

# **"Fish Eggs to Fry Project – Helping Kids Raise Fish"**

## **FINAL PROJECT REPORT**

**Funded through METRO GREENSPACES  
Salmonid Education and Enhancement  
Grant Program 1998-1999**

**Contract Number 921067**

**U.S. Fish and Wildlife Service  
Demonstration Grant Funds**



***Tualatin Valley Chapter  
Association of Northwest Steelheaders***

***SPORTS ANGLERS DEDICATED TO RESTORING AND ENHANCING SALMON, TROUT, AND  
STEELHEAD POPULATIONS AND THEIR HABITATS FOR PRESENT AND FUTURE  
GENERATIONS***

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Lynn Wilson  
METRO Regional Parks and Greenspaces  
600 Northeast Grand Avenue  
Portland, OR 97232-2736

June 9, 1999

SUBJECT: Salmonid Education Grant  
Contract No. 921067

Dear Ms. Wilson:

First let me thank you for helping us out with our Fish Egg to Fry program. The grant from METRO gave us the opportunity to upgrade two of our fish tanks to coldwater aquariums. It was a great year for 15 teachers and about 400 kids, too.

Enclosed is our final report for the 1998/1999 grant. I hope we have the opportunity to work with you again. Yes, we are looking at habitat restoration projects and would appreciate your input.

Thanks again for your time and effort in putting together a great grant program. If you have questions, please call Gregg Dahmen at 229-5108.

Sincerely,

Tom VanderPlaat  
Co-President  
TV Chapter of Northwest Steelheaders

## **"Fish Eggs to Fry Project - Helping Kids Raise Fish"**

### **Tualatin Valley Chapter of Northwest Steelheaders**

#### **PROJECT DESCRIPTION:**

This project was to expand and improve an existing volunteer educational project. The Tualatin Valley (TV) Chapter of Northwest Steelheaders received funding to purchase two coldwater aquariums, in addition to another aquarium funded directly by the Chapter. These fish tanks were used as incubators for elementary schools in the Hillsboro School District to raise fish. Originally, surplus steelhead eggs were supplied by the Oregon Department of Fish and Wildlife (ODFW), however recent Endangered Species Act listings have made steelhead eggs unavailable. Rainbow trout eggs were supplied this year. Eyed eggs are supplied, and the eggs hatch into sac fry. After the yolk sack is absorbed and the fry are ready for solid food, they are released in a natural habitat to forage for themselves.

The educational project started in 1994 with three tanks as a Chapter project. In 1996, the Oregon Community Foundation - Tualatin Valley Water Quality Endowment Fund provided funding for five coldwater aquariums. The funding increased the number of aquariums to a total of 11. For the 1998/1999 school year, the TV Chapter members in cooperation with the Oregon Department of Fish and Wildlife (ODFW) have placed 15 hatch tanks in local schools. The teachers and kids have been hatching trout eggs, which are then released into several local ponds and reservoirs (release sites designated by ODFW and approved by USFW). In 1999, 7500 fish eggs were hatched and over 7000 fry were successfully released from the 15 hatch tanks.

The students must monitor a variety of aspects during the hatching cycle. The students must monitor the water temperature, pH, and dissolved oxygen. This monitoring



provides the opportunity to learn about biology, chemistry and math. They also record fry mortality and observe fish behavior at different stages of their development.

#### **GOALS AND BENEFITS:**

The specific objective is to teach kids the importance of clean water and stewardship of natural systems. This project has already demonstrated the importance of protection of our water resources and the environment. To date, over 2,400 local school children have had the excitement of watching and caring for the eggs while having fun and learning lessons in biology, water chemistry and science. The measurable objective is the number of kids that have been provided an opportunity to see nature in action. This project provided three chiller units and tanks to local schools and the tanks will be used annually with the potential usage of four times per year. The TV Chapter members are committed to conducting a minimum of 16 classes every year. This commitment would equate to reaching 960 students per year. Our past experience has shown that in most elementary schools, the tank is a classroom used by only one class, however the teachers have developed a class buddy system. For example, the tank may be in the fifth grade classroom and a second grade class will buddy with them. This increases the opportunity for students to see nature up close and in action.

Several of the current tanks do not have cooling systems, therefore the teachers and students must place frozen milk containers or 2 liter soda bottles in the tanks to maintain water temperature. The coldwater aquariums have a chiller unit. The chiller unit allows the teacher to control the temperature closely and hold the eggs for a longer period. In several classes this last year, the teachers extended the hatching process by several weeks. This extended time is beneficial to the fish and students. The fish are healthier, because the water temperature more closely matches their natural environment. The students and the teachers can learn about the fish and their environment, such as water quality and pollution. After the fry are mature, the class transports the fry to a local pond and release them, with the assistance of TV Chapter volunteers.

### **WORK TASKS AND TIMELINES:**

|                   |                                    |
|-------------------|------------------------------------|
| October 15, 1998  | Grant applications due             |
| December 1, 1998  | Grant award letter received        |
| January 21, 1999  | Project Managers meeting           |
| February 3, 1999  | Grant Contract signed              |
| February 18, 1999 | Fish eggs delivered                |
| February & March  | Eggs hatch – various dates         |
| March 12, 1999    | First fry released                 |
| April 2, 1999     | Last fry released                  |
| June 10, 1999     | Final Project Managers SEE Meeting |

### **PROJECT BUDGET**

Please see the attached budget sheet for details.

### **PROJECT STAFF AND VOLUNTEERS**

The fish tank project was managed by several key TV Chapter members. The Project Manager, Tom Vanderplaat, divided the specific tasks between several major contributors. Pat Kraft assembled the coldwater aquariums, building steel stands to hold the tanks with the chiller positioned below. Dick Henningsen and George Fox helped set up tanks and fill them with water, and verified that the tanks were ready to receive the eggs. Many other Chapter members helped on the egg delivery day and followed up with individual classroom teachers as needed. This year the TV Chapter members went on many of the fry release trips, helping the teachers as much as possible. Gregg Dahmen helped coordinate this stage of the project. After the fry were released, Dick and George helped clean and prepare the aquariums for storage. Out of the current TV Chapter membership of 90 members, at least half donated time to the project.

## **METRO GREENSPACE PROGRAM**

The project fit very well with the objectives of the METRO Greenspace program. The listing of steelhead and salmon in the Portland watersheds has resulted in much Metro activity, since Portland is the first major city to be directly affected by an Endangered Species Act listing. The Fish Egg to Fry program promotes stewardship of the environment, teaching school-age citizens that the whole ecosystem affects the streams and rivers in our state. The program addresses habitat restoration and riparian zones as well as stream biology. The effects of human activity on the steelhead and salmon are addressed. It is obvious that the effort to revitalize the steelhead and salmon runs are going to take many years, and this early education gives each child the feeling of ownership. They are stakeholders in fish restoration too.

## **HELPFUL HINTS AND ADVICE FOR FUTURE PROJECTS**

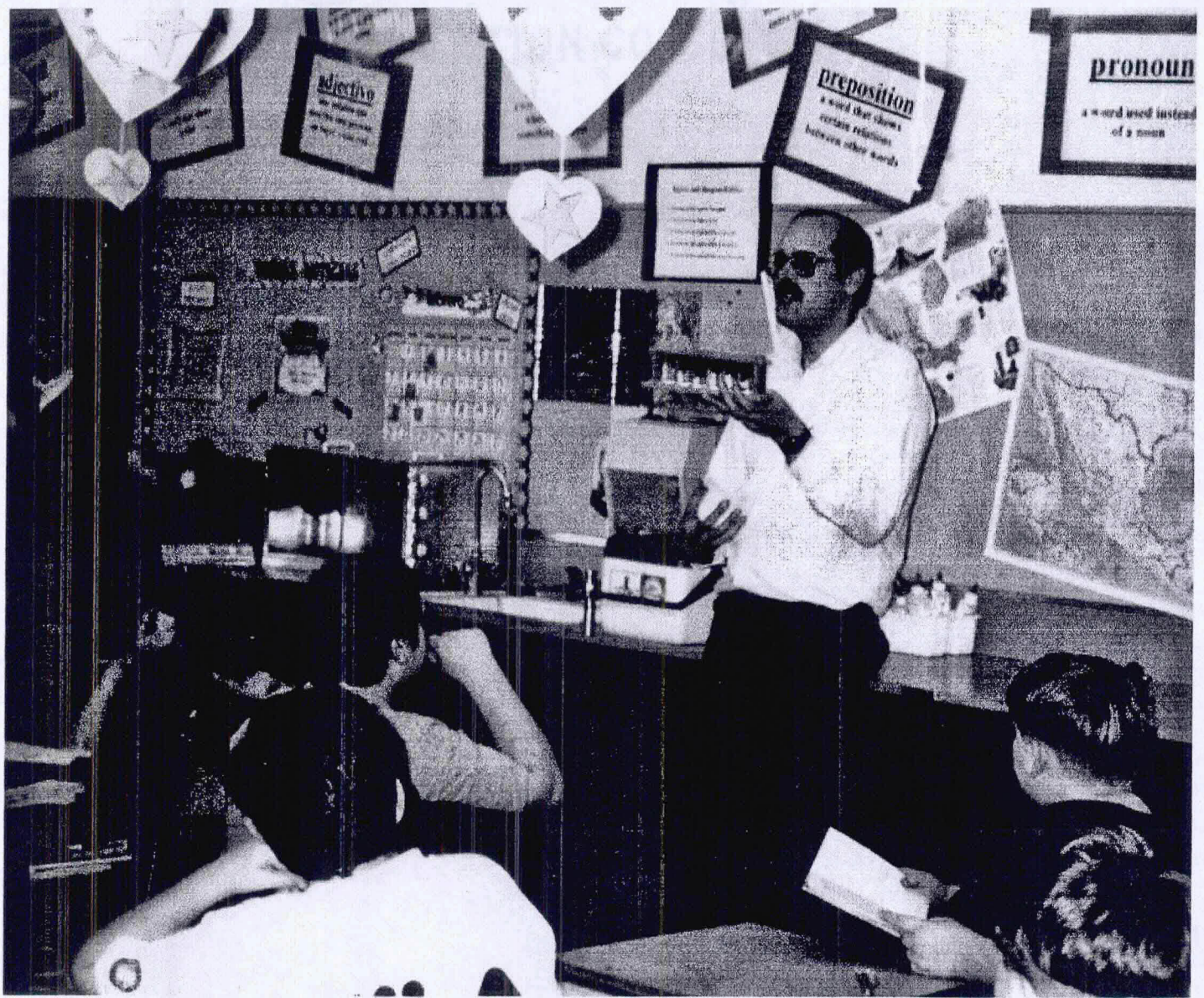
Previous grants to the TV Chapter did not require recordkeeping and documentation of volunteer time. Since the Fish Egg to Fry program had been operated for five years without extensive paperwork or records, the transition was difficult. Only perhaps half of the volunteer hours were recorded, which reduced the grant leverage ratio somewhat. Few volunteers kept track of mileage on their personal vehicles, and many small expenses were paid for and no receipts submitted. Our generous members had to be reminded several times of the matching funds and payment in kind concept. Next year we plan to do a better job of training members in the paperwork tasks that grants require, and suggest other project managers do the same.



# SALMONID EDUCATION & ENHANCEMENT GRANTS PROJECT BUDGET

| CATEGORY  | REQUEST OF METRO                     | MATCHING FUNDS   | MATCHING IN KIND        |
|---|--------------------------------------|--|-------------------------|
| PERSONNEL   | 0                                    | 0  | 0                       |
| VOLUNTEER LABOR<br>@ \$5.50 per hour                          | 0                                    | 0  | \$1100                  |
| PROFESSIONAL<br>SERVICES                                      | 0                                    | 0  | 0                       |
| MATERIALS &<br>SUPPLIES<br>list items and<br>approximate cost | Two Coldwater<br>Aquariums<br>\$1800 | Maintenance Items, one<br>coldwater aquarium,<br>manuals<br>\$1300 | Transportation<br>\$200 |
| RENTAL FEES   | 0                                    | 0  | 0                       |
| INDIRECT/OVERHEAD<br>COSTS<br>not grant eligible              | 0                                    | 0  | 0                       |
| CONTINGENCY<br>not grant eligible                             | 0                                    | 0  | 0                       |
| OTHER   | 0                                    | Teaching Supplies<br>\$300   | 0                       |
| TOTAL   | \$1800                               | \$1600   | \$1300                  |





A Northwest Steelheaders volunteer exhibits a rack containing eggs and fry at different stages of development. The rack of preserved specimens help the students track the progress of their fish, predict the hatch date, and estimate when the fry are ready for release. Note the fish tank's insulation is designed to be opened in front for observation of the eggs and fry.

*Permlife*





Here a spouse was brought in to organize the capture of 500 fry for release. The small fry are very fast swimmers at this stage, since predators are numerous.

Each student gets a bag of fry to take to the release site. Heavy zip-lock bags work well for the short trip.







Fry are released at approved sites selected by ODFW. Trout fry are being released into Sain Creek, which flows into Hagg Lake. It is a sad and happy day for the students.