

Lower Eklutna River Dam Removal

Final Report

The Conservation Fund
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1. Summary of Accomplishments

In four to five sentences, provide a brief summary of the project's key accomplishments and outcomes that were observed or measured.

The Lower Eklutna River Dam was removed as described in the funding proposal, completing one of the fastest and most efficient major dam removal projects ever attempted in the nation. From start to finish, the removal of this dam occurred over a four year period, where many major dam removals take decades to execute. With the dam removed, eight miles of habitat are now available for five species of Pacific salmon to repopulate for the first time in 89 years.

2. Project Activities & Outcomes

Activities

- Describe and quantify (using the approved metrics referenced in your grant agreement) the primary activities conducted during this grant.
All activities contemplated in the grant proposal were completed safely, effectively, on time and under budget. The Lower Eklutna River Dam was removed from the river channel to allow fish passage into 8 miles of upriver habitat.
- Briefly explain discrepancies between the activities conducted during the grant and the activities agreed upon in your grant agreement.
There were no discrepancies between what was proposed and what was accomplished.

Outcomes

- Describe and quantify progress towards achieving the project outcomes described in your grant agreement. (Quantify using the approved metrics referenced in your grant agreement or by using more relevant metrics not included in the application.)
The outcomes achieved in this project are identical to what was contemplated in the grant agreement. The project was a complete success in every regard.
 - We successfully restored fish passage to an 8-mile reach of the Eklutna River, reconnecting 11.3 miles of river habitat. With the dam removed, fish can now move upstream for the first time in 89 years.
 - We improved spawning habitat in the Lower Eklutna River for 5 species of salmon and Dolly Varden trout. We re-established natural patterns of sediment movement and deposition, and improved spawning habitat to transitioning the river downstream of the dam from being sediment starved to being well supplied with natural sands and gravels conducive to spawning.
 - We re-established natural river functions in the Lower Eklutna River. See above.
 - We took a major step towards recovery of the entire Eklutna River watershed. With the Lower Eklutna River Dam removed, conversations and actions are progressing rapidly to re-establish natural water flows in the the Eklutna River.
- Briefly explain discrepancies between what actually happened compared to what was anticipated to happen.
There are no discrepancies between what was proposed and what was achieved.
- Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.

3. Lessons Learned

Describe the key lessons learned from this project, such as the least and most effective conservation practices or notable aspects of the project's methods, monitoring, or results. How could other conservation organizations adapt their projects to build upon some of these key lessons about what worked best and what did not?

The most valuable lesson from this project is that boldness and vision matter. The removal of the Lower Eklutna River Dam had been discussed for decades, beginning in the 1950's, but the idea languished for lack of leadership. Once The Conservation Fund stepped up into the leadership role, the project came together incredibly quickly. Taking the first step is often the hardest and riskiest one in a complex project, but boldness is its own reward.

This project had a variety of elements that contributed to its overwhelming success. Most importantly this project had a great story line that the public and politicians found compelling. Native people and native salmon had been impacted by inconsiderate damming of a river they all relied upon, and here was a chance to rectify this historic injustice. Unlike most conservation projects that seek to hold a firm line and prevent loss or degradation, this project was about fixing something, putting Humpty Dumpty back up on the wall. Restoration work is very restorative to the people involved as it gives them the sense that they can repair some of the damage done to our planet.

Alaskans put salmon ahead of god and guns, it's often said, and this project raised the possibility of restoring a major run of sockeye salmon within 20 minutes of Alaska's largest city. One thing that Alaska has so far done right with salmon is that we haven't built many dams on the rivers that salmon rely upon. In this case, a dam was built where it should never have been built, and it was built without asking the local Native people who owned the land and relied on the fish. Taking this dam was very empowering for the Eklutna Dena'ina as it started to turn back the history of all the things that have been taken from them. Here's a case where we broke a river with a dam but we fixed it, and hopefully in the process we learned that salmon and dams don't play well together.

The speed at which the Lower Eklutna River dam came down is partly due to the fact that most of the money was private, not public funding. It's amazing how fast you can move with private money when you don't have all the hindrances that come with public funding. The biggest hurdle most major dam removals face is the excruciating process of securing public funding. Fortunately we were able to avoid the majority of that hassle.

On a technical note, we learned the hard way that sediments deposited behind an abandoned dam can be complex and difficult to work with. In hindsight we should have done more extensive coring of these sediments to better characterize their composition. The sediments were capped by a thick layer of sands and gravels that we presumed extended the entire depth of the column. In fact, silts and clays were interbedded between the sands and gravels and formed the majority of the deeper sediments. These silts and clays were particularly problematic during the excavation of the job site.

4. Dissemination

Briefly identify any dissemination of lessons learned or other project results to external audiences, such as the public or other conservation organizations.

This project has benefited from an estimated 100 news stories in newspapers, magazines, on television and radio. The story has attracted national attention and was ranked #2 by American Rivers' evaluation of major dam removal projects. The project is also the subject of a Patagonia-funded film project that will come out in the Winter 2018. We anticipate showing the film at major film festivals across the country. I have given over 30 presentations to different organizations and continue to receive requests for additional appearances.