United States participated on behalf of Colorado River Indian Tribes to qualify claims for the permanent allocation of Colorado River water to Tribes. The Supreme Court agreed, and also set a practicable irrigable acreage (PIA) doctrine, "which allowed a quantification of reserved water rights for the present and future needs of the several Indian reservations" (Anderson, 2010). Some say that the case has even "resolved the question of determining the quantity of water sufficient for irrigating reservations" (Semlow, 2015).

In addition to this, there was a relevant case dealing with Indian allotments—*United States v. Powers*. "In *United States v. Powers,* the Court addressed whether non-Indian successors to allotment owners acquired any right to use a portion of the water right originally reserved by a Tribe under the Winters doctrine" (Anderson, 2010). The case concluded that the water rights of reservations pass along to the new owner in the case of selling Tribal land (Semlow, 2015). However, the "language in the opinion indicates that the allotments and the non- Indian successors could have been limited, but only by the development of 'rules and regulations' under the Dawes" (Anderson, 2010).

Arizona v. California II and *Nevada v. United States* addressed the "procedural cases limiting opportunities to bring additional claims" (Anderson, 2010). *Arizona v. California II* made it clear that Tribes can intervene, on their own behalf, on water issues, after originally ignoring the Tribe's claims (S. McElroy, personal communication, 2016). While *Nevada v. United States*, "ruled non-Native

Americans did not have control over Tribal reservation water based on the appropriative system" (Semlow, 2015).

Following the McCarran Amendment, *Colorado River Water Conservation District v. United States*, *Arizona v. San Carlos Apache Tribe*, and *United States v. Idaho* all describe "the circumstances under which state courts may adjudicate Tribal water rights without Tribal consent" (Anderson, 2010).

With regards to relevant police, in the Western Water Policy Review Act of 1992, "Congress expressly found that 'the Federal Government recognizes its trust responsibilities to protect Indian water rights and assist Tribes in the wise use of those resources" (Royster, 2006). This new act allowed for social justice movements to shift towards the settlement process that became favored in the late 20th century for Indian water rights claims.

Explicit Tribal water rights were the result of the social movements of the late 20th century, "as the civil rights movement shifted racial paradigms, the delegitimation of racial paternalism disrupted the institutions of federal Indian policy. This created openings for strategic action that Tribal leaders utilized to address the particular forms of domination facing American Indians" (Steinman, 2012). This is why a majority of water rights settlements took place in the 1980s or after, and why water rights for Tribes can also be considered civil rights given the long-ignored Winters Doctrine decision from over a century ago.

Water settlements are now the favored route for quantifying Tribal water rights claims since, "when litigation is the quantification tool, Tribal claims are generally caught up in massive general-stream adjudications" (Anderson, 2010). This is a costly process in both time and money.

> "The result can be that there are thousands of state water right holders who must be joined as parties to exceedingly complex litigation that takes too long and costs too much even when such adjudications are litigated to a conclusion and Tribes win a decreed water right, such a 'paper right' may do little to advance Tribal needs without the financial ability or the infrastructure to put the water to use" (Anderson, 2010).

However, the biggest issue in, "litigating Indian water rights is how to interpret Indian treaties and agreements that rarely, if ever, deal explicitly with water rights" (Anderson, 2010). It is essential to note that "paper rights transfer to wet water rights through adjudication, [but] litigation is more rare" (B. Didesch, personal communication 2016).

Today, the United States water policy is left with the challenge of decolonizing its western water law. "Indian law and water law are therefore enmeshed in ways that force confrontations not only between the demands of many users to an increasingly scarce resource, but also between our settler-colonial past and our self-determination era present" (Krakoff, 2013).

However, even as the resolution of this delayed water injustice unfolds, the process of decolonization faces numerous social and financial strains. The Colorado and Columbia rivers have countless stakeholders with various interests and value sets (Anderson 2010). The three case studies presented here attempt to frame some of the settler-colonial legacies of past policy in a way that allows for future federal policy to better address water injustice for Native American sovereign groups.

Case Study: Southern Ute

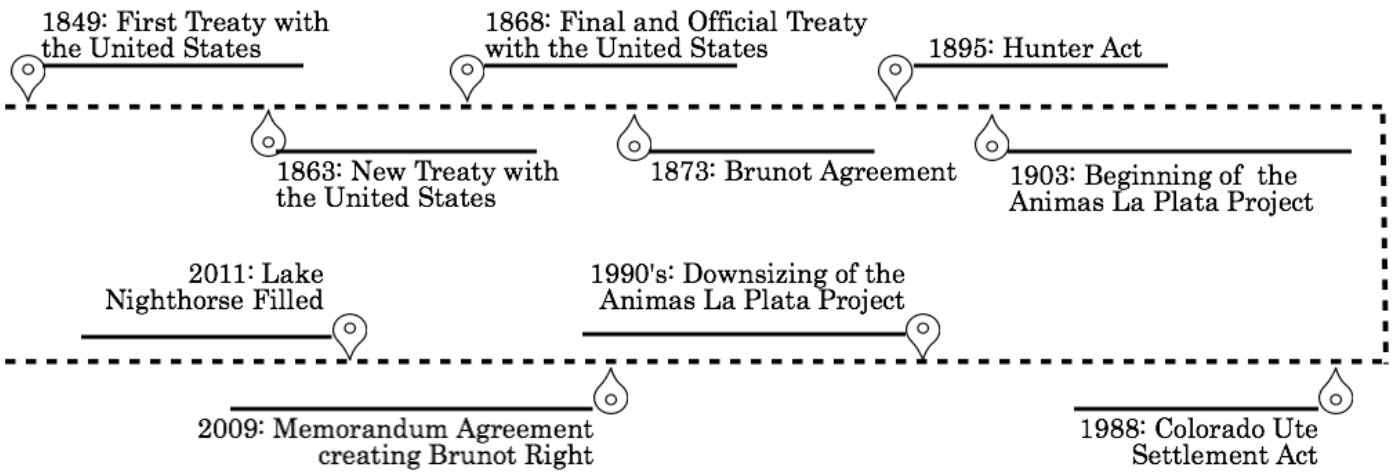
The Southern Ute are a very prominent Tribe in the Colorado River basin. Their original lands span the mountains and plateaus of Colorado, Utah, Wyoming, Eastern Nevada, Northern New Mexico, and Arizona. Traditionally, the Ute Tribe would travel on well-established trails throughout the Colorado Plateau. The Southern Ute were known for their skilled big game hunting and traded tanned deer and elk hides with the Spanish before Zebulon Pike led the United States' influence into Ute lands (Southern Ute, 2016).

The first peace treaty between the United State and the Utes was in 1849. The treaty established boundaries and acknowledged the sovereignty of the United States and the Ute Nation. In 1863, another treaty took precedent, which terminated all Ute claims to mineral rights and lands in the San Luis Valley. In 1868 the official boundaries of the Ute reservation was established. Therefore, Ute water rights date back to 1868 (D. Rue-Pastin, personal communication 2016).

The 1873 Brunot agreement forcibly took away large swaths of land from the Utes, especially land that was traditionally for subsistence hunting. However, in 2009, the unjust nature of this settler-colonial policy was recognized by the state of Colorado, and a Memorandum of Agreement was signed in 2009, which reaffirmed Ute's rights to hunt and fish on off-reservation lands. It is now known as a Brunot Right. Coupled with the Hunter Act of 1895, which sold Ute land for non-Indian development, set the small sliver of land that was left for the Utes reservation (Southern Ute, 2016).

McElroy, personal communication 2016). However, some scholars of the process see more of a conflict. "Sometimes I refer to this project as cowboys and Indians" (D. Rue-Pastin, personal communication 2016). This comment illuminates the innate tension between non-Indian ranching and Tribal water rights. Whether there was an original conflict between the ALP Project and Tribal water rights became irrelevant as soon as Colorado realized it was in their best interest to settle Southern Ute and Ute Mountain Ute water rights. "Some states see the recognition and protection of Indian water rights as a way to gain a com-

Figure 3: Timeline of Federal Actions Affecting the Southern Ute



To the United State's surprise, the small sliver of land that was left was some of the most oil rich land in the west. Throughout the 20th century, the Utes wealth grew through oil, and now natural gas development (S.McElroy, personal communication 2016). This has contributed to the Tribes' relative success in their water rights cases. The most notable being the Colorado Ute Settlement Act.

The Animas La-Plata (ALP) project was prevalent long before it was incorporated into the Colorado Ute Settlement Act. ALP was originally an irrigation project conceived in 1903. There was no Federal interest or funding until the 1980s when the main focus of the ALP became the settlement aspect of it (D. Rue-Pastin, personal communication 2016). The ALP project started and ended with the Bureau of Reclamation, but there were many issues of necessity and practicality that prohibited the project from starting until the 1980s.

The original ALP had substantial Tribal support (S.

petitive advantage over other states in the future allocation of interstate streams by piggybacking the state onto Indian claims" (Tarlock, 1987).

The Ute Mountain Ute and Southern Ute Tribes' settlement act in the 1980s is comparable to a modern-day treaty. First was the agreement in 1986, then approved by congress as a settlement act in 1988, the Colorado Ute Settlement Act originally quantified almost 60,000 acre feet per year for the Southern Ute and Ute Mountain Ute Tribes (McElroy, 1998). In order to satisfy that large amount of claims, the Animas La-Plata (ALP) water development project was adopted as a part of the settlement agreement. The project's original objective was to create a large reservoir to meet Tribal and non-Indian water needs.

The outcome of the settlement was seen as very good for the Utes with respect to other settlements taking place at the same time but in different areas. "The Tribes got the best deal that they could" (R. Anderson, personal commu-

nication 2016). Along with the quantified water rights, the two Tribes also got the right to market water, which was unique at the time and allows the Tribe to treat their rights as financial assets (R. Anderson, personal communication 2016). Utes can lease water to a 3rd party for beneficial use (B. Griffin, M. Chiarito, personal communication 2016). However, a settlement meant that federal funding for the ALP was lost because states handle settlement funding (Ibid.). Despite this, "without the Tribal component, I don't think this project [ALP] would ever be built" (Ibid.). Overall, the original settlement was seen as, "a very good negotiation process for both Tribes" (S. McElroy, personal communication 2016).

There are three main reasons as to why the settlement and the ALP project originally turned out to be in favor of the Southern Ute. The first was the Southern Ute had very good lawyers and representation. As mentioned earlier, the Southern Ute Tribe is relatively wealthy because of oil and gas reserves on the reservation. This allows them the opportunity to decide to hire the smartest lawyers, they are not limited to "someone from the within Tribe" (MSI, personal communication 2016). This is a common component of successful water rights settlements. Secondly, Colorado is a good state for Tribal water rights. Colorado water court is one of the best judicial systems for Indian water rights (R. Anderson, personal communication 2016). One of the lawyers on the case said it was, "refreshing to be in Colorado where the state government was interested in resolving issues involving Indian water rights" (S. McElroy, personal communication 2016). Lastly, the personalities involved in the project were very cooperative. "The settlement is really a credit to good Tribal leadership" (Ibid.).

The settlement was approved by congress in 1988, eighty years after the Winters Doctrine. Although the settlement was enacted, there was still a ways to go when it came to building the infrastructure to eventually deliver those now quantified rights.

As soon as the public caught wind of a new dam being built in an arid place, activism against the ALP project was vocalized. It was primarily environmentalists who opposed new water infrastructure in the Southwest, and immediately sought to stop the project, creating a divide between social justice and environmental needs. The Tribes were the "principal beneficiaries of such a project," but those who oppose feared environmental degradation, and claimed that the Tribal component was solely for justification of the project (McElroy, 1998). However, in his 1998 article, head lawyer for the Southern Ute, Scott McElroy, disputes that, explaining claims are met under the ALP project, which is "the core of the settlement." He adds, "the Indian and non-Indian parties to the settlement have shown an amazing willingness to compromise…" as long as the core components of providing water were met (McElroy, 1998). In a later interview, he added, "the ALP became a poster child for the anti-water development environmental movement in the west," (S.McElroy, personal communication 2016).

Despite this, environmental groups continued to litigate against the ALP project on numerous issues such as the protection of the pikeminnow, an endangered species. The project grew costly in money and time. "Delay was the worst enemy of the settlement, given the ever-increasing cost of the project and the increasingly hostile attitude in Congress toward the federal financing of Western water projects in the difficult budget climate of the 1990s" (McElroy, 1998). In return, the project was downsized from 57,100 acre-feet of water per year to 19,000. Additionally, the reservoir was moved off stream and the irrigation component, the main desired water use for the Ute Tribes, was taken off the table (McElroy, 1998).

McElroy discusses how this issue arguably falls too far on the environmental sustainability side of the spectrum between environmentalism and social justice, when talking about the environmental activists and their lawyer Maynard. "The project's opponents, as exemplified by Ms. Maynard's arguments, have been willing to go to any length to kill the project without regard to the benefits of the settlement to the Ute Tribes, and no matter how insignificant the environmental consequences of the now greatly reduced project" (McElroy, 1998).

The conflict over the Animas La-Plata project is not only significant in a political ecology lens through its relation to the tension between social justice and environmental sustainability, but also, "current debates about Indian water settlements… can be seen in their proper context,

as measures of corrective justice that recognize Indigenous peoples preexisting political, moral, and legal claims, rather than as special rights doled out to select minorities" (Krakoff, 2013).

Since then, the ALP has changed though different federal administrations (D. Rue-Pastin, personal communication 2016). This downsizing put the project in a huge rush to finish before it was downsized more, or scrapped altogether. "States and Tribes and water users stayed at the table, and Babbitt pushed it through very fast, this may have made the outcome a little less thought through" (S. McElroy, personal communication 2016). "People wanted to see ALP go forward, but in retrospect, ALP was an environmental disaster in the making" (Ibid.). Over all, "Animas- La Plata Project divided the community into the liberal mindset or the water buffalo mindset," (D. Rue-Pastin, personal communication 2016).

After the series of downsizing, the final product of the Animas La Plata project is an off-stream reservoir, Lake Nighthorse, which negated some of the ecological effects a traditional dam would have caused. "ALP diverts water from the Animas River to Lake Nighthorse, from there some of the water is moved back into the river, while other water is parceled out to stakeholders" (B. Griffin, M. Chiarito, personal communication 2016). The reservoir stores 120,000 acre feet of water and 30,000 stays in the reservoir at all times while 90,000 can be pumped out to satisfy various claims. One third of the 90,000 goes to the Southern Ute (whose reservation borders Lake Nighthorse), another one third goes to the Ute Mountain Ute, and last third goes to other stakeholders and users (Ibid.).

The infrastructure is fairly adapted to a changing climate, "the pumping numbers are dynamic depending on weather and snowpack, and in the event of a shortage the burden is shared amongst all users" (Ibid.). However, it is argued by the Tribes that this is unfair due to the reasoning that they did not receive the economic benefits that led to climate change, so why should they have to share the burden? In the inevitable future shortage, "the ideal situation is everyone sitting down and coming to an agreement" (Ibid.).

In the creation of the Lake Nighthorse, many cultural resources of the Utes were lost, illuminating the tension between environmental sustainability and social justice. If the reservoir wasn't moved off river, then this would not have been the case. "Lake Nighthorse flooded the Ute trail as well as many other cultural resources" (Ibid.). Before filling of the reservoir began, there was a research trip for archaeologists to collect cultural resources in the soon to be flooded area. Lake Nighthorse showed the interesting challenge of finding the middle ground between fulfilling the settlement water rights and flooding cultural resources.

Despite being filled five years ago, the reservoir is still closed to the public and to Tribes; and there is no water being pumped out of it due to a recent mining cleanup accident on the Animas River. This leads Lake Nighthorse to be aptly called by many, "the bridge to nowhere." The ALP project and Lake Nighthorse is no longer maintained by the Bureau of Reclamation but by the Animas La Plata Operation, Maintenance, and Replacement Association. If the lake will be used for recreation is still up for debate. The majority of the four corners community is in favor of it but, "recreation troubles Tribal leaders with the threat of further degradation of cultural resources in the Lake Nighthorse area" (S. McElroy, personal communication 2016). However, before addressing the issue of recreation, stakeholders must first address the issue of what is to be done with all of the water in the reservoir now?

First and foremost, infrastructure is needed to get the water from the lake to the Southern Ute reservation. However, the once it's there, the issue of water uses must also be addressed. "The Southern Ute wants water that it can use, not just water that can be marketed, however this was taken away with the loss of irrigation" (Ibid.).

Water quality in the reservoir must also be considered. As mentioned above, they are not pumping water out of the Animas River this year. "This is partially due to Tribes being extremely sensitive about water quality" (B. Griffin, M. Chiarito, personal communication 2016). However, although there may not be another accident like there was in August of 2015, the Animas river is severely polluted from upstream, inactive mines in the river's headwaters in the San Juan Mountains. The Tribe must determine if the water quality is adequate for them, and seek water quality justice through various legal avenues.

What is left is 120,000 acre feet of semi-questionable

water in a reservoir that is not sustainable and still lacks proper infrastructure and management to move forward. What are the Southern Ute to do? "The Southern Ute are currently contracting other rivers and building pipelines" (Ibid.). However, the Tribe evidently experienced a huge casualty in the long process of actualizing the Animas La-Plata project and their reserved water rights. "It was a loss to the Tribe to lose the irrigation component. Their primary goal was to create a reliable water supply on their reservation, not to sell water to Arizona" (S. McElroy, personal communication 2016).

Despite its failures the Colorado Ute Settlement, "in the end it did strengthen the community and communication, even if the outcome wasn't what was originally promised" (Ibid.). To the Southern Ute, modern water justice is, "to have a firm and reliable water supply to make their reservation into homelands," and to allow, "Tribes to make the decision on how, where, and when to use water" (S. McElroy, personal communication 2016).

Columbia River Basin

The Columbia River Basin is approximately 259,500 square miles. Of the basin, 15% lies in Canada, while the other 85% is in the United States (see **Figure 3**). Like the Colorado, it covers seven states: Washington, Oregon, Idaho, Montana, Nevada, and Wyoming. "Although only 15% of the basin lies within the Canadian province of British Columbia, 38% of the average annual flow and 50% of the peak flow measured at The Dalles (a dam located on the mainstem between Oregon and Washington) originates in Canada. In addition, due to the later runoff from snowpack, flow originating in Canada can be 50% of the late summer flow" (Cosens, 2010).

The river is valued by current managers for the four H's: hydropower, habitat, harvest, and hatchery. The last three focus on the numerous livelihoods based on a flowing river, and the central species of concern, the most well-known being salmon.

The Columbia River used to be one of the most productive salmon runs in the United States. However, salmon populations have been on an exponential decline for many decades now. "The decline in wild stocks was caused by a well-known but poorly understood combination of factors, including unfavorable ocean or climatic conditions; excessive commercial, recreational, and subsistence fishing; various farming and ranching practices; dams built for electricity generation, flood control, irrigation, and many other purposes; water diversions for agricultural, municipal, or commercial requirements; pollutants of many types; hatchery production used to supplement diminished runs or produce salmon for the retail market; degraded spawning and rearing habitat; predation by marine mammals, birds, and other fish species; competition, especially with exotic fish species; diseases and parasites; and many others" (Lackey, 2012). Now the Columbia Basin hosts only 1.7% of its original salmon run (Ibid.).

Salmon are a sacred and subsistence species for Tribes on the Columbia River, and their dramatic decline has hurt and affected the religious freedom, health, and overall well-being of Columbia River Tribes. Tribes have been sustaining themselves from hatcheries, but in recent years there have been efforts from most stakeholders to improve salmon habitat on the river. However, we should "keep environmental success in perspective, because if you've completely killed a river, anything is a success" (D. Olsen, personal communication 2016). As far as local, state, and federal efforts to increase fish population, "thus, there is a policy conundrum: salmon ostensibly enjoy universal public support, but society collectively has been unwilling to arrest their decline, much less restore depleted runs" (Lackey, 2012).

Like the Colorado, to understand modern day deferred justice on the Columbia River, some historical perspective is necessary. "In 1805 when Lewis and Clark made their way down the Columbia River to Astoria, there were no dams. Salmon fisheries sustained the native population. Falls slowed upriver migration of salmon and provided excellent fishing locations. Each year thousands of Native Americans from numerous Tribes gathered at locations such as Celilo Falls (now inundated by water behind The Dalles Dam) to fish and trade. Competition from commercial fishing and an influx of canneries began in 1866. The U.S. Army Corps of Engineers began transforming the Columbia River for navigation with locks at the Cascades as early as 1896" (Cosens, 2010).

In 1853, the United States and Tribes established a

Figure 4: Map of the Columbia River Basin

The Columbia River Basin spans seven states as well as British Columbia and contains an extensive network of dams. The dams' cumulative storage capacity, however, pales in comparison with the water stored in mountain snowpack. Source: ESRI, Bureau of Indian Affairs, National Watershed Boundary Dataset, National Inventory of Dams, Canadian Department of Natural Resources, Columbia River Inter-Tribal Fish Commission, National Elevation Dataset

Stevens Right. "The Stevens Treaty Water Rights stem from treaties made by Governor Isaac Stevens of the Washington Territory 1853 granting aquatic habitat protection to the surrounding Tribes. The exact words securing Native American historic fish sites, even off reservation, were in nine treaties" (Semlow, 2015). In addition, the Stevens Treaty Water Rights also gave confederated Tribes and bands the right to take fish in all usual and accustomed places (Ibid.). This is the language that set a precedent for all future instream flow policy.

The 1855 case *United States v. Winnans* is where the "the Supreme Court considered the rights of Yakama Tribe members to cross privately owned land in order to exercise off-reservation treaty rights to fish at usual and accustomed grounds and stations" (Anderson). This case that is one of many that sought to enforce Tribal rights on private land.

During this time, and especially through the 20th century, federal and private dam development on the river was taking place at astronomical rates. The main agencies doing this are the Bonneville Power Administration (BPA) and the Army Corps of Engineers, both run by the federal government. Hydropower supplies up to 80% of power in the Pacific Northwest, and 28% of that is exclusively from the Bonneville Power Administration (BPA, personal communication 2016). Despite their dams being the main barrier to wild salmon repopulation, BPA provides mitigation funding to Tribal hatcheries from their dam profits. They also claim to practice, "an all H approach to dam management" (Ibid.). An all H approach means valuing hydropower, habitat, hatchery, and harvest as equals. As social values shift to a more ecological mindset, BPA has also started buying water rights for instream flows. So far they have reserved 373,000 acre-feet of water (Ibid.). However, some see BPA as a conflict of interest since it is a branch of the federal government, and the federal government is supposed to also be a trustee for Native American Tribes. To BPA and most dam managers on the Columbia River, "the biggest new energy is conservation," the same could be said for the Colorado (Ibid.).

One of the main differences between dams on the Colorado and dams on the Columbia is purpose. While most of the Colorado River dams primarily serve as storage, the Columbia's primary purpose for dams is energy. There is some storage in the upper Columbia, however that is mostly for flood control. The majority of Columbia river dams are run of the river dams, meaning that rather than holding a significant amount of water back, they primarily harvest the energy of moving water.

In 1948 there was a huge flood on the Columbia River, which spurred inter-governmental conversations about flood control and a treaty. "Even before the 1948 flood, the International Joint Commission formed by the 1909 Boundary Waters Treaty between the United States and Canada, was directed to study the possibility of storage within Canada to provide flood control or power benefits to both countries. The Columbia River Treaty that would form the framework to accomplish this task was not adopted until 1964" (Cosens, 2010). Negotiations between the United States and Canada took place between 1961 and 1964, and in 1964 the Columbia River Treaty was signed into action. This is still the primary governing policy on the river (Ibid.).

Nine years later the United States Congress signed the Endangered Species Act, one of the firmest environmental policies to date. The purpose of the Endangered Species Act (ESA) is to recover and protect diminishing species populations and their surrounding habitat. The U.S. Fish and Wildlife Service has regulatory authority over to terrestrial and freshwater species, and the National Marine Fisheries Service exercises authority over to marine and anadromous species. The two levels of protection under the ESA are endangered or threatened, both listings related to the likelihood of the species extinction (Petersen, 1999).

Since 1991, multiple Columbia River fish species have been listed as endangered or threatened under the Endangered Species Act. Twelve populations within four species of salmon and steelhead, bull trout, and white sturgeon have all been listed for protection and recovery. The job of developing and implementing recovery plans for these protected species falls to the National Oceanic and Atmospheric Administration (NOAA), which houses the National Marine Fisheries Service. Recovery plans seek to bring species back to self-sustaining populations, however, they are only suggestions and are not regulations. The re-

covery plans attempt to provoke collaboration of federal, state, Tribal, local, and private groups (Waples, 1991).

"Tribes have a huge role under the Endangered Species Act in the Pacific Northwest" (R. Anderson, personal communication 2016). A lot of the recovery plans have involved Tribal hatcheries, and state, federal, and private groups are slowly realizing that Tribes have the most successful hatchery practices. Although there are infrastructural problems greater than the hatcheries, "getting the fish upstream is relatively easy through fish ladders and the truck and haul method. The real issue is how to get the juvenile fish back down" (T. O'Keefe, personal communication 2016). Despite Tribal management success, "federal agencies have ultimate implementation of ESA" (CRITFC, personal communication 2016). Many are critical of this and the ESA as a whole, "ESA is the lowest bar of what recovery might be...Tribes have a higher threshold for recovery" (Ibid.).

Two years after the signing of the ESA into law, the 1974 Boldt decision was promulgated. This refers to the precedent setting ruling by Federal Judge George Boldt in the case of *United States v. Washington*. The goal of the ruling was to reaffirm that Tribes have a right to fish in all usual and accustom places. The Boldt decision said that treaty Tribes are entitled to half of all of the fish in the basin (Bruun, 1982). Around the same time, was the *Antonine v. Washington* case, which also reaffirmed fishing and hunting rights of Tribes in traditional lands and waters (Cosens, 2010). Despite these important, precedent setting cases, there needs to be more management over the outcomes. "There is the need to have agencies to regulate and improve fisheries in order to ease inter-Tribal conflict over the 50% of salmon" (B. Cosens, personal communication 2016).

In 1986 there was a necessary amendment to the Federal Power Act, which said equal consideration must be given to power and non-power values in the Columbia River basin. "However, equal consideration does not mean equal values or treatment" (T. O'Keefe, personal communication 2016).

Today there is still the ongoing case of *United States v. Oregon*. This case established technical management teams, which makes basin recommendations, and is currently dealing with matters of the intersection between water rights and treaty rights for salmon in the basin (CRITFC, personal communication 2016).

There are two important Tribal organizations that hold various power and management roles on the river: the Columbia River Inter-Tribal Fish Commission (CRITFC) and the Upper Columbia United Tribes (UCUT). CRITFC is composed of the lower basin Tribes: Nez Perce, Umatilla, Warm Springs, and the Yakama. While UCUT is primarily Tribes in the upper basin: Coeur d'Alene Tribe, Kalispel Tribe of Indians, Spokane Tribe of Indians, Kootenai Tribe of Idaho, and the Confederated Tribes of the Colville Reservation. These two groups have varied roles in the basin and many argue that CRITFC is more powerful (CRITFC, personal communication 2016). "This organization was born out of controversy" (Ibid.). CRITFC's role in salmon management has been extremely impactful in the basin, especially their Spirit of the Salmon plan. CRITFC is shifting the broader public's focus to the fish's life cycle rather than just numbers of returns, in order to have fish for future generations. This has caused them to "butt heads" with other groups over long term versus short-term view and goals (Ibid.).

In contrast, the "upper Columbia Tribes are viewed as settling," (R. Miles, personal communication 2016). This could be because there are not salmon in the Upper Columbia due to all of the infrastructure, whereas the lower Columbia still has some wild populations left. "They have a huge injustice done onto them through Grand Coulee," since there are no wild salmon above Grand Coulee due to the dam having zero methods of fish passage (Ibid.).

In order to address salmon and other endangered or threatened populations, some Tribes within the Columbia River Basin signed the 2008 Columbia Basin Fish Accords. The accords were between the Umatilla, Warm Springs, Yakama, and Confederated Tribes of the Colville Reservation, the Bonneville Power Administration, U.S. Army Corps of Engineers, and the Bureau of Reclamation. In a broad sense, the accords dedicated $900 million to these Tribes for Salmon restoration projects, in return for ten years of active dams and the signing parties to not advocate for dam removal. What spurred this policy is the removal of the Condit Dam on the White Salmon and the

increased activism for the removal of the four lower Snake River dams. "The Condit dam removal was the gateway drug to the lower snake dams," (T. O'Keefe, personal communication 2016). The "Accords helped Tribes better their relationship with BPA and Army Corp," (CRITFC, personal communication, July 19th, 2016), which is necessary for a greater co-management of the Columbia River Basin. However, the $900 million goes directly into hatchery projects, which is a strategy that conflicts with a lot of environmental groups interests. Hatcheries divide environmental interests and Tribal interests (B. Cosens, personal communication 2016). Additionally, some argue that the Tribes were financially forced to sign the agreement because BPA dramatically cut funding to Tribal hatcheries right before the signing of the Columbia Basin Fish Accords. It is also important to note that the Nez Perce did not sign the Accords, which is due to the fact that they are more financially independent and that they are the most affected by the four lower Snake River dams. This Columbia Basin Fish Accords and the surrounding activism for or against dams in the Columbia Basin illuminate a shift in values and attitude towards dams. "I feel like things are shifting. It's not a case of will these dams ever come out but when" (B. Hurlbutt, personal communication 2016).

This shift in values on dams is representative of greater changes in the Columbia River Basin. The goals are now clear, "we've come a long way since the 1920's, but that's not what we should compare ourselves to, we should return the salmon numbers to the pre-dam numbers" (BPA). There are five major changes to getting there (Cosens, 2010). The first is a change in values concerning the river. This is the shift in an increasing desire for public input in policy. This is in contrast with the broader Columbia basin public formerly being agnostic to river policy (Cosens, 2010).

The next is a change in empowerment of local communities and in particular, of Native American and First Nation governments. This is practiced through CRITFC and UCUT's member Tribes' governments working to "renew their sovereign authority in fisheries management" (Cosens, 2010). What is needed next is for that sovereignty to be recognized and included in more management practices.

Third is the change in the viability of populations of anadromous fish that spawn within the Columbia River system. "It is possible that we have so altered the ecological system of the Columbia River that salmon restoration in any way resembling a natural system is impossible," (Ibid.). However, Cosens argues that the, "key to restoring salmon resilience is not merely to maintain genetic diversity through hatcheries, but to re-establish the natural processes that led to adaptation" (Ibid.).

There also needs to be a change in energy demand, and in the type of energy demanded. Currently, "hydropower remains the dominant energy source in the region and the value of the system has grown dramatically. With the current push to develop non-carbon sources of energy, hydropower is likely to become even more valuable" (Ibid.).

Lastly, the largest change in the basin is climate change, and there needs to be an increase in policy and management response to the changing Pacific Northwest climate. "In this way, the [Columbia River] Treaty provides sufficient flexibility for adaptive management to account for seasonal and year-to-year uncertainty within the limited purposes of the Treaty" (Ibid.). However, "climate change takes us out of the range of variation that can be predicted based on historic behavior" (Ibid.). Due to the lag effect in climate change, planners and managers must look into all scenarios of climate change and plan accordingly. The Columbia River treaty is currently in a review process which could provide excellent management plans for high flow scenarios but lacks any for low flow. "The result of failure to address low flows: fish and farmers will bear the brunt of climate change if no effort is made to adapt" (Ibid.).

The Columbia River Treaty currently is in a ten-year renegotiation process, from 2014 to 2024. The process is the Columbia River Treaty Review and it is organized and managed by the Bonneville Power Administration and the Army Corps of Engineers with significant Tribal and public input. Scholars such as Barbara Cosens think that there has been "a complete paradigm shift" which is seen in this review process and that the aspect of Tribal input is not a façade, but indeed genuine. BPA made an effort to get information of the changes being made in the Columbia River Treaty

Review process out to Tribes before going to the public, but that "info was going to Tribal representatives who were filtering out info to the rest of the Tribe" (BPA, personal communication 2016). A road bump was hit during the review process when deciding how much detail BPA should give in the recommendation. If there was too much detail in the recommendations for the revisions that should be made to the Columbia River Treaty, then the recommendations might not be taken into account, "but too little and there will be no change" (Ibid.). This posed a risk to the review not getting finishing in time; however, the BPA says that the Tribes were the main actors in "pushing it through" (Ibid.).

There are two sides to this story, and most Tribes feel like the extent of their input is exaggerated. "We have input," but "the input we have is not better than the input we had when we first established the treaty in the 60's" (CRITFC, personal communication 2016). In most cases, Tribes are just copied on emails and their input is mostly for a token Tribal perspective, and is not seriously considered.

Regardless of the two-sided story, the outcome of the review process has been great. The most significant change is that "ecosystem functions are elevated to the level of flood control and hydropower" (B. Cosens, personal communication 2016). This means that ecosystem function is now, in theory, valued as equal with flood control and hydropower. "Tribes led the change on bringing ecosystem function to a third pillar on the Columbia River Treaty" (BPA, personal communication 2016).

Case Study: The Confederated Tribes of the Colville Reservation

The numerous bands that compose of the Confederated Tribes of the Colville Reservation were nomadic until the mid 1800s when discussion of a treaty began between Tribal leaders, the Chief, and the U.S. government. In 1855, a five-day council took place in eastern Washington to discuss and claim specific reservation boundaries for individual Tribes in the area. The first reservation that came out of this was several million acres of diverse and prosperous land. However, in 1872 President Grant moved the Confederated Tribes of the Colville Reservation to its present day location, and decreased the reservation size to 2,825,000 acres (Colville, personal communication 2016). Twenty years later, the north half of their reservation was ceded to the United States. The Tribe reserved the right to hunt and fish on the ceded land (Du Bey, 2004). Again in 1910, the southern half of the Colville reservation was opened to homesteading, which began in 1916 (Colville, personal communication 2016).

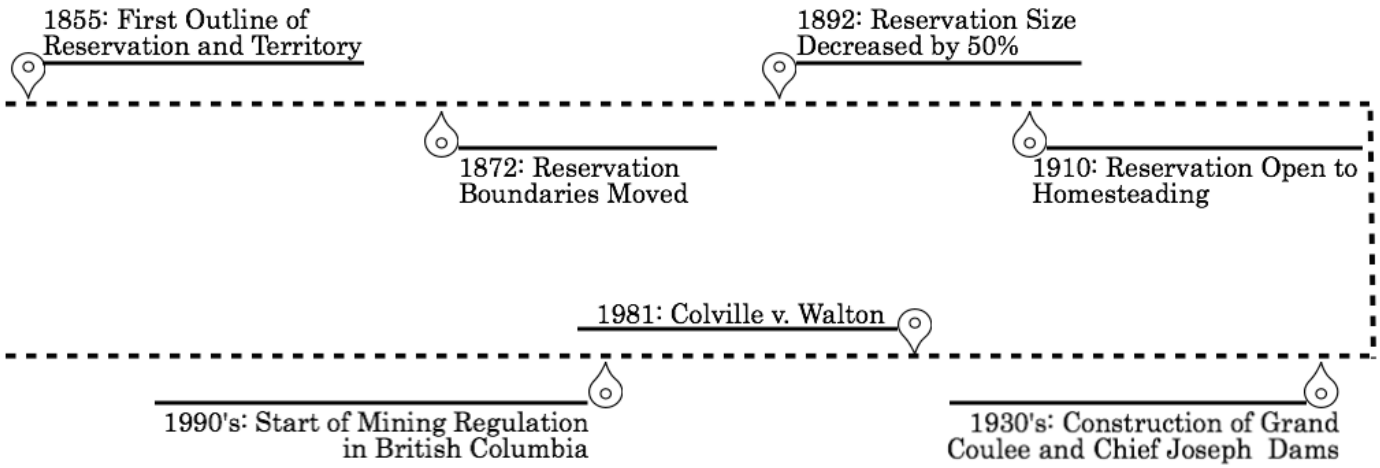
Today, the Confederated Tribes of the Colville Reservation is composed of twelve bands: Chelan, Chief Joseph Band of Nez Perce, Colville, Eniat, Lakes, Methow, Moses-Columbia, Nespelem, Okanogan, Palus, San Poil, and Wenatchi. As of 2015, the Tribal enrollment was just shy of 10,000. At 1.4 million acres, their current reservation is slightly larger than the size of Rhode Island (Ibid.). The Tribe is located in eastern Washington. The Columbia River is both the eastern and southern border of the reservation, and the Okanogan River is the western border. Both the Grand Coulee and Chief Joseph dams also border the reservation.

No wild salmon reach above the Chief Joseph and Grand Coulee dams since their construction in the 1930s. Additionally, these dams cause numerous water quality issues for the Tribe. Alongside these issues, the Confederated Tribe rejected the agrarian lifestyle pushed on them by the United States government; therefore there is very minimal water infrastructure (Ibid.).

One of the precedent setting cases in Native American water law was *The Confederated Tribes of the Colville Reservation v. Walton*. This case involved the adjudication of No Name Creek to the three parties that had claims on the water. One of those users was Walton, who was not a Tribal member but had inherited homesteaded land on the reservation. Walton was diverting too much water from No Name Creek, and therefore too little water was reaching Omak Lake. The other two upstream water users were a Tribal farm and school. The court upheld Tribal jurisdiction and rights to the water within the reservation, and Walton lost his claim (Anderson, 2015). As this case was pre-McCarran amendment, it was tried in federal courts, which lead to a more favorable outcome for the Confederated Tribes of the Colville Reservation due to the federal government's values compared to Washington's.

The Ninth Circuit ruled that state regulation of a non-navigable waterway that is entirely within the bound-

Figure 5: Timeline of Federal and International Actions Affecting The Confederated Tribes of the Colville Reservation



aries of an Indian reservation cannot be regulated by the State of Washington because "a Tribe retains the inherent power to exercise civil authority over the conduct of non-Indians on fee lands within its reservation when that conduct threatens or has some direct effect on the health and welfare of the Tribe. This includes conduct that involves the Tribe's water rights" (B. Didesch, personal communication 2016). This case is relevant to all Tribes because it reaffirms Tribal jurisdiction and rights to water resources that lie within the reservation.

Although their rights might have been supported on water sources within reservation boundaries, rivers that border the reservation are a different story. The Federal Columbia River Power System's (FCRPS) largest dam is Grand Coulee (GCD). In its time, this dam stood for American resilience and brought many jobs to the area. Grand Coulee construction was finished in 1940, and formed Lake Roosevelt, which holds 9 million acre-feet (Du Bey, 2004). "When the US Bureau of Reclamation (USBR) began constructing GCD in 1933, planners intended to build a dam that would put people to work during the depression and generate inexpensive hydropower. A few years after construction began, the project was expanded to include irrigation. Since the initial project was completed in 1941, additional project purposes have been added, the most notable being recreation, flood control, and wildlife conservation" (Ortolano, 2002). However, the dam was built with no fish ladder and killed all salmon runs upstream of the dam. Before Grand Coulee, the Upper Columbia had 1 million salmon, during the end of construction it had approximately 25,000, and today there are zero (Du Bey, 2004).

Grand Coulee and Chief Joseph dams are really issues of environmental justice because it is very clear that those who benefit from the dams are not the ones who pay the cost.

> "Major beneficiaries have included irrigators, electrical utility ratepayers, downstream businesses and residents who received flood protection, and residents of the Pacific Northwest who benefited from the economic development linked to low-cost power, irrigation, and project-related recreation. The people who bore the major costs of the project were US Native American Tribes and Canadian First Nations. The project's main adverse direct effect was the inundation of lands and the elimination of salmon and steelhead runs upstream of the dam site" (Ortolano, 2002).

Due to the lack of fish passage, the reservoirs behind the dams are stocked with hatchery fish. "Colville still rely heavily on salmon through fishing hatchery fish on the Okanogan river which are called kokanee, for landlocked salmon, between and Grand Coulee and Chief Joseph dams," and "relying on kokanee means a lot of health problems" (Du Bey, 2004). Getting rid of wild salmon attributed to the huge rise in obesity, heart disease, and diabetes because Tribal members are replacing fish with fattier beef (Ibid.). However, another, perhaps far great issue with hatchery fish and the dams is their effect on water quality.

While also keeping salmon out, Grand Coulee and Chief Joseph dams hold in toxic waste from mining drainage upstream. Arsenic, cadmium, lead, and zinc are found in high concentrations in the sediment of Lake Roosevelt, the reservoir behind Grand Coulee, as well as the sediment trapped behind Chief Joseph. Many mines in Northern Washington and British Columbia drain into the Columbia River headwaters. What is essential to understand is that waste from mines upstream of these dams is causing large amounts of toxic runoff into the Columbia River. When the flowing water, saturated with mining waste, hits the large dams it is completely halted; the mining waste begins to settle out and gets into the sediment, the substance hatchery salmon, or continues to move downstream through metal-laden water (Ibid.).

Most of these mines are in the Silver Valley, upstream from the Confederated Tribes of the Colville Reservation, or in British Columbia. The Tribe's Environmental Trust has specifically been working against an active nickel mine in British Columbia. This interaction has been going on since the 1990s, and now the goal is to finish negotiations in the next couple of years (Colville, personal communication 2016). This is challenging "because transboundary water quality is very hard to enforce" (B. Didesch, personal communication 2016). A lot of this waste is also due to a huge lead-zinc smelting plant and mine located in British Columbia that remained unregulated until the 1990s (Du Bey, 2004). Within the United States, the Confederated Tribes of the Colville Reservation is working on getting recognized under the Environmental Protection Agency's Treatment as a State program. If their application is accepted, the Tribe could set water quality standards for the water coming into the reservation that are higher than that of Washington state (Colville, personal communication 2016).

A common process that happens with mining waste is that it settles out of the water and into the sediment. "Sediment is the number one water quality issue on the reservation"(Colville, personal communication 2016). This has led to an increase in sandbar cleanup efforts along the Columbia River by the Confederated Tribes of the Colville Reservation's Environmental Trust. "Additionally the lake is drained about 80 feet per year for flood control, which exposes settled sediments. When they dry they emit air pollutants as well as seep into the surrounding flora"(Du Bey, 2004).

The quality of hatchery fish in these reservoirs is also diminished by mining waste in the river, as they too absorb a lot of the mining waste as it settles out of the still water. Fish in these reservoirs show high quantities of arsenic, cadmium, zinc, and lead (Ibid.). The big problem with this is that salmon, specifically these hatchery salmon between Chief Joseph and Grand Coulee as well as above Grand Coulee, are subsistence food for the Tribe and a huge part of their diet. Additionally, these fish are used for sacred and ceremonial practices. "There is a fish advisory because of poor water quality. However that advisory is set based on the average American diet, and although Tribes are eating less than they normally would, they still eat three times as much as the average American" (Colville, personal communication 2016). The Environmental Trust is currently working with the United States government on developing stronger and more accurate fish quality standards for Tribal members.

Another large part of water quality for the Confederated Tribes of the Colville Reservation is water temperature. Temperature affects the habitat of fish, but also the amount of plant life and oxygen in the water. Coupled with the mining waste, algal blooms have a detrimental effect on the environment and the Confederated Tribes of the Colville Reservation. "Cyanobacteria blooms with toxins in lakes on and surrounding the reservation and treaty lands deeply affect members of the Colville" (Colville, personal communication 2016).

When it comes to solving these water issues, the Tribe must work with private groups as well as the State and Federal governments. The Environmental Trust works a lot with the Washington State Department of Ecology on water issues. "We have a collaborative and co-manager relationship on Lake Roosevelt" (Ibid.). When compared to Tribes working in other states, "I would say Washington is less antagonistic" (Ibid.). However, "we do a lot of work with them, but we don't always see eye to eye" (Ibid.).

Currently the Environmental Trust has a fair amount of funding for restoration projects due to a natural resource mismanagement settlement with Department of Interior; $193 million in total went to the Confederated

Tribes of the Colville Reservation. Twelve million of that sum went to the Environmental Trust to get rid of polluting roads, increase riparian areas, and remove fish boundaries (Ibid.). When it comes to federal agencies, there is "some collaboration on water quality with the Army Corp of Engineers, but their relationship with the Colville is rocky and lacks recognition of sovereignty" (Ibid.). Most of the collaboration is about total dissolved gas from water leaving the Grand Coulee dam (Ibid.). In truth, "no one really works with each Tribe on an individual basis," and, "consultation with the Colville usually looks like a mass email or a telephone conference with all the Tribes" (Ibid.).

In addition to all of this, the Confederated Tribes of the Colville Reservation is also dealing with numerous other environmental issues. First, there is an unwanted dam on the Okanogan river. Second, the reservation has a lot of feral and wild horses that are causing huge environmental degradation. Trust land and water ways, land outside the reservation but within hunting and fishing trusts, also needs to be cleaned up to water quality standards. Lastly, the Confederated Tribes of the Colville Reservation have not yet quantified water rights due to the prohibitive basin adjudication process. There are simply too many claims and stakeholders and not enough incentive to overcome the transaction costs that are associated with adjudicating basins that the Tribe holds claims in. "This will also put Tribal interest against agriculture," which is not what the Tribe wants to do (Ibid.). Even if the water rights were quantified, there would be no current infrastructure to put it to use, "the challenge for Indian Tribes in adjudication is getting the funding for the infrastructure to put that water right to use" (B. Didesch, personal communication 2016).

To the Confederated Tribes of the Colville Reservation, "water justice would be universal recognition of Tribal water quality standards and water rights coupled with a productive working relationship with local, state, federal, and international regulatory entities. The goal would be to ensure adequate water of sufficient quality on the Colville Indian Reservation to provide a permanent and prosperous home for the Confederated Tribes" (Gary Passmore Colville, personal communication 2016).

Case Study: Nez Perce

The Nez Perce, or Nimi'ipuu (meaning the real people or we the people) are one of the most vocal and activist Native American Tribes (B. Hurlbutt, personal communication 2016). Prior to being moved to their current reservation, the Nez Perce traveled frequently and freely in groups along the Snake, Clearwater, and Salmon Rivers, spanning what is now Oregon, Washington, Idaho, Wyoming, and Montana. Today their reservation lies in north-central Idaho, with the Clearwater River running through it.

The Nez Perce were a part of the 1855 Treaty, alongside the Umatilla, Yakama, Cayuse, and Palouse. This treaty ceded 7.5 million acres of Nez Perce land to the U.S. government. Shortly after, gold was discovered on the remaining land. However, rather than allowing settlers, the United States government initiated another treaty that ceded 90% of the remaining land. This resulted in the 1863 treaty, which is known as the "Steal Treaty" (Nez Perce, 2016).

A significant court case in Nez Perce history is the 1994 *Nez Perce Tribe v. Idaho Power Co.* In this case, "the federal District Court of Idaho denied the Tribe compensation for the damage done to its salmon fisheries by Idaho Power Company's (IPC) construction and operation of the Hell's Canyon dams on the middle Snake River" (Blumm, 2006). The ruling of the case said,

> "despite judicial precedent recognizing that the Stevens treaties not only created Tribal property rights, but also reserved for the Tribes a fair share of harvestable salmon runs and water necessary to protect fishing rights, the district court held that the Nez Perce had no property rights for which compensation was due because the Tribe did not own an absolute right to the individual fish in any given salmon run. Instead, so the court reasoned, the Nez Perce Treaty created only treaty rights—that is, the treaties merely reserved to the Tribes an opportunity to catch fish if they are present at the accustomed fishing grounds" (Blumm, 2006).

This set an unfortunate precedent for Nez Perce treaty rights, and might have been ruled differently if the case was tried outside of Idaho Courts.

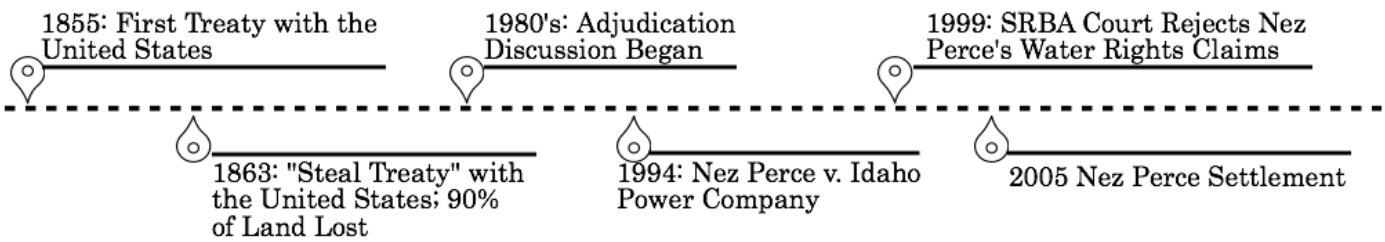
Before this case, began the discussions of the Nez Perce's Winters right claims on the Snake River. In the 1980s, conversations began about adjudicating the Snake River and were done so in secret until 2003 (R. Miles, personal communication 2016). Some argue that this was necessary so that the parties could be candid, however it had negative repercussions that hurt intra-tribal trust. The adjudication process attributed water quantity rights to every stakeholder in the basin and tributaries. There were over 150,000 water rights claims on the Snake River. The process took around twenty years, which is extremely speedy for a large basin, such as the Snake River (Ibid.). This led to the 2005 Nez Perce Settlement. "In March 2005, the Nez Perce Tribal Executive Committee agreed to waive in stream reserved water rights claims for salmon throughout the Snake River Basin in a settlement with the federal government, State of Idaho, and Idaho water users. These claims arose from treaties signed by the Nez Perce and federal government in 1855 and 1863, which exterminated aboriginal title to millions of acres in Idaho, Oregon, and Washington but also explicitly reserved fishing rights for Tribal members on and off the Nez Perce reservation in north central Idaho" (Hays, 2006).

After the conversation began on the Snake River Basin adjudication (SRBA), "the Nez Perce and federal government on behalf of the Tribe filed over one thousand claims for in stream reserved water rights in the SRBA. The SRBA Court ruled on the Nez Perce claims in 1999 and rejected Tribal claims to reserved water rights in the Snake River Basin. In a decision assailed by some commentators, the court ruled that the Nez Perce did not imply reserved water rights to protect Snake River salmon when it reserved fishing rights in the treaties," (Hays, 2006). Despite this, "the Tribe appealed this decision to the Idaho Supreme Court while continuing efforts to reach a negotiated settlement with the federal government, State of Idaho, and Idaho water users. Negotiations culminated in 2005 when settlement parties reached accord. Under the settlement, the Nez Perce Tribe agreed to waive its reserved water rights claims in the SRBA, which avoided a significant reordering of priorities in the State of Idaho's priority-based water rights system. The Nez Perce secured an array of terms in exchange, including commitments from the federal government and State of Idaho to enhance salmon habitat in the Snake River Basin" (Ibid.). It is important to note that this 2005 water settlement is almost a century after the 1908 Winters Doctrine and highlights the process of deferred justice.

The whole process happened from 1987 to 2005. "This was a relatively speedy negotiation and adjudication process. It was passed very fast, which was cost effective, but almost too fast, before everyone could agree" (R. Anderson, personal communication 2016). On top of this, "the 2005 Nez Perce water settlement was the biggest decision since the treaty," and it reaffirmed the negative effects of Tribal water settlements (R. Miles, personal communication 2016). "Tribes don't like to do settlements because it always means a loss. Settlement really means concession" (Ibid.).

The settlement had some good outcomes for the Nez Perce. The federal government had to transfer, "11,000 acres of federal land within the Nez Perce reservation into trust for the Tribe, and creation of a Tribal water right to 50,000 acre-feet from the Clearwater River with a priority date of 1855" (Hays, 2006). The SRBA also did reserve water for endangered species under state's law. Additionally, the settlement created means for on reservation in stream flows (Ibid.). These gains are not much, but the settlement is considered a success because Idaho is a very challenging state for Tribal water rights. Idaho traditionally does not acknowledge Tribal sovereignty, so "getting anywhere with them is a win. They don't view Indian water rights as more important than standard rights. They are the largest

Figure 6: Timeline of Federal Actions Affecting the Nez Perce



injustice actor to the Tribes" (R. Miles, personal communication 2016). Some of the settlements relative success is due to a very good legal team. "The Tribe fared very well in the settlement due to a very strong legal team, all whom were outsiders," and, "if you voted no [on the settlement], you were just putting your people into battle in the courtroom" (Ibid.).

Despite relative gain, as outlined above, a lot was lost. Of greatest import to the Tribe was access to local springs and fountains, however these were forfeited in the settlement. "Still in 2016, it comes up in meetings as our biggest hurt," and "they are lost forever. Unless we buy back what was already our treaty right" (Ibid.). They also lost the claim to off reservation instream flows. "Nez Perce instream flow claims threatened an irrigated agricultural economy in Idaho created and sustained by water diversions in the Snake River Basin. That Nez Perce would dedicate these water rights to provide non-consumptive flows for Idaho's imperiled salmon runs whipped agricultural and municipal water users into a frenzy" (Hays, 2006). On a larger scale, the Nez Perce also has to waive a significant amount of water rights claims in the Snake River Basin, which was critical for salmon habitat, as well as culturally significant springs and streams. "Courts have interpreted similarly worded provisions in other Indian treaties and have held that fishing rights necessarily include instream water rights sufficient to sustain the native fishery. Thus, the waiver of treaty-based claims to water under the Nez Perce fishing right represented a major concession by the Tribe" (Ibid.).

"The Nez Perce argued that the treaties implied a federal right to instream flows necessary to preserve the Tribe's bargained-for treaty right to fish in the Snake River Basin. Without such a right, the Tribe maintained, its treaty fishing rights would be virtually meaningless. The SRBA court proceeded to ignore the precedents supporting the Tribe and the federal government and ruled that its reserved treaty right to" (Blumm, 2006). The Tribe also lost a large volume of water for wetlands, a vital ecosystem on the reservation (J. Holt, personal communication, July 14th, 2016). Overall, "the judicial system was very biased against the Tribe and the federal government" (R. Anderson, personal communication 2016).

As time passes, the true outcome of SRBA and the 2005 Nez Perce Water Settlement will be seen. Today, "the Tribe still has a sour taste in its mouth, but generations from now we'll look back and see it as the best Tribe could have done" says Nez Perce Executive Director Rebecca Miles (R. Miles, personal communication 2016). Settlement was not the best for the people immediately but over time it is, and it is important to have that reliability (R. Anderson, personal communication 2016).

Eleven years after the settlement there are a lot of current water issues that the Nez Perce are dealing with. Ecological restoration is one of them. "Nez Perce is the largest Tribal fishery and most successful in the US" (J. Holt, personal communication 2016). Alongside salmon, the Nez Perce are working on improving lamprey habitat and passage over dams because they can, "do everything but go over a 90 degree angle" (Ibid.). The Nez Perce hatchery is one that both Tribal and non-Tribal hatcheries alike strive to learn from. They have a "cutting edge hatchery that is designed to mimic nature as much as possible, including tree roots, and curved runs"(Ibid.). The Nez Perce are also striving to improve their on-reservation wetlands. "Wetlands are the kidneys of the system. They are the source and keep the water cool. Wetlands are vital to the ecosystem as well as they contain a lot of culturally vital plants," but "I worry about our wetlands. Our subsistence plants need wetlands" (Ibid.).

On top of ecological restoration, the Nez Perce are also dealing with the effect that the Fish Accords have had on them. As mentioned above, the Fish Accords are an agreement signed between all CRITFC Tribes (except the Nez Perce) and the United States government that says the Tribes will not advocate for dam removal, and in return the United States will provide more funding for Tribal hatcheries. From the Nez Perce's perspective, BPA cut funding to Tribes when they were undecided about signing and agreed to give money back if they signed the accords. This "lessened their negotiation power" (R. Miles, personal communication 2016). Rebecca Miles says that the, "divide and conquer method was used in the Accords by pinning Tribes against each other" (Ibid.). In the past, "advocating for dam breaching was hard because of inter-tribal politics, but this has changed in recent years in favor of dam breaching" (J. Holt, personal communication

2016). Today, the Nez Perce are some of the most prominent activists for dam removal, and especially the removal of the four lower Snake River dams.

Today the Nez Perce are striving to have a seat at the decision making table. When asked if they currently feel like they are included in the river management process, Rebecca Miles says, "absolutely not. We are not actual negotiators, like a state. We are cc'ed on emails, but we don't have a seat at the table. We are scared that the process is going to happen, the ships are going to sail, and we are going to be left at the docks" (R. Miles, personal communication 2016). "I think the Tribes are doing everything they can to be a part of the treaty in both management and benefit. They [BPA] aren't honoring the aspects of the government that they are supposed to operate by. I think the Tribes have been ignored in a large way" (J. Holt, personal communication 2016).

To the Nez Perce, "Water justice would be to have adequate, healthy, clean, accessible water; and having the way we think and view water valued" (R. Miles, personal communication 2016).

Discussion and Analysis

There are, of course, key differences between the Columbia and Colorado River Basins as well as the Tribes within them. The geography, climate, and culture vary greatly between the Southern Ute, the Confederated Tribes of the Colville Reservation, and the Nez Perce. Each of these Tribes also struggle with a different water issues outside of water quantity. The Southern Ute are shackled by how their water can be used. The Confederated Tribes of the Colville Reservation struggles with water quality. While the Nez Perce are fighting for better salmon habitat. Additionally, the basins hold different uses and user priorities for the shared waters. In the Colorado Basin, water is primarily for agriculture and municipal and industrial use, while in the Columbia Basin water is mainly valued for electricity generation. For the Tribes, the meaning and use of water also varies from an economic right to a religious right to a subsistence right based on salmon.

Treaties are a commonality of all federally recognized Native American Tribes, however not all treaties outline the same rights or representation for decision-making power. Some argue that the treaties in the Northwest are more thorough than other parts of the United States because of the connection to salmon, and "because of the treaty rights in the Northwest they [Columbia River Tribes] have a huge legal presence" (R. Anderson, personal communication 2016). Each of these three Tribes also experience similar but not identical representation in management. Native American empowerment, "happened in the wake of civil rights movement, but change in policy and management happened through lawsuits and through activism" (B. Cosens, personal communication 2016). However, the difference lies in the fact that, "it has taken longer for the upper Columbia River Tribes to come to the table or really be invited to the table because they literally have no salmon, while CRITFC Tribes still have some salmon in streams" (Ibid.). Despite this all Tribes do struggle with the issue of tokenism. Although, many hope that the change in representation will contribute in a positive direction and benefit future Tribal generations, "I've seen things go from an era of confirmation to an era of collaboration" (CRITFC, personal communication 2016).

Despite these differences there is one over-arching commonality between the Southern Ute, the Confederated Tribes of the Colville Reservation, the Nez Perce, and all North American Tribes: *deferred justice*. The causes of this deferred justice are due to four factors: federal colonial policies, violated federal treaties, state federalism, and settler-colonial infrastructure priorities. The systematic mechanism that best explains why deferred justice happens is settler-colonialism.

Settler-colonialism structured much of the history of the United States, and the oppression of the Indigenous peoples. While the colonial period has been over for a hundred years, arguably, the legacy of settler-colonial resource policy continues to this day. "Winters was a blip in the sea of homesteading acts and development period of non-Indian water rights by the feds" (R. Anderson, personal communication 2016). "However, instead of protecting Indian water rights, the federal government has consistently expended the vast majority of its resources developing water projects for non-Indian use" (Anderson, 2000). Additionally, the [Indian] assimilation period was built on the premise that Tribes would disappear into western culture, "so why spend money [in courts] protecting their

rights?" (R. Anderson, personal communication 2016). In 1934 congress passed the Indian Reorganization Act (IRA); "the IRA prohibited further allotment of Indian reservation land and extended existing restrictions on alienation of trust land" (Anderson, 2010). During that time, and some argue even to this day, "we ignored the fact that Indians are more than just a novelty" (B. Didesch, personal communication 2016). The Nixon era changes allowed for the start of the litigation of these rights. However, "The concern for Tribes ebbs and flows, and Tribal issues tend to get back-burnered" (S. McElroy, personal communication 2016).

The benefits of this deferred justice accrued to the vast majority of white settler-colonial inhabitants of the West, as well as state governments. Yet now, "the trust responsibility extends as well to federal representation of Tribes in water rights adjudications and settlement negotiations, and any judicial decision binding on the United States as trustee is also binding on the represented Tribes" (Royster, 2006). As history has shown, it is clear that the law "at times favored federal interests over Tribal interests, the Supreme Court held that, if Congress directs the government to represent both Tribal and competing federal claims to water, the dual representation does not, by itself, breach the federal trust obligation" (Ibid.). Due to this breach in responsibility by the federal government, "Tribal water rights exist in a sort of trust limbo. They are trust assets due protection from the federal government. But the government is, in almost all circumstances, under no legal obligation to act and under no cloud of legal liability if it fails to act" (Ibid.). As seen in the case studies, the federal government's conflict of interest comes from its branches - the Bureau of Reclamation, the Army Corp of Engineers, and the Bonneville Power Administration- all profiting from stolen resources.

This critical analysis is not intended to exclude the role and power of *state* actors in deferred justice. States play an ambivalent part in Tribal water rights, and some states are far more cooperative and receptive to Tribal rights and sovereignty than others. Despite this, Tribes had no say in which state their reservation was located. For example, Colorado has always been a good state for Tribal water rights because there are only two Tribes in the state (S. McElroy, personal communication 2016). When compared to a state like New Mexico with 19 pueblos and two Tribes, they fear that if they rule one way with a Tribe or pueblo, then they must do the same for all the others, which is very costly. Then there are states like Arizona and Idaho, who "have always been hostile to Tribal interests" (Ibid.). The states' true power in Tribal water rights lies in the McCarran Amendment, which gives basin adjudication power to the states. States act adversely to Tribal water rights because, "states don't see water to Tribes as their responsibility" (Ibid.). Another reason that a state would not be supportive of a Tribe is because, generally, western states are opposed to the federal government's power and they see the Tribes as an avenue for federal influence. Anderson takes the argument so far that the states are even "jealous of Tribal jurisdiction within state lines" (R. Anderson, personal communication 2016). Additionally, there is still inherent racism against Native Americans that affects the outcome of these water settlements and contributes to deferred justice. "By authorizing state courts to interpret federally-reserved water rights, the McCarran Amendment has forced Tribes into hostile forums in which Tribes must be prepared to compromise their claims for stream flows that fully support the purposes of the reserved rights, perhaps settling for stream improvements that can partially restore river ecosystems," and, "although Tribal reserved water rights claims may open the door to discussions about stream flow restoration, in practice the McCarran Amendment Era has reduced these claims to mere bargaining chips rather than vehicles for achieving the purpose of reservations through stream flow restoration" (Blumm, 2006). In reality, "everyone expects the worst out of the state courts because of bias and racism" (R. Anderson, personal communication 2016).

Lastly, one of the main factors contributing to deferred justice is those who are benefiting from the current policy. "In every one of these cases, there is always a party that is benefiting from the status quo" (S. McElroy, personal communication 2016), and it is in that party's best interest to make these cases as long as costly as possible.

As seen in these case studies, and countless other issues in the west, the current policy structure subjugates Indigenous groups. Krakoff states,

> "if early public land and water laws were grounded in assumptions about the elim-

> ination of Native people and we are concerned about reversing the unjust effects of those laws, we should assess contemporary decisions about resource allocation in that light. In the water context, arguments about appropriate standards for quantifying Tribal water rights and the uses to which Tribes can put their water should be viewed against two backdrops" (Krakoff, 2013).

The first being a historical perspective on the countless unfulfilled promises and marginalization of Tribes, and the second being the present perspective and accounting for modern needs of Tribes, especially addressing climate change, "together, these contexts point to solutions that allow Tribes to have maximum flexibility with respect to their water rights in order to meet pressing and varied demands on our natural resources today, while simultaneously reversing the unjust effects of our eliminationist past" (Ibid.). In addition to this, she addresses the fact that decolonization of policies would move the West forward, "the final unraveling of settler-colonialism, which would redeem both American Indian law and natural resources law, would be to unhook natural resources law from its Lockean (and Jeffersonian) assumptions," (Ibid.).

However, Schneider critiques some aspects of the settler-colonial lens, "scholarship dealing with settler-colonialism has tended to take for granted the discursive construction of land as a generic space that is determined by the nature and extent of human interaction with it, both in terms of how settler-colonialism is understood and what 'solutions' or processes of decolonization are proposed" (Schneider, 2013). Despite this, it appears the settler-colonial framework best explains Tribal water issues.

> "To establish Tribes' status as sovereign nations, Tribal leaders aggressively enacted infrastructural power, transposed favorable legal rulings across social fields to legitimize sovereignty discourses, and promoted a pragmatic coexistence with state and local governments. Identifying the United States as a settler colonial society, the study suggests that a decolonizing framework is more apt than racial/ethnicity approaches in conceptualizing the struggle of American Indians" (Steinman, 2012).

Moreover, there is a tension in the spectrum between environmental sustainability and social justice, and it is linked to a settler-colonial past,

> "the separation of land into spaces of production and consumption, or private allotments and wilderness, is based entirely on whether or not humans (and in particular, men) have interacted with it. This androcentric division of space not only assumes a false chronology of human interaction with land in the West (i.e., that it began with Lewis and Clark), but also elides the effects and implications of settler-colonialism for non-human species and natural entities, such as rivers, lakes, rocks and other minerals, air and weather, and the soil" (Schneider, 2013).

In future conflicts over Tribal water rights in the west, commodification of water may be the biggest challenge. The privatization of water is not only favorable to small government and states' rights advocates, but the federal government incentivizes it through the 2002 Water Investment Act also (Johnston, 2003). However, as Johnston points out, one on the main issues with the commodification of water is that it perpetuates an already uneven power structure,

> "when water is commodified, the meaning and prioritization of use values shifts from household subsistence and regional markets to the national and global economic arena. Centralization of authority and capital is an increase in distance between those who decide water resource development, management and distribution, and those who experience the consequences of decisions. This environmental alienation produces local conflicts and crises" (Ibid.).

Additionally, Johnston elaborates on the social justice and environmental conflict with neoliberalism water policy,

> "in communities around the world, municipal and regional water supply systems are increasingly being taken over by large corporate entities and water resource development projects are being financed and built as private rather than public ventures. However, as the management of water supply and delivery systems moves from the community and their watershed to the corporate boardroom and commodity markets, the prioritization of profit often trumps social welfare and

environmental quality concerns," (Johnston, 2003).

Settler-colonial policy is our past and present, and there are many challenges that stand in the way of achieving modern water justice. Anthropogenic climate change is going to make it increasingly challenging to adjudicate basins and decree a Tribe's Winters Right. Because of climate change, the temperature of rivers is increasing. Traditional snowpack is disappearing while winter rain becomes more common, leading to smaller flows of warmer water.

One possibility to combat this is to regulate water temperature through the Clean Water Act, however few cases have been tried with this approach. Additionally, dams might be used as a temperature control technique by letting cold water out from the bottom of the reservoir. Many support this, however some question the role of human influence in natural cycles, and how much human intervention would be too excessive. With rising water temperatures come an increase in bioaccumulation of mercury, which poses a public health threat (J. Holt, personal communication 2016). Additionally, in warm temperatures, fish habitat diminishes, "we have to hope that climate change won't completely kill all the fish" (Colville, personal communication, July 15th, 2016). Today, "there are current temperature standards but with climate change they will be impossible to meet" (Ibid.).

The relationship between dams and salmon is zero-sum. Dams are currently contributing to their extinction, but if the dams are removed and there is no other infrastructure in place to meet clean power needs, there would be an increase in greenhouse-gas producing energy. This leads to increased river temperature, and therefore to the salmon extinction as well. Climate change also leads to resource scarcity. Parts of the Colorado River basin have been experiencing severe drought, and climate models only predict an increase in drought and water scarcity. With this, it is expected that California agriculture will move north where there is more water, which will only contribute to more competing interests (Ibid.).

Climate change will also affect the Indigenous community's seat at the table. There is no doubt that "climate change is the biggest obstacle that the Tribes face" (B. Cosens, personal communication 2016). However climate change is a double edged sword. It can create a policy window for collaboration or yet another means of oppression. Scholars Barbara Cosens and Robert Anderson believe that one gets a bigger voice, or seat at the table, at times of increased conflict. Tribal members such as Rebecca Miles of the Nez Perce fear that the marginalization will only grow. "Scarcity of supplies has made it very difficult to come up with solutions," and climate change will show that, "there is no such thing as finality in what your water rights are" (S. McElroy, personal communication 2016; R. Anderson, personal communication 2016).

The current political climate is also another hurdle for quantifying a Tribe's Winters Right. "We need new legislation, but in our political climate it would be impossible to pass. So, more likely, small changes and nickel and diming is more promising" (B. Didesch, personal communication 2016). The polarization of the American political system has led to inefficiency when it comes to these settlements. "Even when the parties *can* reach a settlement, Congress may not be willing to take action to ratify the agreement or provide funds needed to make the deal work" (Anderson, 2015). It is understood that, "the settlement process can certainly be improved, but it isn't realistic to expect that" (S. McElroy, personal communication 2016). In addition to this, the recent shift in America's political climate might create even more challenging and oppressive process for water settlements, however it is too early to tell.

Many argue that what could help Tribes overcome the political hurdle is finding a common voice. This can be hard because each Tribe is unique and has a different set of values, and therefore putting them in the box of 'Native Americans' can be oppressive and racially biased. However, there is power in numbers, and the commonly used divide and conquer tactic would not work on Tribes who used a common voice. Rebecca Miles of the Nez Perce argues that Tribes need to be "learning from each other, not competing with other Tribes." Additionally, Tribes are sometime paired against environmental interest, and there is a constant push and pull between environmental sustainability and social justice. This is exemplified in irrigation and water projects with the Southern Ute and many other Colorado River Basin Tribes, but also with issues

like Tribal hatcheries in the Columbia River Basin.

Another obstacle is that there is a deep value misunderstanding between Tribes and western society. History has shown this as an issue when looking at communal water rights for a Tribe versus an individual water right, but today it is still present in areas like river health evaluation. Traditional knowledge is used by organizations such as CRITFC, "the fish will tell us if what we are doing works." Yet the state and federal government do not largely accept this mode of evaluation. There is also the misunderstanding of a moral versus legal claim to water.

> "Native Americans view water as a part of their spiritual being and in turn it is part their moral responsibility to protect the water on their land for very different reasons than simply conservation like non-Native Americans. The tensions between moral and legal claims is increasingly salient in the discourse of Native American water and land rights. Native Americans must make the legal arguments that seem logical to the United States 'outsider' government and this approach neglects the cultural importance of water to Native Americans" (Semlow, 2015).

In addition to this, "moral to legal claim translation oppresses cultural significance by putting water in the same lens as the majority of the population that views water less as a symbol embedded in their collective identity, but rather a material good that can be utilized" (Ibid.).

The last obstacle to achieving modern water justice, and arguably the largest, is that these water resources are already allocated. "The issue with water rights is that it's a reallocation of a resource that has already been divided up" (CRITFC, personal communication 2016). Barbara Cosens agrees, "a water right is only a right if the water is there." Best said, "the biggest issue for Tribes is that they don't have the water. Possession is nine tenths of the law and Tribes are starting behind everyone else" (R. Anderson, personal communication 2016).

As time passes, "it is becoming more and more difficult to find and develop settlements for Tribes who have yet to settle" (S. McElroy, personal communication 2016). However, these challenges are not insurmountable, and there are many Tribes that are striving to achieve water justice.

One way to move towards achieving water justice is to have effective consultation and collaboration. This can be done with a shift to a better understanding of values. "We live on two different systems. Seeing water in the river is valuable to us. We don't see pumping it out as the only value" (R. Miles, personal communication 2016). Along the same lines, "Tribes want more than a museum piece fish" (CRITFC, personal communication 2016). Rather than continuing with the current 'token Tribal input' system, the government should shift to making a stronger effort to be on the same page as the Tribes they are working with.

Since resource scarcity is one of the main ailments to modern water justice, incentivizing efficient resource management could help alleviate that. This means that the government could provide incentives for non-Indians to be more efficient water users, for example providing funds for switching from flood irrigation to drip irrigation (R. Anderson, personal communication 2016). There needs to be, "a serious reallocation of how water is used, which calls for an adjustment from agriculture on how water is used" (Ibid.). Reducing urban sprawl and overall population growth is also discussed when looking at alleviating resource scarcity. "Until we are ready to have an adult conversation about exponential population growth, we are in for a world of hurt" (D. Rue-Pastin, personal communication 2016). When facing a diminishing resource, the only way to create more water is to use less.

To truly work towards justice, outdated policy must be changed to have more long term and inclusive management strategies. "We need a comprehensive solution that is federal, not small and disorganized," (B. Cosens, personal communication 2016) and, "we need legislation to be updated, and the principle of economics changed in the decision-making process" (B. Didesch, personal communication 2016). Realistically, Barbara Cosens says, "We need a modern New Deal" (B. Cosens, personal communication 2016). The west is governed by outdated laws and, "there needs to be flexibility and adjustments in the law" (R. Anderson, personal communication 2016). When it comes to management we are looking at the ends rather than the means, "non-Indians want to measure the outcome to determine success, they want a number.

But there are very many challenges to that" (CRITFC, personal communication 2016). As far as concrete solutions, "there is one simple thing that the Department of the Interior could do: lift the moratorium on approval of Tribal water codes. In 1975, the Secretary of the Interior mandated that any Tribal law that "purports to regulate the use of water on Indian reservations" (Royster, 2006) should be automatically disapproved. For any Tribe with a constitution that requires secretarial approval of Tribal laws, the Department's approach raises serious obstacles to Tribal water management. Tribal water codes may set forth both procedures for obtaining use rights in reserved Tribal waters and the substantive uses to which the water may be put" (Ibid). Royster isn't the only one who suggests this, "the Department of the Interior's moratorium on the approval of Tribal water codes is an impediment to Tribal management that should be removed" (Anderson, 2015). Policy makers could also change the definition of the baseline, or bare minimum, of water quantity and quality to include all Tribal rights. "The strongest trust protection for Tribal reserved water rights, and thus the preferable alternative, is for all such water rights—quantified or unquantified, exercised or unexercised—to be included in the ESA environmental baseline" (Royster, 2006). Additionally, the McCarran amendment's interpretation should be evaluated in the courts. "The State's unlimited power and attitude over these issue has got to go" (R. Anderson, personal communication 2016). The constitutionality of the Indian Appropriation Act of 1871 should also be evaluated by the judicial system.

When it comes to updating policy, the resilience theory should be included. "Resilience theory provides a framework for understanding complexity within an ecological system and for developing governance to enhance the resilience, and thus sustainability, of the social-ecological system" (Cosens, 2010). Other organizations are already working on this, for example the CRITFC is currently "learning resilience from a salmon." Additionally, adaptive governance should be applied to new river management practices. "Adaptive governance moves from a focus on efficiency and lack of overlap among jurisdictional authorities, to a focus on diversity, redundancy, and multiple levels of management that include a role for local knowledge and local action" (Ibid.). There six key elements of adaptive governance that should be followed in order to be successful:

> "multiple, overlapping levels of control with one level of either control or strong coordination at the scale of the particular social-ecological system,… horizontal and vertical transfer of information and coordination of decision-making among entities and individuals with a decision making role, …meaningful public participation, …local capacity building, …authority to respond (adapt) to changes in circumstances across a range of scenarios, … and diversity" (Ibid.).

If these elements of adaptive governance are applied to river management in both basins, modern water justice could be within reach.

However, none of the means above can alone reach water justice, without recognition of Tribal sovereignty and jurisdiction over natural resources, water justice will be unachievable. "First, all parties should recognize that Indian Tribes and their members have paramount rights to the use of some if not all reservation water resources" (Anderson, 2015). Additionally, "it makes most sense for Indian Tribes to be the lead regulatory body on Indian reservations with respect to water permitting and water quality control" and, "Tribal governments are the ultimate in local control, and states should recognize the advantages that can come from cooperating with Tribes and melding technical and enforcement authority under Tribal institutions" (Anderson, 2015). Rebecca Miles of the Nez Perce emphasized, "our values have always been in natural resources." Furthermore, it it's to everyone's best advantage to have Tribal sovereignty over natural resources. "Tribes have an environmental ethic that is stronger than you or I. It is their fiber and being. It is who they are. Tribal control over their natural resources is not being driven by an alternative motive, it's in their blood" (B. Didesch, personal communication 2016).

Conclusion

Despite their differences, like all Indigenous people in the United States, the Southern Ute, the Confederated Tribes of the Colville Reservation, and the Nez Perce experienced a form of deferred water justice due to federal policies favoring settler-colonialism. Federal colonial

policies, violated federal treaties, state federalism, and settler-colonial infrastructure priorities are factors of the systematic marginalization that creates deferred justice. There are many avenues to diminish deferred justice, yet the best and most essential one is that the United States government needs to recognize Tribal sovereignty and jurisdiction over natural resources. Modern water justice looks different to each Tribe; however, all Tribes share the same goal of participation in management and recognition of sovereignty. “Water justice would be to have adequate, healthy, clean, accessible water; and having the way we think and view water valued” (R. Miles, personal communication 2016).

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