Introduction

Chinook salmon (Oncorhynchus tshawytscha) (Aqua: Shoshone-Bannock) is a traditional medicine and food source for the Nez Perce and Shoshone-Bannock Tribes of Idaho. These are two of the five federally recognized tribes of Idaho, that still practice traditional fishing methods along the Columbia and Snake River; their fishing rights and use of traditional fishing methods were secured by the Walla Walla Treaty of 1855 (Nez Perce) and Treaty with the Eastern Band Shoshonis and Bannock of 1868 (Shoshone-Bannock). Unfortunately, Chinook salmon populations are dwindling due to Lower Granite Dam as well as, the seven other major dams the Chinook salmon must swim against along their journey to Idaho. How has the Lower Granite Dam affected Chinook salmon populations, and Nez Perce and Shoshone-Bannock Tribes fishing methods?

Analysis

The Lower Granite dam is killing Chinook salmon populations because river flows are slowed, causing temperatures in the lower Snake River to rise. When temperatures rise, salmon will not move through warmer water when migrating to their spawning grounds, this also elevates risks of mortality in both juveniles and adult salmon (Mason, 2001, 2006). Migrating patterns are changing due to rising water temperatures. (Crowder and Zabel 2006) Dams slow salmon down in two ways: first, they cause the salmon to use extra energy (their energy reserves) that produce body heat which in turn causes them to burn more energy; and secondarily, it contributes to warmer water temperatures making it difficult to survive while migrating. When migrating through the dam, fish pass through a variation of water flows, but, slow moving water in reservoirs have the most negative impacts (Mason, 2001, 2006). Reservoirs are unnatural bodies of water that doesn’t naturally exist. These reservoirs play a significant role in raising water temperatures because of the slowed flows. Chinook salmon are not inherently created to travel through these slower warmer waters—and while they have and are adapting to this change, its effects are disturbing to their population. Man-made dams have significantly reduced populations of anadromous fish endangering their species as a whole around the globe (Rasm, 1994; Meyers, 1994; Stabile, 1994) (Josephin and Munauf 2001, 48-50).

Conclusion

The Nez Perce and Shoshone-Bannock Tribes are fighting for the Chinook salmon that are currently subjected to determinants because they are seen as a resource in our capitalistic society, rather than our relative that we must engage with reciprocity. Through these mass-made technologies and the effects of rising temperatures from climate change, it will only be a matter of time before two Indigenous Nations lose their traditional fishing methods, culture, medicine, and identity as fishing societies.

Possible Mitigation Ideas

- Remove the Lower Granite Dam
- Tribes implementing wind farms to supplement for hydropower loss
- Tribes implementing solar farms to supplement for hydropower loss

Bibliography


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