

“Unleashing the Beast: The Elwha River Restoration Project”

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Throughout history, stories and events of organizations and people using their power for wealth have shaped the world we live in today. In such accordances, members of the public are called to duty, to take a stand for their rights when such cases have occurred. These events have led us into the world we live in, and have painted history. We can learn from these events of our past to improve our future.

One of the greatest examples of this can be found in the controversial history of the Elwha Dams. Just over a century ago, in the early 1900's, the 45 mile long Elwha Dam flowed freely from the Pacific Northwest and into the Strait of Juan de Fuca. However, two entrepreneurs alone would shape the culture and development of Port Angeles, Washington and Clallam County as a whole.

In the late 19th and early 20th century Port Angeles began to develop when more people began to move west in search of resources such as gold, silver, and timber. As a result, families would be in need of basic necessities such as energy. Thomas Aldwell, a Canadian entrepreneur would come up with the idea of a colossal hydroelectric dam. Aldwell, would reach out to another Canadian financier named George Glines. George Glines was from Winnipeg, and came from a wealthy family. Together, Aldwell and Glines would found the Olympic Power and Development Company. They would reach out to several other investors from the timber industry, who were already considered, “timber barons”. Aldwell and Glines would raise the funds needed to build not just one, but two massive dams (Wikipedia, “Thomas Aldwell”).

The Elwha Dam would begin construction in 1910, and officially open in 1913. However, many shortcuts would be used to build the Elwha Dam as quickly and cheaply as possible. The Elwha Dam was built so cheap that instead of anchoring it to the underlying bedrock of the river, Aldwell chose to anchor the dam to the bedrock canyon.

As a result, the bottom portion of the dam blew out, and had to be repaired before opening.

In addition, an 1890's law, that stated, "Fish passage wherever food fish went to ascend" was broken. This law required that when dam operated passage through for fish had to be available. Aldwell chose to ignore this requirement (American Rivers, "ELWHA RIVER: (RE)BORN TO BE WILD").

In 1915, Leslie Darwin the Washington State Fish Commissioner offered to let Aldwell bypass the law as long they built fish hatcheries. These fish hatcheries were built the same year, but would be abandon only seven years later in 1922. As a result, it would be impossible for salmon to swim pass the dam (National Park Service, "Dam Construction").

Salmon were and are a keystone species to Elwha River ecosystem. This means that many other unique organisms depend on salmon to survive. When salmon become a scarcity, then other animals can't survive, and this continues through the food chain. Before the Elwha Dam was built salmon and steelhead were caught that reportedly weighed over 100 pounds (Cole, "Will the 100-pound Salmon return to the Elwha").

In addition, salmon and the Elwha River itself were viewed as sacred to the Native American community. The Klallam Tribe, not only lost its generational connection to the salmon, but also lost their sacred grounds. Once the Elwha Dam was put up, Klallam Tribe's sacred grounds were flooded, and tradition was lost.

"We actually had people, a college team come by and said they wanted to talk to tribal members that had...a strong spiritual tide to the river, and you know my mouth just dropped open. There's not a tribal member that does not have a strong spiritual tie to the river, that doesn't go down and see how the river's doing." States Robert Elofson, the Director of the Elwha River Restoration Project.

Mel Elofson talks on behalf of his deceased grandmother who was just a young girl when both the Elwha and Glines Canyon Dam were put up. He recalls that his grandmother used to love walking along the Elwha River and watching the salmon. "One day the dam was completed...and she stood there in tears, watching the salmon just banging their heads and dying...it was very devastating to her, and she rushed home and told everybody else what she had seen, and word passed through the tribe quickly."

Despite this, the second dam known as the Glines Canyon Dam would be built in 1925, and open two years later in 1927. This dam though would be much larger than the original Elwha Dam. The Glines Canyon Dam would be 210ft tall, and located eight miles above the Elwha Dam (National Park Service, "Timeline of the Elwha from 1940 to 1292").

Crown Zellerbach Corporation had bought the Elwha Dam in 1919, and the Glines Canyon Dam in 1936. However, two years after buying the Glines Canyon Dam in 1936 the Olympic National Park was founded. After the Olympic National Park boundaries were redrawn in 1940, they included the Glines Canyon Dam (Reed, "The Once and Future Elwha River").

Beginning in the mid to late 20th century activists including the Lower Elwha Klallam Tribe began to fight back against the company Crown Zellerbach Corporation that owned the dams. In 1968 Crown Zellerbach Corporation filed to license the Elwha Dam. This same year the Lower Elwha Klallam Tribe filed for federal recognition, and

officially set up a reservation along the Elwha River (Sadin & Vogel, "An Interpretive History of the Elwha River Valley and the Legacy of Hydropower on Washington's Olympic Peninsula").

Tensions would progress further between the Lower Elwha Klallam Tribe and the Crown Zellerbach Corporation. In 1973 after Crown Zellerbach would file for a relicensing of the Glines Canyon Project. Meanwhile, as terms were being set for this US District Judge George Boldt would revolutionize Native American fishing rights. The case would be eventually known as "The Boldt Decision", through the treaties set for Native American Tribes in the mid 1800's the Lower Elwha Klallam Tribe was guaranteed fishing rights of 50% of the annual catch, however these had been largely ignored.

George Boldt would rule in recognizing fishing rights for the Lower Elwha Klallam Tribe, as well as neighboring tribes such as; the Samish, Snoqualmie, Steilacoom, and Duwamish. However, at the same time Boldt would rule against landless tribes. His decision would later be upheld in 1975 with the Ninth Circuit Court of Appeals, as well as the United States Supreme Court in 1979. George Boldt's decision would be monumental. He would set the precedent for other court cases around him (Crowley & Wilma, "Federal Judge George Boldt issues historic ruling affirming Native American treaty fishing rights on February 12, 1974").

As Crown Zellerbach's license for the Glines Canyon Dam was being processed, questions were being raised. However, Crown Zellerbach reached an agreement with State Department of Fisheries, that allowed the company to \$145,000 to monitor and build a spawning channel for fish. In 1986 the Lower Elwha Klallam Tribe would file to the Federal Energy Regulatory Commission (FERC) for the removal of both dams as well as a fish recovery plan. The Secretary of Interior would step in, and state that the FERC did not have the authority to license the Glines Canyon Dam (Reed, "The Once and Future Elwha").

Shortly after, environmental activists groups such as the Sierra Club, Seattle Audubon Society, and Friends of the Earth petitioned for the full removal of both dams. In addition members of the Olympic National Park staff were tasked with finding possible options of restoring the salmon to their original state.

Representative Al Swift would convince members of the government to conduct studies on dam removal. It was soon learned that removing both the Elwha and Glines Canyon dam would provide the best opportunity to restore salmon to the Elwha River.

So in 1992, six representatives; Norman D. Dicks of District 6, Jim McDermott of District 7, John R. Miller of District 1, Sid Morrison of District 4, Jolene Unsoeld of District 3, and Rod D. Chandler of District 8, of Washington State banded together to form House Resolution 4844. House Resolution 4844 would also be known as *The Elwha River Ecosystem and Fisheries Restoration Act*. Thus on, April 9, 1992, it was introduced into the House of Representatives ("Elwha River Ecosystem and Fisheries Restoration Act"). *The Elwha River Ecosystem and Fisheries Restoration Act* granted the Secretary of Interior permission to obtain both hydroelectric dams. In addition, House Resolution 4844 outlined the protection of the restoration of the Elwha, such as maintaining the water quality and funding the fish hatcheries.

On that same day, April 9th, the act was referred to the House Committee on Energy and Commerce, the House Committee of Interior and Insular Affairs, and the House

Committee on Merchant Marine and Fisheries. The bill was then referred to seven other subcommittees. Eventually, Representative Al Swift, who introduced the bill, moved to suspend the rules, which would allow the act to be passed. Soon after that, there was a forty-minute debate on October 6, 1992. From there, the bill was amended, and the House agreed to suspend the rules. Later, on October 7, 1992, it passed the Senate without the amendment. President George H.W Bush signed the act into law on October 24, 1992, and it became Public Law 102-495 (National Park Service, "Timeline of the Elwha from 1940 to 1992").

Even though Public Law 102-495 was passed in 1992, the dams still wouldn't be torn down until around 20 years later. A process political arguments, funding disputes, and methods to finally tear down the Elwha and Glines Canyon Dam arose. The document, the Final Environmental Impact Statement which would cooperation between six separate agencies led by the National Park Service would released. It would detail safe ways to remove both dams, as it was estimated 13 million cubic yards of sand was trapped behind the Glines Canyon Dam alone (National Park Service, "Final Environmental Impact statement").

As of August 26th, 2014 both the Glines Canyon and Elwha Dam have been removed. However, a long road to recovery remains. The National Park Service is now tasked with monitoring the restoration of the Elwha. "There's something like 2,000 dams over two meters tall in the country, and a lot of them are coming to the end of their life expectancy...and so society will have to decide what to do with a whole lot of these dams." States Mike McHenry a Fisheries Habitat Biologist of the Lower Elwha Klallam Tribe.

"It was spiritual, it was emotional, there's a lot of pride in it." Explains Patty Elofson, a Lower Elwha Klallam Tribe member who was a young adult during the turning point of the late and mid 20th century. "It's a process", she says, "So dam removal and restoration...will go on for the next generations." Now, all eyes are on Port Angeles as the largest successful dam removal in history has been completed.

Annotated Bibliography

Primary Sources

Images:

American Rivers- Elwha River, windsox.us

This image of the Elwha was a good visual for use in our documentary.

Atkins Assists NPS in Construction of New Fish Hatchery on Elwha River, January 3, 2012, Atkins Global

This image of a fish hatchery showed the viewer an example of a fish hatchery. This helped to understand how they were operational and how this contributed to the Elwha restoration.

“Black and white photo showing water flowing from spillways.” *Clallam County Historical Society*, Port Angeles, WA.

This photograph through the CCHS helped us to understand just how the water spillways when it was up in business and what it looked like when it was in the middle of its use. It was used as a visual in the presentation.

Blue Salmon Paddle By Darrell Charles. N.d. Photograph. Ecogenetix. Web. 22 Apr 2017.

This image helped us capture a better understanding of the Elwha. It showed the cultural aspect of the Elwha especially because of their large role in the river.

Chinook Salmon Elwha River, NOAA

This image was a visual aid in the documentary, showing examples of the types of salmon/wildlife living in the Elwha River. It was helpful because salmon are very abundant in the river and are a big reason for many decisions made about it.

Chinook salmon in fish ladder. *California Department of Fish and Wildlife*

This photo helped us see the salmon more growing up. We understood more of why they were so important to the Lower Elwha Klallam Tribe.

Dam Construction, National Park Service

This image showed an example of the dam construction process. It was used as a visual to show what the dam looked like in its early stages which helped to comprehend what the original thoughts for the dam were.

Duwamish Tribe opposes 520 expansion through ancestral homelands, montlaker.wordpress.com

This image provided a good visual for the documentary, and aided in the storytelling. It was a cultural example of how prominent the Elwha was in the culture.

Earth Saving News, October 6, 2011, EarthShare

This image of salmon jumping up a waterfall provided an example of the species that occupy the Elwha River. It was especially important because they have a very large population in the Elwha River.

Elwha dam when it was still standing. PopularMechanics.com

This image showed the Elwha Dam, and how it looked while it was still up in the Elwha area.

Elwha Dam - Wikipedia. N.d. Photograph. Wikipedia. Web. 25 Apr 2017.

This image of the Elwha dam provided a clear visual for use in our documentary, showing what the dam looked like, and what an impact it had on the aesthetic of the environment.

Elwha Hiking and Dam Removal Tours, Olympic National Park, May 27, 2012, Experience Olympic

This image of a salmon jumping out of the water provided an example of the species that live in the Elwha River. This was used as a visual in the documentary to show the beauty of the river.

The Elwha River, elwha.weebly.com

This image showed an example of the dam construction, and what it looked like in the early 1900s. This correlated to show and help convey how different the area looked like compared to what it is today.

Elwha River, February 26, 2017, Wikipedia

This image showed what the Elwha River looks like today, after the dam removal. This relates to how the river has changed to what it is today and helps show just how it looks very different after dam removal.

“Elwha River – The largest dam removal in US history.” *Before It's News*, 25 Aug. 2012, beforeitsnews.com/earthquakes/2012/08/elwha-river-the-largest-dam-removal-in-us-history-2444208.html.

This picture was used for our presentation board to show the progression between about ten years to how much silt and debris started to flow down the river after the dams were taken out.

Elwha River near Glines Canyon Dam, February 5, 2017, Abby Sanders

This image showed examples of the Elwha area, and explained what that area was like. This was used as a vivid example of what the surrounding area looks like and helped us to understand how much different it looks since dam removal.

Elwha River: Sanctified by Salmon, Colorado College

This image showed an example of the Native American community of this area in the early 1900s. This correlated to show what the Elwha looked in the back as the surrounding area.

Elwha River: Sanctified by Salmon. N.d. Photograph. Colorado College Sites. Web 25 Apr 2017.

This image showed what the Elwha dam looks like from a dramatic angle, which was good for use in our documentary.

Elwha River - The Largest Dam Removal in US History, *Before It's News*. 23 Apr 2017.

This image showed what effect the dam removal had on Lake Aldwell. This was important because it changed because of dam removal.

Elwha: Roaring back to life, published: February 13, 2016, Steven Ringman, Seattle Times

This image showed an example of the wildlife that lives around the Elwha. This wildlife are all things that use the river to survive and have it as their habitat.

Federal court dismisses suit against Elwha hatchery; tribe drops nonnative steelhead stocking plan, February 17, 2013, The Seattle Times

This image showed an example of a fish hatchery. This was helpful because the large role in history that they played.

Federal Energy Regulatory Commission, LinkedIn

The logo for the Federal Energy Regulatory Commission was a visual aid used in explaining how the different bills traveled. This commission was important in the Elwha restoration and leading up to it.

First Salmon Ceremony, May 25, 2010, markmalijan.com

This image was a good example in showing the cultural aspects that the salmon had with the Native tribes. It showed one of the ceremonies and helped in the documentary as a visual aid.

Freeing The Elwha (Calling The Salmon Back to The Elwha: Poems for the Adventurous Anadromous, National Park Service

This image was a good example for showing the salmon species that occupy the Elwha River, which are a big part of the river.

Freeing The Elwha (Salmon Nutrient Cycling), December 13, 2014, Hands on the Land/ Dean Butterworth

This image shows how the species living around the Elwha interact with one another. It was taken by a local Park Ranger who captured the beauty of the forest in which he works around.

Friends of the Earth: Anti-nuclear group turned anti-technology activists, March 8, 2016, Genetic Literacy Project

This logo was useful in explaining the process of the petitions against the Dams. Friends of the Earth was fundamental in the standing up for the environment in many parts of the restoration and dam removal.

Frink, Noreen. "Color photographic print of Elwha Dam in the fall of 2010." *Noreen Frink*, Port Angeles, WA, 2010.

This photo taken by Noreen Frink, a relative of Thomas Aldwell. It shows the dam closer to when it was removed. It is one of the more recent pictures of when the dam was in use and shows what it looked like in more recent times.

From the Rivers: Life as a Fisheries Biologist: A River Running Free, 16 Nov 2012, From the Rivers: Life as a Fisheries Biologist. 23 Apr 2017.

This image shows the Glines Canyon Dam partially removed. This is important as it shows how one of the two dams started off in dam removal and how much was released from behind it.

"Glines Canyon before starting dam". *Clallam County Historical Society*, Port Angeles, WA

We used this photograph taken from the Clallam County Historical Society to be able to see the river in the canyon before the dam was constructed. This shows and helps us

understand how the river and the its surroundings look before the monstrous dams were added.

“Glines Canyon/Lake Mills.” *Clallam County Historical Society*, Port Angeles, WA, 0AD.

This photography provided by the Clallam County Historical Society showed what the Glines Canyon Dam looked like in its process of its construction. This photo very clearly depicts what a process dam construction was and exactly what it looked like.

The Glines Canyon Dam after removal, September 25, 2014, National Parks Conservation Association (US)

This image showed what the Glines Canyon Dam looked like when it was still standing. It helped just to show what this dam looked like and was used in the documentary.

Historic Photographs from the Construction of the Elwha River Dams. Images courtesy of the Clallam County Historical Society. *KCTS9*.

This historical photo helped to tell the story of the Elwha as it unfolded throughout the early 1900s. It was important because this was the years that the dam was very prominent in the history of the river and the dam.

History at Port Angeles, Clallam County, Washington, 1900, craigmagnuson.com

This image provided a visual and information about what Port Angeles was like in the early 1900s. This was included because it was during the same time period as when the dams were built.

Jaacks, Jason. “The freshly freed Elwha River meanders through a former lakebed.” *National Geographic*. National Geographic Creative.

This aerial image of the Elwha after the removal of the Dams had a great cinematographic feel that was good for the use in our documentary.

Knight, Ben. The Elwha Dam before its removal. *ESRI*.

This provided a good image of the Elwha area, to display its beauty. It was taken and used as a reference to show what the area looks like and Elwha itself.

The Lower Elwha Klallam Tribe’s journey of discovery, both painful and healing, June 14, 2009, Seattle Times

This image helped show the Native American community, and what that looked like in the early 1900s. This helped to convey what this community would have looked like at about the time of the construction of the dams.

The Lushootseed People Peoples of Puget Sound Country, Coll-Peter Thrush and University Libraries of University of Washington

This image showed what the Native American community looked like at the time that the Elwha Dam was beginning to be built. It helped to create a picture of contrast of what the differences are.

Message from Salmon-Sacred Beauty, January 30, 2016, skyestephenson.wordpress.com

This image showed the salmon art that is prevalent in the Native American culture. It cemented even more to how big salmon are in this culture and how the dam affected them.

Miles Lost Miles Gained: History, 1900, mileslostmilesgained.org

This image showed what Port Angeles looked like in the early 1900s. This is to show what Port Angeles would have been like when the dam construction was taking place and what kind of technology they had.

Mill Pond Preserve, Charleston Land Trust

This image showed an example of fish hatchery, and what that may have looked like at the time of the construction of the fish hatchery built by Thomas Aldwell. This is very interesting because it shows their intentions and what they had set when the dams were built.

Miller, Ian. "The Elwha River estuary on March 22, 2005." *USGS*, 22 Mar. 2005, walrus.wr.usgs.gov/elwha/estuary.html.

This image showed an example of the Elwha area and what the estuary looks like which is where many of the salmon along with the silt travel down the river.

"New viewing area gives look at Elwha River after dam removal" *Seattle Times*, 5 June 2015, www.seattletimes.com/life/travel/glines-canyon-spillway-overlook-opens-in-dam-free-elwha-valley/.

We used this photo for our presentation board to help show others what the Glines Canyon Dam looked like when it was being removed and how it opened up a lot of water into the river below.

Port Angeles, Crown Zellerbach pulp and paper mill, 1985, Joel Rogers Photography

This image showed the Crown Zellerbach pulp and paper mill, which provided a clear image of exactly what that company represented, and therefore what the Elwha and Glines Canyon Dams represented in an area of natural beauty.

Pennsylvania Chapter Sierra Club, Sierra Club

This logo helped in explain the petitions that were against the Dams, and for their removal. The Sierra Club were an important in the advocacy for the removal of the dams so it was important to include their visual in the documentary.

Port Angeles, Paper Mill owned by Nippon Paper Industries, Washington State, Pacific Northwest, November 11, 2012, Joel Rogers Photography- Northwest Worldwide

This image was important because it is of the paper mill that was operating which correlated to the dam and had impacts through the dam and dam removal.

President George H. Bush (R.), Pinterest

This provided a visual of the president that signed the act into law that represented the removal of the Elwha's Dams. It was helpful because he was an important part in enacting the events that happened during the restoration.

Rebuilding the River as Washington's Elwha Dams Come Down. N.d. Photograph. High Country News. 23 Apr 2017.

This image shows the before and after of the Glines Canyon dam, demonstrating the effect its removal had on the area.

Remembering the Boldt Decision 40 years later, The Washington State Library

This image of George Boldt helped in explaining the story of the Boldt decision, and how that affected the treaty rights of the tribes.

Return of the fish wars: Hatchery pits environmentalists against tribe, April 22, 2015, Aljazeera America

This provided a map of the Elwha watershed area, which puts the area into a geographical perspective.

Salmon Life Cycle Chart, *Salmon Facts*.

This image showed the life cycle of a salmon, which in turn proved just how vital the Elwha is for that species.

Salmon spawning in a Washington stream. *My Olympic Park*.

This image helped show visuals of the salmon species that occupy the Elwha River.

Seal of the United States Supreme Court. *Wikimedia Commons*.

This logo helped explain how the different bills traveled, and eventually made it to the Supreme Court.

Seattle Audubon Society logo. *Seattle Audubon Society*.

This logo was useful in explaining the petition against the Dams, and the activism that started to take place in the 1970s and onward.

Snoqualmie Tribe logo. *Living Snoqualmie: Navigating Life in the Foothills*

This logo helped to represent the Snoqualmie tribe. This was important because this tribe is one of the ones in the area of the river and also uses salmon in their culture.

Sund, Harald. A fish ladder built around a dam in the Pacific Northwest. *How Stuff Works*.

This photo showed an example of fish ladders, and also demonstrated how they would have been helpful if they had been included in the original Dams.

Underwater photo of pink salmon in the Elwha River. *Peninsula Daily News*.

This photo helped to show the wildlife that live around the Elwha area. These are of animals that rely on the Elwha and what it has to offer.

Documents:

495, 102nd Cong. (1992) (enacted).

This document was useful in furthering our knowledge of the Elwha Restoration Act which was an important document in the renewing of the river and the future plans.

Boldt, George H. *The Boldt Decision*.

The document "The Boldt Decision" helped understand what the Boldt decision was all about. As a result we learned that many of the native tribes in Washington were still fighting for basic treaty rights.

Final Environmental Impact Statement Elwha River Ecosystem Restoration. National Park Service.

This document documented how to possibly take down the two dams, and what their

effects might be. It gave our group a greater understanding to how complicated and delicate the dam removal process was. As a result we learned that large projects like this take years to plan and fund, and how slow change can be.

"H.R.4294 - 105th Congress (1997-1998): To amend the Elwha River Ecosystem and Fisheries Restoration Act to provide further for the acquisition and removal of the Elwha dam and acquisition of Glines Canyon dam and the restoration of the Elwha River ecosystem and native anadromous fisheries, and for other purposes. | Congress.gov | Library of Congress." Congress Gov, n.d.

The failed bill that tried to be passed gives a window into how important the Elwha is. It showed the attempts that took place, and the effort that was poured into the Elwha Restoration Project. Even though this bill never was passed, it helps explain how points of view evolved when comparing it to other house bills.

White, Rick. "H.R.4294 - 105th Congress (1997-1998): To amend the Elwha River." Ecosystem and Fisheries Restoration Act to provide further for the acquisition and removal of the Elwha dam and acquisition of Glines Canyon dam and the restoration of the Elwha River ecosystem and native anadromous fisheries, and for other purposes." N.P.,n.d. 17 Mar. 2017

This bill helped us greater understand how many acts were attempted to be passed about the Elwha. We learned that were failed attempts to revise and edit the many things containing the Elwha.

Videos:

GSOBirds. *YouTube*. YouTube, 18 Oct. 2014. Web. 16 Mar. 2017.

This video provided a good visual for the documentary, showing flowing water from the Olympic Peninsula area.

Ian Miller. "Time lapse of the removal of Elwha Dam, Washington State." Online video clip. *YouTube*. N.p., 16 Jul. 2013. Web. 23 Apr. 2017.

This video time lapse of the Elwha Dam removal shows how the removal affected that area over time.

Mkbobkoff. *YouTube*. YouTube, 12 Jan. 2009. Web. 16 Mar. 2017.

This video showed the Strait of Juan de Fuca at the mouth of the Elwha River, which provided a good visual for use in our documentary.

Mouth of the Elwha River, March 4, 2017, Maizie Tucker

This showed the Elwha River area, and provided useful visuals for the documentary. It was taken by a group member close to her home and shows the real time look of the mouth.

National Geographic. "Remove the Dams to Save the Salmon? | Short Film Showcase." Online video clip. *YouTube*. YouTube, November 7, 2015. Web. April 21, 2017.

This video provided good visuals for the documentary, and showed what effects dam construction can have on salmon populations nationwide.

NationalGeographic. *YouTube*. YouTube, 02 June 2016. Web. 16 Mar. 2017.

This video provided great visuals for our documentary, and gave examples of the Elwha area, and what it looked like.

Salmon Jumping - Bing video. N.p., n.d. Web. 17 Mar. 2017.

This video provided useful visuals of salmon, and how they interact with their habitat.

Salmon Jumping Shrewsbury Weir - Bing video. N.P., n.d. Wed. 17 March 2017

This video showed how different species interact with each in the natural Elwha habitat.

YouTube. N.p., 16 July 2016. Web. 16 Mar. 2017.

This video of the Strait of Juan de Fuca provided a good visual for the documentary, and showed an example of the Elwha watershed area.

Interviews:

Personal interview. John Tucker. 14 Apr. 2017.

This interview helped us understand the other side of the argument. We learned from Mr. Tucker that the tearing down both dams weren't great. Many people had quarrels against taking down the dams, such as losing their jobs or homes.

Personal interview. Mike McHenry and Mel Elofson. 23 Feb. 2017.

This interview with both Mr. McHenry and Mr. Elofson provided both a cultural and scientific explanation of the dams. Mr. Elofson provided his own insight to the cultural aspect of the Elwha and Glines Canyon Dam, as well as representing his grandmother.

Personal interview. Patty Elofson. 3 March 2017 .

This interview with a Mrs. Elofson helped us learn a more cultural aspect of the Elwha river Restoration Project. Mrs. Elofson had been the chairman of the board during the decision to tear down the dams. She provided a unique look and stand point of many of the traditions of the tribe.

Personal interview. Robert Elofson. 18 Feb. 2017.

This interview with Mr. Elofson helped us understand the more cultural aspect of the Elwha River Restoration Project. At the same time though Mr. Elofson mentioned many scientific effects, followed by his own cultural perspective.

Personal interview. Sam Brenkman. 3 Feb. 2017.

This interview helped us understand the effects the Elwha and Glines Canyon Dam had on the salmon population and the over ecological area of the Elwha. Mr. Brenkman taught us about how complicated the removal process of the dams were scientifically. As a result of this, he gave us our first glance at the long and complicated history of the Elwha area.

Music:

Morning Guitar Instrumental Music to Wake Up Without Coffee to Wake Up Without Coffee. OCB Relax Music, 2015. *YouTube*. Web. <<https://www.youtube.com/watch?v=GsrIZ1mnOvU>>.

These river sounds were useful in our documentary, to aid in fully submerging the viewer into the sounds of nature, to get the feel of what the nature surrounding the Elwha was like.

Nakai Earth Spirit: Native American Music. Roses of Time, 2015. *YouTube*. Web. <https://www.youtube.com/watch?v=VTsUOjA6_zg>.

This song was useful in our documentary and had a peaceful feel that was also related to the Native American culture.

Secondary Sources

Articles:

Barcott, Bruce. "The Elwha's Last Dam Summer." *Seattle Met*. 22 July 2011. www.seattlemet.com/articles/2011/7/22/elwha-river-dam-august-2011

This article gave us information regarding the deconstruction of the Elwha dam and the events that led up to it. These were important because the deconstruction was a large part of the history.

Crowly, Walt and David Wilma. "Federal Judge George Boldt issues historic ruling affirming Native American treaty fishing rights on February 12, 1974." *HistoryLink*. 23 Feb. 2003. www.historylink.org/File/5282

This article summarized court decision that was vital to progression of the Lower Elwha Klallam Tribe rights. It helped better explain why the Boldt Decision was so important, and what the case was actually about.

"Dam Construction" *National Park Service*. National Park Service. www.nps.gov/olym/learn/historyculture/dam-construction.htm

This article clearly presented facts and information about what led to the construction of the Elwha dam in the first place. It was very useful to understand the reasons behind the dam's construction.

Gottlieb, Paul. "Elwha dam fete boycott?" *Peninsula Daily News*.

This article showed how some people were against the dam removal, for different reasons. It was important to show the controversy and why people decided to stand up for their beliefs.

Hawkins, Erin. "Groups aim to improve health of Dungeness." *Peninsula Daily News*. 19 Apr 2017.

This article explained how people are still putting effort into river restoration in this area. This was used to have an overall main idea of the conflict and the effort.

Oldham, Kit. "Ceremony marks start of demolition of Elwha River hydroelectric dams on September 17, 2011." *HistoryLink*. 10 Feb. 2015. www.historylink.org/File/11011

The document helped us learn about what people thought of after the dam were being torn down. We learned more about the celebration and significance of the dams finally being torn down.

Books:

Crane, Jeff. *Finding the river: an environmental history of the Elwha*. Corvallis, OR, Oregon State U Press, 2011.

This book helped us better understand the historical and cultural value behind the Elwha River area. The book provided detailed information and facts on Clallam County, Washington State, and other National Parks. The knowledge proved crucial in comprehending the importance of the Elwha River area

"*The Elwha report: restoration of the Elwha River ecosystem*". 1994. *Archive.org*.
www.archive.org/details/elwhareportresto94nati

This book provided a wide range information on the Elwha Restoration Project. In the beginning of the book, it provided some of the historical background of the dams before going into different ways and calculations on how to remove them. What was most helpful though was the detailed timeline of the Elwha and Glines Canyon Dams.

Websites:

"Dam Removal - Overview." *National Park Service*, www.nps.gov/olym/learn/nature/dam-removal-overview.htm.

This website gave a completely and accurate explanation of how both the Elwha and Glines Canyon Dam were removed. It shows the complex process used, and the work that had to be done.

"Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service." *Endangered Species Act of 1973*, www.fws.gov/laws/lawsdigest/ESACT.html.

This website helped simplify Public Law 102-495, also known as The Elwha River Ecosystem and Fisheries Restoration Act. The original bill is very confusing and was difficult to comprehend. Using this version of the bill helped us grasp the concept and rules behind the actual bill.

"The Elwha Act: P.L. 102-495." *National Park Service*,
www.nps.gov/olym/learn/historyculture/the-elwha-act.htm.

This website gave us brief information regarding the Elwha Restoration Act, which was helpful in leading us to other sources for further information.

"Elwha River Restoration." *National Parks Service*, U.S. Department of the Interior,
www.nps.gov/olym/learn/nature/elwha-ecosystem-restoration.htm.

This website better explained the continuing project to restore the Elwha River area to its youth. They give a brief history of the dams, before going into more specific details as the dams were being torn down.

"History of the Elwha- Overview". *National Park Service*.
www.nps.gov/olym/learn/historyculture/history-of-the-elwha-overview.htm

This website helped give us the history and historical value of the Elwha Dam. It explains everything in a very chronological order, making the history of the Elwha Dam easy to learn.

“Secretary Salazar Applauds Beginning of Restoration of Elwha River, Largest in U.S. History.” *U.S. Department of the Interior*, 17 Sept. 2011, www.doi.gov/news/pressreleases/Secretary-Salazar-Applauds-Beginning-of-Restoration-of-Elwha-River-Largest-in-US-History.

This website better explained how dramatic the effect was of finally tearing down the two dams. It explained some of the positive effects that the demolition of the dams will bring, both culturally and scientifically.

“Timeline of the Elwha Through 1940.” *National Parks Service*, U.S. Department of the Interior, www.nps.gov/olymp/learn/historyculture/timeline-of-the-elwha-through-1940.htm.

This website created a timeline of the construction of the dams, beginning in the 1800s and ending in 1940. The timeline made the history of the Elwha clear and simple. It provided the crucial facts to include in our documentary.

“World's Largest Dam Removal Unleashes U.S. River After Century of Electric Production.” *National Geographic*, National Geographic Society, 27 Aug. 2014, news.nationalgeographic.com/news/2014/08/140826-elwha-river-dam-removal-salmon-science-olympic/.

This website helped us understand the immense size of the Elwha Dam removal project. It captured everything that we needed to know on how they were actually tearing down the Elwha Dam. The site provided tons of statistics and a few photos to help us mold our documentary.