

## *One River's Tears*

One of the main reasons that salmon populations in the Pacific Northwest are declining is because of the production of hydropower, specifically from dams installed in rivers that have or have had a historical salmon run. Since the Southern Residents feed almost exclusively on chinook salmon, the dams represent a large risk to them as well. Dams without fish passage negatively impact salmon by effectively closing off entire regions of spawning habitat by making it impossible for salmon to return to spawn in any stretch of water upstream of that dam. This results in the extirpation of that river's salmon population. Dams that *do* have fish passage installed in them are still bad for the salmon because they drastically decrease the natural river current, forcing young salmon on their journey to the ocean to expend far larger amounts of energy along the way. By lowering the speed of the river's current, dams also raise the temperature of the water, further lowering the odds of adult salmon making it to their natal waters to reproduce. Although dams farther up the river will release water from their reservoir in an attempt to lower the rising river temperatures, the practice is not very effective. According to the organization Columbia Riverkeeper, *"Scientists estimate that about 277,000 salmon, about 55% of the total run, returning from the oceans to spawn died in the Columbia and Snake rivers due to warm water temperatures in 2015."* Between the ways that they block returning salmon from spawning, raise water temperatures and reduce water current, dams pose huge issues to the livelihood of the Pacific Northwest native salmon population and therefore are risking the extinction of the Southern Resident orcas. This is the reason that I chose the issue of hydropower as the topic for my painting, it poses a very large and very real risk to the survival of the Southern Residents.

I was motivated to create this art piece because I live very close to the dams on the Snake River, and feel very connected to this issue. Before we started this project, I attended multiple Free the Snake flotillas on the Snake River. The purpose of this movement was to breach the lower four dams on the Snake River in the hopes of restoring native salmon populations to those waters. At that point, I had absolutely no idea that the orcas were affected by these dams as well. When we learned about the ties between the Southern Residents and salmon early in our learning, I knew exactly what I wanted my art piece to be about. When I saw orcas swim right under our whale watching boat on two separate occasions, I truly realized what was at stake with this problem, and turned it into more of a personal and urgent issue for me. The effect that I want my art piece to have on those who see it is very similar to the effect that seeing wild killer whales had on me. I want my art piece to make people feel more connected to the wonderful creatures whose lives are at stake because of the dams, and I want them to become passionate about the issue and motivated to help. And really, I just want people to care about all of this as much as I do, because to fix this problem and to breach the dams, everybody needs to.

Morgan

