Final Report
January 1998
Yreka Union High School District
Salmon Spawning Ground Survey and River Studies
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Abstract

The purpose of the Salmon Survey Program and River Studies Projects is to involve a growing number of Yreka Union High School District students in hands-on Natural Resource curriculum while at the same time helping resource agencies meet the challenge of collecting large amounts of data, in a scientific manner, so as to make informed management decisions. This grant has served to assist YUHSD with the purchase of waders/boots and wetsuits/masks/snorkels in order to properly equip teams working on field projects. All data collected was submitted directly to resource agencies responsible for related projects. In the case of the Salmon Survey, data was submitted to the California Department of Fish and Game and the United States Forest Service, Scott River District. Water Quality data was submitted to the Siskiyou County Office of Education Watershed Education Program and KRIS. Data for Shasta River Profiles was delivered to Dave Webb for the Shasta Coordinated Resource Management Plan and KRIS.

Introduction

For the past four years, students from Yreka and Discovery High Schools have participated in the annual Fall salmon spawning ground survey as members of California Department of Fish and Game and Forest Service crews. During the first year of this program, 12 students from YUHSD contributed as full partners in field surveys on the Shasta and Scott rivers helping gather important data on Chinook Salmon during the fall run. By year two of the survey, participation rose to 22 students helping to conduct surveys on the afore mentioned rivers and on Bogus Creek. We also had one student working on Beaver Creek. This school year we had 30 students who participated.

A weekly water quality program consisting of a rotating group of 7 students has been collecting water samples at two locations each on Yreka Creek and the Shasta River for comparative analysis of temperature, DO, ph, and nitrate levels for several years. The District also maintains Hobo Temp gauges at 10 locations on Yreka Creek, Shasta River, and Beaver Creek. All of this data is submitted to the KRIS program.

Further, 8 students from Discovery High School, and an equal number from Yreka High School have been gathering annual river profile data for 2 consecutive years on the Shasta River in order to study test areas where cattle fencing has been installed in order to protect stream banks. We are planning to expand the number of profile study areas and increase student involvement for this activity.

In addition, the YUHSD in partnership with the Klamath National Forest Service is in the final process of completing the Oak Knoll Outdoor Environmental Education Center focusing on watershed issues. This program will actively place a class of students in the field conducting stream inventory surveys, salmon habitat studies of aquatic insects by snorkeling in pools, and stream profiles on Beaver Creek.

The YUHSD and partner agencies plan on continued joint projects as a way to provide more students with practical applications to school curriculum as well as gain school to work transition training. With the growing student interest and partnership opportunities, keeping up with equipment needs has been a limiting factor. This grant has facilitated the creation of a safe and varied inventory of waders/boots and snorkeling gear to place more students in the field for longer periods of time.

Study Areas

The study areas are vary depending on the particular program and season. Starting in the late summer, student projects began at the Oak Knoll Education Center on Beaver Creek. In the fall, students began collecting data for stream inventory surveys on the upper reaches a mile down river from Cow Creek. Snorkeling surveys took place on the lower reach of Beaver Creek near the confluence with the Klamath River. At the end of September the annual salmon survey season started. Students were placed throughout the Scott River system as needed, along the Shasta River from the Anderson Grade Road to the confluence with the Klamath, on the lower reach of Yreka Creek, and on the lower reaches of Bogus Creek. On occasion, students have also assisted on the Salmon River. Pre-program trainings were conducted on the Scott River near Kelsey Creek and at the Petersburg Fire Station on the Salmon River.

Water quality data has been collected once a week at 4 established locations. For upper Yreka Creek, samples are taken at the Siskiyou County Fairgrounds. Samples are also taken at the bridge crossing over Yreka Creek on Anderson Grade Road. The other comparative locations are on the Shasta River. The upper location is under the historic Shelly Bridge on Anderson Grade Road, and the lower location is at Salmon Heaven on the Old Shasta River Road.

The River Profile projects were completed in the Montague area. Don Meambre has allowed for 7 stations along his property both up and down stream from the Montague-Grenada Road bridge which crosses the Shasta River near the flow gauge station. Two years worth of data has now been collected from this location. A second location with 5 stations was established this past year between the bridge crossing of the Shasta River on the Ager Beswick Road and the train tracks to the southeast.

Methods and Materials

As related to this grant, the materials consist of the equipment purchased. Each of the river and stream projects requires the use of quality waders with felt sole boots for safety and efficiency. In the case of habitat surveys, full wetsuits with masks and snorkels are used.

Result and Accomplishments

Student participation on the many different river projects has increased with each of the past four school years. With the new equipment purchased by this grant, this trend should be allowed to continue. Furthermore, a Natural Resource class is now in place at both Yreka and Discovery High School allowing for more opportunities for student involvement in hands on field activities. Success in these programs comes in two forms. In the case of partnership projects, not only are students getting work experience, but agencies are getting valuable data collection for making management decisions relating to natural resources. Students are using these field experiences to create a resume, sample possible career interests, and develop Senior Projects for graduation. Over the past 4 years of the River Project programs, 10 student volunteers have subsequently been hired into paid seasonal positions with the California Department of Fish And Game and the United States Forest Service.

Summary

The intention of this grant was to help augment the further development of the Natural Resource Programs at Yreka and Discovery High Schools by supplementing existing equipment inventories. The emphasis of student projects has centered on involvement in watershed resource issues and participation in partnership programs with resource agencies. Growing student interest, year by year, in the River Projects and the continued data collection that is submitted to partner agencies are both positive reflections on the success of the program. The Yreka Union High School District plans to support the continued growth of these watershed projects in number of students served, use of technology, and partnership projects. The addition of the new wader and wetsuit supplies has greatly assisted our Natural Resources Pathway development.

Expenditures

Attached invoices list itemized equipment purchased, prices, and totals.