

Western Native Trout Initiative Final Report: Orofino High School Fisheries, Wildlife, and Forestry Class

Objectives of Orofino High School Fisheries, Wildlife, and Forestry Program (FWF):

- 1) Develop a solid curriculum that allows students to experience first-hand the habitat parameters that promote healthy native trout species.
- 2) Utilize grant monies to implement a stream habitat assessment comparing stream health in a public use area compared to an area located in a low public use area. Analyze water quality parameters with a digital water quality meter and a freshwater water quality test kit.
- 3) Collect and analyze macroinvertebrate samples collected with kick nets and sieves following standard collection protocols. Students identify the macroinvertebrates and analyze the connection between low and high pollution tolerant species.
- 4) Utilize grant monies to support bus transportation to and from our sampling locations. Culminating benefits of this project to educate our students on the components needed to sustain and conserve our native trout species, promote future employment in a natural resource career, and develop a greater appreciation for native trout species.

Orofino Junior Senior High School is located in a remote town with a community population of 3,109 people and a student body population of approximately 340 students. During the 2021-2022 school year, Orofino Junior Senior High School started a natural resource class that encompasses fisheries, wildlife, and forestry. In the past the course offerings strictly revolved around wildlife and forestry. In a town that supports a federal fish hatchery (Dworshak National Fish Hatchery), a state hatchery (Idaho Fish and Game Clearwater Hatchery), and several tributaries significant to both salmon, steelhead, and native trout migration, the development of this course was instrumental to educating young minds of a significant natural resource present in our community. The resource contributes significantly to the economy as recreators and fishermen travel from neighboring states to utilize and benefit from the resource.

Funding from WNTI supported a vast array of activities and field trips as well as the development of a solid fisheries curriculum with emphasis on wild, native trout.

- Prior to our stream assessment field experience, students were introduced to the wild, native trout of Idaho. Students learned how to identify the different species by physical characteristics and we studied their geographical range.
- Students completed comparative stream assessments for a site with low public use and a site with high public use in Orofino Creek. During the stream assessment, students used a YSI Water Quality Meter and collected data for dissolved oxygen,

temperature, and pH. Students also collected water quality data for nitrates/nitrites and ammonia using water quality monitoring kits. Both collection methods allowed students to gain exposure collecting data digitally and also using water samples and test solutions.

- During the stream assessment, students gained experience with kick nets, Surber samplers, and collection trays for macroinvertebrate collection. Each group used a macroinvertebrate key to identify their collected specimens and were also required to quantify the specimens for their sampling area.
- Back at school, we compiled and analyzed our data and discussed the importance of habitat and water quality parameters to sustainably support native trout of Idaho. We discussed and examined our macroinvertebrate data with special emphasis on pollution tolerant and intolerant species.
- In the classroom, we participated in an activity that involved discussion and reflection as we analyzed several projects in our area that support the sustainability of wild, native trout of Idaho. The projects we studied (review of video and research papers) included: Redband Trout studies at Hagerman Fish Culture Experiment Station in collaboration with the University of Idaho, improving bull trout spawning habitat in Trestle Creek (tributary to Lake Pend Oreille), and Conservation of Yellowstone Cutthroat trout by suppression of rainbow trout with Idaho Fish and Game.
- The grant also supported several field trips:
 - Orofino Creek Stream Assessment (transportation to 2 sites)
 - Dworshak National Fish Hatchery for spawning spring chinook. Students gained knowledge regarding the life cycle and ecological as well as cultural significance of these once native species. Our discussions also involved the fish hatchery's mission and goals.
 - Nez-Perce Hatchery Complex for our study on Pacific Lamprey. Students gained knowledge regarding the life cycle, and efforts to increase native lamprey habitat and survival.







Budget Narrative

Travel Expense: Actual \$91.80 (Budgeted \$1,000); We budgeted for a much larger amount; however, the remaining amount was used toward supplies and the extra cost of equipment. Our school district had some extra funds to financially support the Orofino Creek and Nez-Perce Tribal Hatchery Complex field trips. However, the support of WNTI encouraged the support from our school district to participate in the financial expense of our Fisheries, Wildlife, and Forestry class/program. Historically, the school district has provided little to no financial support outside of the teacher expense. Due to the presence of grant money support and the positive impact of the Fisheries, Wildlife, and Forestry class/program, the school district is observing the importance and significance of their financial support to sustain our class/program.

Equipment: Actual \$3,709.36 (Budgeted \$3,340); We purchased kicknets, Surber samplers, a water quality meter, macroinvertebrate sampling trays, and turbidity tubes. All equipment was successfully utilized during our stream assessment and will continue to be utilized in future years.

Supplies: Actual \$599.20 (Budgeted \$160); We were able to purchase supplies including our water quality monitoring kits.

Contractual: Actual \$600 (Budgeted \$500); The amount of time needed to purchase the equipment and supplies, organize and facilitate the field trips, and complete the final grant report, while collaborating with our office staff to manage the grant money reimbursements was more than expected.

We want to extend a huge thanks to WNTI for supporting the future growth and sustainability of the Fisheries, Wildlife, and Forestry class/program at Orofino Junior Senior High School. Again, we are surrounded by a plethora of natural resources and find it essential to educate our youth. My ultimate goal is to instill a means of environmental stewardship among my students, ensure they are educated on the meaning of natural resource sustainability, and positively impact any students that are interested in pursuing a career in a natural resource field. I hope my teaching develops a lens within each student that allows them to view their natural environment and resources with meaning, intention, and respect. Thank you for supporting our mission!