

Spring 5-13-2017

Dammed Societies: Effects of Dams on Native Americans in the Columbia River Basin

Elliott McGill

Carroll College, Helena, MT

Follow this and additional works at: https://scholars.carroll.edu/sociology_theses

 Part of the [American Politics Commons](#), [Environmental Studies Commons](#), [Human Ecology Commons](#), [Place and Environment Commons](#), [Rural Sociology Commons](#), and the [Social and Cultural Anthropology Commons](#)

Recommended Citation

McGill, Elliott, "Dammed Societies: Effects of Dams on Native Americans in the Columbia River Basin" (2017). *Sociology and Anthropology Undergraduate Theses*. 1.
https://scholars.carroll.edu/sociology_theses/1

This Thesis is brought to you for free and open access by the Sociology and Anthropology at Carroll Scholars. It has been accepted for inclusion in Sociology and Anthropology Undergraduate Theses by an authorized administrator of Carroll Scholars. For more information, please contact tkratz@carroll.edu.

Dammed Societies: Effects of Dams on Native Americans in the Columbia River Basin

Elliott McGill

Senior Capstone Project

Faculty Advisors: Dr. Jamie Dolan, Dr. Jeremy Johnson, and Dr. David McCanna

Abstract

Since dam construction began in the New Deal Era, it has represented a dominance of humankind over nature. These massive structures have harnessed, collected, and distributed electricity from the rivers they hold back and allow humans to reap the benefits of that cycle. One of the areas where dams are particularly apparent is in the Columbia River Basin in the Pacific Northwest region of the United States.

While the dams in this region certainly have allowed the area to develop and build by using the electricity collected by these dams, they have also had several negative effects on the tribal people in the region who once fished the mighty Columbia during its populous salmon runs and relied on the salmon for nutritional, economic, and cultural reasons.

This project seeks to examine the costs of human advancement when it comes to dams, and will do so by studying three dams located in the Columbia River Basin: The Bonneville Dam, The Dalles Dam, and The Grand Coulee Dam. These dams will be studied using Black's Theory of Law as a framework to examine the manner in which law was applied to each case. The research finds that although the dams certainly provide a useful resource to the people of the region, it has had negative effects on the Native American people who depended on the river.

Introduction

When President Franklin D. Roosevelt successfully passed his New Deal legislation in 1933, many Americans rejoiced in hopes that the new jobs created by this initiative would energize the economy and provide the means for the country to climb out of the worst economic crisis in American history. One initiative created by this legislation would be construction of hydropower dams along some of the major waterways in the United States. Among the dams created were some of the most well-known in the country such as the Grand Coulee and Hoover Dam.

While this legislation surely stimulated and boosted the struggling economy and created a renewable source of energy that showed no immediate negative aspects, it also set in motion the damming of wild waters and displacing native people and animal species. This cycle of dam-building has continued to grow to this day even outside of the United States, as sixty-percent of the world's two hundred major river basins are dammed (Hawley 2011). Together, these dams have drowned a land-mass behind them that is larger than the state of California (Hawley 2011). Furthermore, these dams have held back sediment and minerals from reaching the ocean and have instead allowed for salt and alkaline deposits to build up and be transported into farmland that neighbors these massive dams (Hawley 2011). Possibly the most staggering statistic is that since World War II, between forty and eighty million people worldwide have been displaced and lost land, lifestyles, and jobs as a result of dam construction in various regions of the globe (Hawley 2011).

As noted earlier, these dams played a vital role in American history and have had a significant impact on American lifestyles today. According to the United States

Geological Survey, hydropower represents about 16% of the world's total electricity production (U.S. Geological Survey 2014). The purpose of this research paper is to examine this delicate and intricate relationship between humans and nature. It aims to answer the following question: What are the consequences of human advancement when it comes to dams? To answer this question, I examine the dams constructed along the Columbia River basin and the effects they have had on the native people, plants, and species of the region. This study looks at these effects both from a statistical approach using data on several measures, and also on a deeper level to examine some of the qualitatively negative effects dam construction has had on Indian tribes in the region that are not as easily quantified. In order to complete the latter aspect, the research uses Donald Black's Theory of Law as a framework (Black 2000).

Project Significance

This research is particularly significant for two main reasons. First, there is relatively little research and information on this issue, both on a global level and particularly in the Columbia River Basin which suggests that it is somewhat understudied in the academic and scientific communities. While there seems to be a fair amount of research on either the benefits of dams or the negative implications of them, little has been published examining both and specifically how they relate to Native Americans. Furthermore, none of the existing research uses Black's Theory of Law to examine the case which makes this research unique and significant. Also, this research is something society should consider because it is one example of a very interesting relationship that has existed for all of human history. This relationship is that of human

advancement and nature, and the consequences the natural world experiences in order to make life easier or more enjoyable for some.

This research aims to serve as a case-study of this relationship and possibly open the eyes of readers who may have not previously thought about it by examining the manifest and latent functions of dam construction.

Literature Review

As noted, most of the existing literature and research related to this subject has mainly focused on either the benefits of hydropower dams or on the negative issues resulting from dams on a worldwide scale. The most extensive of this research is a study done in 2000 by the World Commission on Dams (WCOD) to examine the various economic, environmental, legal, and social costs and benefits of damming projects across the world.

The WCOD found that large dam-construction projects offer a variety of social benefits to the communities nearby. One of the most obvious is electricity produced by many of these dams. The electrical output generated by these dams, the report points out, has brought electricity to communities in the world that previously lived without it (WCOD 2000) Among the communities listed are the slums in San Paolo, Brazil and various impoverished communities in India. The report shows that people in these areas were mostly living in shacks with either no electricity or illegal and often unsafe access to electricity (WCOD 2000).

Another benefit of large dam-construction projects noted in the report is improved irrigation which benefits the agricultural areas surrounding dams. The report makes note

of the Grand Coulee Dam, the largest hydropower dam in the United States which sits on the Columbia River Basin which is the region of focus for this research. It shows that agribusiness in the surrounding communities multiplied due to newly constructed irrigation systems that diverted water from the reservoir created by the dam and that this contributed to higher production yields in crops (WCOD 2000). A final benefit is that of employment. Again using the Grand Coulee Dam as reference, the report notes that this construction created around 10,000 jobs employing both skilled and unskilled laborers during the construction period and created a few thousand jobs stemming from the tourism created by the dam (WCOD 2000).

The report also suggests that dams have created some negative aspects. The most striking being the displacement of people in the communities that stand where construction takes place. In looking at the Grand Coulee Dam project again, the study states that the project drastically flooded the Colville and Spokane American Indian reservations as well as three towns in the area (WCOD 2000). The construction required workers to burn homes to clear land and eventually thousands were forced to leave their homes with no compensation after the entire area was flooded by the new reservoir (WCOD 2000). It was not until two years later, when the American Indian residents found out that most of the white landowners affected by the construction had been compensated, that tribes demanded to be paid and finally were, but only for the land and not homes or other personal property lost. This displacement was also negative for the tribal members because they were relocated to areas that were not powered by the newly produced electricity coming from their lands and therefore they were not able to reap benefits of the construction that others did (WCOD 2000).

Little research has been done on all of the effects of dams on the Columbia River region, which reaffirms the significance of this project. Nevertheless, there has been some limited research conducted to examine the experience of Native Americans in dealing with large-dam constructions on their land. A study by Du Bey and Sanscrainte (2004) noted three major negative implications that arose as a result of the Grand Coulee Dam construction. The first was the destruction of tribal salmon fisheries that had existed for centuries. The authors note that prior to 1850, salmon runs along the Columbia were among the highest in the world, seeing between 500,000 and 1,300,000 salmon each year (Du Bey and Sanscrainte 2004). Annual runs have decreased to about 25,000 and continue to dwindle due to the difficulty the fish have making it up the river and over multiple dams to their spawning beds (Du Bey and Sanscrainte 2004).

The second implication Du Bey and Sanscrainte noted was that due to the high amount of sediment held in the reservoir created by the Grand Coulee Dam (Lake Roosevelt), sediment and other minerals, as well as toxic sediment from mine tailings was released into the air in the surrounding communities (Du Bey and Sanscrainte 2004). This can have serious implication on health of tribal members in the area as well as the plants, animals, and other wildlife present in the area and tribes are currently working to pass emissions quality regulation to try to limit these potential risks (Du Bey and Sanscrainte 2004).

A final implication noted in the study is on the overall health of the Native Americans living in the communities surrounding the Grand Coulee Dam. As a result of the destruction of their salmon fisheries, tribal members have seen increases in heart disease and high cholesterol as their diets have shifted from a focus on nutrient and

protein rich salmon to high fat and sodium foods that are available and affordable (Du Bey and Sanscrainte 2004).

A similar study was also conducted by Fisher on the Yakama tribe in which he examined the effects the people experienced in the Celilo Falls region of their land (Fisher 2004), after the construction of The Dalles Dam in 1952. The flooding caused by the dam destroyed one of the most successful tribal fisheries along the Columbia at Celilo Falls (Fisher 2004). Prior to the construction of The Dalles, the federal government had largely been cooperative and protective of the tribal lands and their rights to fishing waters. Numerous court cases defended the tribes' rights and access to their historical fishing areas and also defended their right to prevent unwanted fishermen from accessing and destroying these sites (Fisher 2004).

Unfortunately, despite outspoken opposition by both tribal and other community members in the area surrounding The Dalles, construction began in 1952. These people recognized the negative effects the construction had on the fisheries surrounding the Bonneville Dam, and fought to prevent it from happening to their fisheries, but eventually lost (Fisher 2004). The act of fishing was not only a matter of physical sustenance for these tribes, but a cultural and religious aspect as well (Fisher 2004). Religious ceremonies celebrated the salmon which returned each year and fishing spots were passed down from generation to generation within each tribe. Furthermore, the trade that once took place at Celilo Falls served to maintain positive relations between tribal and non-tribal people suffered as a result of the dam construction (Fisher 2004).

Roels (2013) conducted another study on Native Americans in the Columbia River region and the effects of salmon depletion on their societies. She also notes that the

construction and presence of dams along the Columbia has been the number one culprit in the diminishing salmon populations in the region (Roels 2013) and that tribes have suffered the greatest losses as a result. Roels notes that when the tribes of the Pacific Northwest and Canada signed treaties giving up some of their lands, they did so with an understanding that their fishing areas would continue to thrive and that they would control access to the areas. She also notes that in communities like that surrounding the Bonneville Dam along the Columbia River, the salmon runs played a central role in the people's sustenance, religious ceremonies, and economies (Roels 2013). She finds that traditional Indian methods for storing salmon and transporting it allowed for them to use it to trade with white settlers for other items they needed, and that this economic activity was wiped out with the construction of dams like Bonneville, The Dalles, or Grand Coulee (Roels 2013).

Roels noted that although the United States federal government guaranteed tribal members to harvest 50% of salmon runs each year, the construction of dams has decimated these populations to a level where 50 % cannot even support the tribes on a nutritional level, much less on a cultural or economic level (Roels 2013). She states that this violates the rights of the Native Americans expressed in treaties with the American government and that serious compensation must be given to the tribes as a result.

Roberta Ulrich (1999) also discussed the negative impacts on Native Americans as a result of the Bonneville Dam construction. She used firsthand accounts from tribal members in her study to learn their experiences and those of their ancestors regarding the project and their relocation. She found that many Native Americans in the area were promised by members of the Army Corps of Engineers to be relocated to high ground and

that their homes and salmon-drying shacks would be replaced by the government (Ulrich 1999). This never came to fruition and the tribal members were left to build their new lives alone without financial aid from the government. Ulrich also noted that the construction of the Bonneville Dam flooded a Native American burial ground that had existed for generations and forced tribal men and women to relocate ancient bones, jewelry, baskets, and other artifacts to a small single grave cemetery five miles from the dam (Ulrich 1999).

Wilson (2000) also studied the Columbia River and some of the implications dams have had on the tribal people in the region. In her study, she argued that the dams constructed and operating along the Columbia and Snake Rivers are actually illegal and that the United States and Army Corps of Engineers are in violation of treaties signed in 1855. These treaties, Wilson points out, call for the native tribes to hand over millions of acres to the United States for development, but reserved the tribes right to the salmon fisheries on these rivers and the economic reliance the various tribes had on them.

On multiple occasions since 1855, the United States Supreme Court has upheld these treaties and established that the salmon fisheries discussed in the treaties must be maintained in a manner that allows the Native Americans in the region to harvest and use this resource at an “economically viable level,” (Wilson 2000:360). Due to the harsh effects the dams have had on the salmon populations, and the failure and difficulty to offset these effects with hatchery salmon, Wilson states that the United States must remove the hydropower dams in the Columbia River Basin because it is the only way to rebuild the salmon fisheries in the region and allow them to be self-sustaining and

economically viable to the Native Americans as was promised in the treaties in 1855 (Wilson 2000).

Black's Theory of Law

Wilson's research on the legality of the dams in relation to the various treaties signed in 1855 raises many of the legal questions and aspects mentioned later in this study. Donald Black's Theory of Law (Black 2010) helps explore these issues from a sociological and legal perspective. Black's theory articulates many dimensions of the law in a sociological context, but this study will focus on three: A "vertical dimension" which focuses on socioeconomic status, the "horizontal dimension" which focuses on race and ethnicity, and the organizational structure, which examines the groups and their size in conflict (in this case the Native American Tribes and the government) which is critical to consider (Taylor 2008).

Black's Theory applies quite well to the relationship that this research focuses on for a few reasons. The primary reason is that when examining the two parties of focus here (the federal government and the tribes), the two are almost at complete ends of the spectrum when examining them in the terms of horizontal and vertical dimensions which Black wrote about. The Native Americans were dealing with an entity that, in terms of Black's theory, had a greater vertical dimension (higher socioeconomic status), higher horizontal dimension (made up of mostly white males), and a much greater organizational structure (the federal government pitted against the small tribal government). Black's writing discusses what a pivotal role these play in the enforcement of law on a community or person. He states that as organizational differences increase between two parties, the more law tends to flow downward (Black 2010). In other words,

when a small group such as the tribes take on a large group like the federal government, the more likely the large group is to win or impose their wishes on the smaller group.

Donald Black's Theory of Law is certainly a useful lens for this research, and other researchers have used it as well. One such study focused on police-citizen homicide and used Black's Theory as its lens (Tucker 2015). Tucker's research found that in examining homicide of a citizen at the hands of a police officer, the status of the state in comparison to the status of the citizen allowed the state to assert its superiority and essentially "get away with murder" (Tucker 2015: 294). Clearly my research takes a slightly different approach and makes different use of Black and his theory, but still draws on the organizational, socioeconomic, and ethnic differences between two parties and how that influences the way law is enforced.

As this issue of damming continues to remain prominent, many communities and governments have called for dams to be removed. If the results of this research are examined, at least in terms of Donald Black's Theory of Law, this seems to be a reasonable request, and one that is also held by those in the academic community (Wilson 2000) because it represents a clear use of "downward" law that Black discusses in his theory (Black 2010).

It seems at least possible that one method for the Native Americans to regain their rights spelled out in the treaties of 1855 is for the removal of all dams in the region. John Loomis conducted a study at the local, state, and national scale to measure the public's willingness to use tax dollars to remove the Elwha River Dam near the Strait of Juan De Fuca in Washington (Loomis 1996).

The Elwha Dam had been criticized for many years for the negative effects it had on the ecosystem in the region as well as on the salmon populations. Loomis found that although the removal project would require a significant budget that would come from tax increases, people at the local, state, and national level were willing to pay for the removal (Loomis 1996). What Loomis' research shows is that the population is slowly becoming aware of some of the negative results of dam construction, and that they are willing to pay to remove them. The dam on the Elwha eventually was removed in 2011 and resulted in increased revenue at both the state and national level. When examining this from the lens of Black's theory, the Elwha Dam removal not only represents the possibility of dam removal in general, but possibly the resolution of "downward" law that took place in the previous century by returning lands and their cultural significance to the tribes who lost them due to dam construction.

Methodology

This study takes a comparative look at the manifest and latent functions of large dam projects in the Columbia River Basin and their effects on Native Americans in the areas of construction. To do this, I frame the research using Donald Black's Theory of Law to examine these functions.

The Columbia River Basin is home to over sixty dams, so a complete and in-depth analysis of each project is beyond the scope of this research. Instead, this study focuses on three of the most well-known and oldest dams in the area: The Bonneville Dam, The Dalles Dam, and the Grand Coulee Dam. These were chosen because they had the most widely available information on hydroelectric output and other statistical figures that are critical to this research. For each dam, the research takes a two-level approach to

aim for a more complete analysis. The first level will focus on statistical analyses, and examine the data available on each project while the second level takes a more in-depth look at the specific issues Native Americans have experienced as a fallout of these dams such as cultural displacement due to decreasing salmon populations or health problems now affecting the tribes.

The first step of this research provides some background information on each dam and how it came about. Next, the study examines and explains statistics of the dam's construction. These statistics are narrow and focused and look at specific figures like electrical output, total cost, and the total time taken to complete the project. The next step identifies the native people who once called those lands home. The Native Americans displaced by these projects is one of the major units of analysis in this project as it is looking to see how they were affected. This section looks at total numbers displaced as well as reparations given to the tribal members, if any. A final step in the first level of research examines the current data on dams and their functions today. This step looks at figures regarding electrical output, tourism revenue generated by the dam, and cost of upkeep for the dam. Finally, this data as well as the data collected from the steps above was compiled in order to provide an organize and accessible reference for the reader.

The second level of research examines the current state of affairs for Native American people affected by the three dams listed. It looks at any changes the tribes experienced from a cultural standpoint after the construction of the dams. It also looks at their reliance on salmon, and how that has changed or altered their way of life as the salmon populations continue to dwindle. This second level also studies the legal implications of these projects and makes an argument for whether or not the tribal

members in this region were wronged by these construction projects. This is accomplished by using Black’s Theory of Law as a reference to frame the arguments. Donald Black’s theory is only used as a reference and provide insight through which I structure my argument for the legality of these construction projects. It should be noted that this section of the data simply offers one point of view based on my understanding of the data available. It does not make any definitive claims on if these projects were legal or if the tribal members today have grounds to take action against the federal government or Army Corps of Engineers, nor does it aim to.

The final step of the research makes conclusions based on the data found during this study, and what it can tell us about the future of this region and its native people. This step offers some insight into what the future might hold for dams in the United States and, more specifically, in the Pacific Northwest. This issue is one that will surely have a complex and interesting future in the coming years, and this section aims to give a rough idea of where that future may head.

Data and Analysis

The Bonneville Dam

<u>Electrical Production</u>	<u>1,000,000 kilowatts</u>
<u>Total Cost</u>	<u>\$754.8 million USD</u>
<u>Tribal Fishing Areas Lost</u>	<u>37</u>
<u>Compensation</u>	<u>40 out of 400 acres promised</u>

Currently, the Bonneville Dam has the capacity to produce over 1 million kilowatts of electricity and provides electricity to the Pacific Northwest. The dam is made up of two powerhouses that were completed roughly forty years apart. The first powerhouse, completed in 1943, cost 88.4 million dollars in total while the second powerhouse cost a total of 666.4 million dollars after its completion in 1982 (Army Corps of Engineers 2013).

As far as the impacts on Native Americans in the area, the dam was responsible for flooding thirty-seven traditional fishing areas used by tribal fisherman (Ahlstrand 1999). These sites were said to be protected by the Treaty with the Yakama, the Treaty with the Tribes of Middle Oregon, and the Treaty of the Walla Walla, all signed in 1855 by members of what is now the confederated Yakima tribes, Warm Springs tribes, and Umatilla tribes, respectively (Columbia River Inter-Tribal Fish Commission). In response to this violation of the treaty, the tribes were promised 400 acres along the river to utilize in lieu of the areas that were destroyed by the dam's construction. Unfortunately, this promise has not been upheld, and the tribes in this area have only received 40 of the 400 promised acres (Ahlstrand 1999).

As this project relates to Black's Theory of Law, there seems to be a significant difference in the law "on the books" and how the law stated in the Treaty of 1855 was upheld by the federal government and the Army Corps of Engineers. In terms of the horizontal dimension and vertical dimension, which focus on socioeconomic status and racial or ethnic, the tribes and the government seemed to be on opposite ends of the spectrum. In Black's writing, he discusses how those who are at a disadvantage in terms of socioeconomic status and racial or ethnic status tend to have the law enforced "on"

them instead of “for” them, especially when going up against a larger entity (Black 2010:21) which seems to explain what happened in this case. As far as the organizational structure applies to this case, the small tribes were up against a much larger entity in the federal government and Army Corps of Engineers, which may explain why the law was not enforced in full compliance with the Treaty of 1855.

The federal government, in effect, went against its own word stated in the treaties of 1855 by destroying areas that were protected in the treaties (Ahlstrand 1999). In terms of Black’s view of “style” this law was clearly violated. Black may argue that reconciliation was at least attempted by the federal government by promising the 400 acres to the tribe. This seems to be an insufficient and unenforced compensatory measure because it destroyed tried and true fishing grounds used by the tribes and replaced them with new ones that may not be as successful. Furthermore, the compensation was not fully upheld as the tribes have seen only a 10% compensation of the 400 acres (Ahlstrand 1999).

The Dalles

<u>Electrical Production</u>	<u>7.2 million kilowatts per year</u>
<u>Total Cost</u>	<u>\$378 million USD</u>
<u>Consequences for Native Americans</u>	<u>Destruction of Celilo Falls</u>
<u>Compensation</u>	<u>Market Value of Living Quarters</u>

The Dalles Lock and Dam sits on the border of central Washington and Oregon, located 192 miles upstream of the Columbia River. The Dalles Dam is capable of

producing up to 7.2 million kilowatts of electricity each year and also has allowed for the passage of nearly 10 million pounds of river cargo to pass each year. The total cost of production for The Dalles Dam is roughly 378 million dollars, and the total construction was completed in two phases, quite similar to the Bonneville Dam and the Grand Coulee Dam. The first phase was completed in 1957, which built 14 generators and was followed in 1973 by the second phase which added an additional eight units (US Army Corps of Engineers 2013).

Also similar to the other dams studied, were the effects this construction had on the Native American population in this region. Similar to the Bonneville Dam project, the land for this project was ceded by the tribes to the government in the Treaty with the Yakama, the Treaty with the Tribes of Middle Oregon, and the Treaty of the Walla Walla. The effects also impacted the confederated Yakima, Warm Springs, and Umatilla tribes (The Confederated Tribes of the Colville Reservation 2014). Also similar to the Bonneville Dam especially, the exact numbers of Native Americans relocated by the project were difficult to find, but it is known that tribal members who lived near the area were paid the market value of their drying shacks and living quarters and then relocated to another area (Craig 2007). Eventually, in the late 1990's, the tribal people were given more funds and better housing after years of legal battles and campaigns to raise awareness in the public (Craig 2007). Another aspect that seriously affected the tribal members in the area was the destruction of Celilo Falls, which had once been one of the most populous fishing areas and trading locations for goods and services exchanged between tribal and non-tribal people for decades. This not only eliminated the fishing sites at the falls, but also destroyed the trading capacity it once held and impacted the

Native American’s economic sustainability by diminishing salmon populations and the economic value the salmon held for them (Fisher 2004).

When applying Black’s theory to this construction project, again many of the same issues exist. Native Americans were once again going up against a much more powerful entity in the United States Government, and one that also had much higher status while trying to negotiate a fair implementation of the Treaties of 1855. Although they were given some compensation, again it was not enough to cover the costs of relocating, and was not enough to support the tribes until additional assistance was given in the 1990s. Also similar to the other projects, because the government wrote the laws, they were able to interpret them to benefit their goals in building a dam in the location they chose.

Although the treaty promised to keep all “usual and accustomed” fishing sites intact, the construction of The Dalles Dam destroyed many of them, and diminished the salmon populations that the rivers once held (Fisher 2004: 184). This suggests another instance of a breach of trusts created by the Treaties of 1855 that the government was able to accomplish due to its size and various advantages it held over the tribes. It seems that in terms of Donald Black’s theory, this instance shows that the government altered the “style” of the law to benefit its own goals.

The Grand Coulee Dam

<u>Electrical Production</u>	21 Billion Kilowatt Hours
<u>Total Cost</u>	\$1 billion USD
<u>Estimated Native Americans Displaced</u>	3,000-4,000

<u>Compensation</u>	50% of Salmon in the Area
---------------------	---------------------------

The Grand Coulee Dam was also constructed in two phases. The first and second powerhouses were completed in 1941, and a third was added later in 1974. According to the US Bureau of Reclamation (USBR), Grand Coulee Dam has the capacity to supply up to 21 billion kilowatt hours each year which is enough to power 2.3 million homes for one year. The cost of the construction of the first two powerhouses was roughly 300 million in the 1940's and the construction of the third cost roughly 700 million dollars after it was added in the 1970's (USBR 2015). If these projects were to be undertaken today, the costs would be 5.4 and 2 billion dollars respectively which speaks to the immense cost this project took to complete (USBR 2015).

The land area utilized for this project was ceded by the Colville and Spokane tribes to the American government in the Point Elliot Treaty, the Yakama Treaty, and the Hells Gate Treaty, all signed in 1855 (The Confederated Tribes of the Colville Reservation 2014). The USBR does not offer exact statistics on how many people were relocated due to this project, but most agree the numbers to be roughly 2,000-2,500 members of the Colville and Spokane tribes (Ortolano 2000: XII). Aside from the relocation of the tribal members, research has shown that the destruction of the Colville's fishery below the dam largely affected the health of the tribal members. Ortolano states that 40-50% of the tribes' daily diet was lost due to this destruction and that heart disease and other illnesses have increased on the reservation as a result (Ortolano 2000). In response to the relocation and flooding of these reservation lands, the USBR offers some explanation of its efforts to compensate the tribes.

“Congress also directed that one-quarter of the entire reservoir be set aside for the paramount use of the members of the Confederated Tribes of the Colville Reservation and Spokane Tribe of Indians for fishing, boating, and hunting purposes. The tribes fish the waters below the salmon hatcheries and are allowed to take up to 50% of the fish raised by these hatcheries. The tribes also work on habitat restoration in the tributaries below Chief Joseph Dam. These tributaries provide excellent spawning grounds to indigenous migrating fish. In addition, a new hatchery has been built just below Chief Joseph Dam that is operated by the Colville Tribes” (USBR 2016:20).

When applying Black’s Theory of Law to this project, there seems to be many of the same issues that exist in examining the Bonneville Dam project. Yet again the tribes differed from the government in terms of race and ethnicity and socioeconomic status. Also, the size of the organizations affected by this project were once again at odds with one another. In terms of the “style” of the law as it applies to the project, it again seems to be similar to the construction of the Bonneville Dam and The Dalles dams. As mentioned above, because the tribes differed in each of the dimensions Black discusses, they were unable to stop the much larger government from taking their land. This relationship is what Black refers to as “downward” law (Black 2010:21) and is a behavior similar to the previous two dams discussed above. This describes a situation where the larger entity (the government) hands down law to the smaller group because it has higher power and status and is therefore seen as more powerful in social terms.

Although the government has admitted to destroying reservation land and fishing grounds, it attempted to compensate for that destruction by promising tribal members a section of the reservoir created by the dam (Du Bey and Sanscrainte 2004). The tribe also was promised up to 50% of the salmon in the fisheries that remain after the dam’s construction (Du Bey and Sanscrainte 2004). Again, applying the Theory of Law, we might expect that although compensatory measures were taken, they were insufficient.

The USBR fails to recognize that 50% of the remaining salmon populations today is only a fraction of the populations that existed before the dam's construction. The tribal members used the salmon that used to exist in the millions for cultural and economic benefit and as a result of those diminishing populations, they are unable to do so in the same manner they once were.

Conclusion

This research attempted to make sense of the discussion surrounding each of the projects by following the same steps to collect data and then analyze how the damming projects affected the Native Americans in the areas surrounding each dam. Overall, this goal was largely accomplished and most of the data were accessible through online government resources. Unfortunately, some of the data was not accessible or found through this research, such as exact numbers of Native Americans relocated.

While this may be seen as a negative aspect, many of the larger issues that existed as a result of these projects were still able to be researched and analyzed. The themes of insufficient compensation and destruction of fishing and cultural sites once held by Native Americans seem to be consistent with each damming project studied. This pattern is particularly significant because it connects much of the previous research that either focused on one dam or another. This trend found from case study to case study seems to suggest that these large-scale dam projects in the Columbia River Basin created several qualitatively negative latent effects for Native American people in the area. These large dams researched for this project are likely not the only ones with these consequences, and it seems that more public attention needs to come to the issue of dams and their future. Society and elected officials should look at these projects and consider if the energy and

economic benefits of these dams outweigh the cultural and environmental harms they present.

Furthermore, Black's Theory of Law proved to be a useful lens in examining the construction projects and the impacts they had on Native Americans in the area. In terms of his theory, another trend seemed to be recurring through my analysis. In each of the three cases studied, the Native Americans were at a disadvantage in terms of their horizontal and vertical dimensions as well as in terms of the organizational structure and size of the federal government they faced. Because the federal government was at an advantage, being much larger, and being essentially "the law", they were able to interpret and navigate the Treaty of 1855 in order to accomplish their goals in what Black would consider a "downward" fashion. Using Black's theory as the lens for this study certainly added a dimension that was missing from previous research and perhaps shows where future research on this issue could go. Not only could this theory be applied to studies of other dams where Native Americans were involved, but it could also be used to examine much of the Native Americans history. It seems that using Black's theory would allow a framework which researchers could use to examine tribal and governmental relations throughout American history and see how often the Native Americans suffered the same disadvantages they did in the cases studied here.

This research certainly does not offer a concrete answer to the discussion of dams, nor does it aim to, but simply attempted to shed light on the issue and the group of people that have largely been left out of the discussion of dams and their effects. Although this research found that Native Americans were the group most seriously affected by the construction of these dams, the evidence of the larger environmental effects of the

projects will likely affect all of society in the future. Issues like rapidly diminishing salmon populations, toxicity in waters held back by dams, and cost of operation and upkeep of these massive structures will likely pose economic and environmental hurdles for society in the future which is why a discussion of these dams and their actual contributions should be dealt with carefully.

As alternative energy sources are found and technology to harness them continues to develop, it seems that it is at least reasonable to assume that the electricity produced by these dams could be developed using alternative methods. Dam removal is certainly not a fiscally easy task to accomplish but it seems that as the world and the environment is put under increased stress, removal might offer the best chance of a future where salmon runs are restored and Native Americans are able to once again occupy and harvest the lands and waters that they held prior to the dams. The research presented above will hopefully add to this discussion and offer insight from both legal and sociological standpoints in order to find a resolution that will benefit Native Americans, salmon, and the earth.

References

- Abramowitz, Mara, 2010. "How Law Behaves: An Interview with Donald Black." *International Journal of Law, Crime, and Justice* 28: 37-47.
- Ahlstrand, Chris, 2010. "Four Tribes Four Dams." University of Colorado Student Publications.
- Black, Donald, 2010. *The Behavior of Law*. UK: Howard House.
- Columbia River Inter-Tribal Fish Commission. "The Confederated Tribes and Bands of the Yakama Nation." Retrieved December 1, 2016.
- The Confederated Tribes of the Colville Reservation. 2014. "History of the Colvilles." Retrieved December 1, 2016.
- Craig, Carol, 2007. "Relocation and the Celilo Village Community." *Oregon Historical Quarterly* 108: 698-705.
- Du Bey, Richard and Sanscrainte, Jennifer, 2004. "The Role of the Confederated Tribes of the Colville Reservation in Fighting to Protect and Clean-Up the Boundary Waters in the United States: A Case Study of the Upper Columbia River and the Lake Roosevelt Environment." *Penn State Environmental Law Review* 12: 335-525.
- Fisher, Andrew, 2004. "Tangled Nets: Treaty Rights and Tribal Identities at Celilo Falls," *Oregon Historical Quarterly* 105: 178-211.
- Hawley, Steven, 2011. *Recovering A Lost River: Removing Dams, Rewilding Salmon, Revitalizing Communities*. Boston, MA:Beacon Press. 61.
- Loomis, John L, 1996. "Measuring the Economic Benefits of Removing Dams and Restoring the Elwha River: Results of a Contingent Valuation Survey" *Water Resources Research* 32: 441-447.
- Ortolano, Leonard and Cushing, Katherine Kao, 2000. "Grand Coulee Dam and the Columbia Basin Project: WCD Case Study."
- Roels, Starla Kay, 2013. "Borrowing Instead of Taking: How the Seemingly Opposite Threads of Indian Treaty Rights and Property Rights Activism Could Intertwine to Restore Salmon to the Rivers" *Environmental Law* 12: 375.
- Schneider, Lindsey, 2013. "There's Something in the Water: Salmon Runs and Settler Colonialism on the Columbia River," *American Indian Culture and Research Journal* 37: 149-164.

- Tucker, James, 2015. "The Pure Sociology of Right and Wrong: New Directions in Donald Black's Theory of Law and Social Control," *International Journal of Law, Crime, and Justice* 43: 293-294.
- Ulrich, Roberta, 1999. "Empty Promises, Empty Nets" *Oregon Historical Quarterly* 100: 134-157.
- U.S. Army Corps of Engineers. 2013. "The Bonneville Lock and Dam Fact Sheet." Website. <http://www.nwp.usace.army.mil/Locations/Columbia-River/Bonneville/>
- U.S Army Corps of Engineers. 2013. "The Dalles Lock and Dam Fact Sheet." Website. <http://www.nwp.usace.army.mil/Locations/Columbia-River/The-Dalles/>
- U.S. Bureau of Reclamation. 2015. "Grand Coulee Dam Statistics and Facts." Website. <https://www.usbr.gov/pn/grandcoulee/pubs/factsheet.pdf>
- U.S. Bureau of Reclamation. 2016. "Grand Coulee Dam Frequently Asked Questions." Website. <https://www.usbr.gov/pn/grandcoulee/about/faq.html>
- U.S. Geological Survey. 2014. "Hydroelectric Power Water Use." Website. <http://water.usgs.gov/edu/wuhy.html>
- Wilson, Rollie, 2000. "Removing Dam Development to Recover Columbia Basin Treaty Protected Salmon Economies," *American Indian Law Review* 24: 357-418.
- World Commission on Dams. 2000. "Dams and Development: A New Framework for Decision Making.