

**HELP OUR SALMON PROGRAM
(EGGS TO FRY)
ASSOCIATION OF NORTHWEST STEELHEADERS
CONTRACT # 921692**

Greenspaces Salmonid Education and Enhancement Project
Final Report
Help Our Salmon Program

1. There are five major steps in the Help Our Salmon Program:

Step 1 is an introduction to the life cycle of the salmon to students in Elementary, Middle School, High School and Colleges. This is accomplished using refrigerated incubation tanks in the classroom. The students see the development of the salmon eggs to the fry stage. These incubation tanks were funded by Metro's Greenspaces Salmonid Education Project. The tanks were placed in three of the eighteen schools that are participants in the program. This step in the program is complete.

Step 2 is hands-on training at Whitaker Ponds in water testing and collecting macroinvertebrates.

Step 3 is field trips to the Lower Columbia Slough where a Basic Level Habitat Survey is conducted along with a study of the Macro collection and identification plus water quality tests. There is also a study of the riparian zone. Depending on the school's schedule, this may require two to three trips.

Step 4 is a trip to Balch Creek where an Intermediate Habitat Survey is conducted. The purpose of this trip is to compare a pristine environment for fish versus what they found at the Lower Columbia Slough.

Step 5 is the input from students on how the Lower Slough could be enhanced to make it much more environment -friendly to the Fall Chinook that winterover at the mouth.

Different schools are at different stages of the program but all have completed the first step, therefore, that part which was funded by Metro is complete.

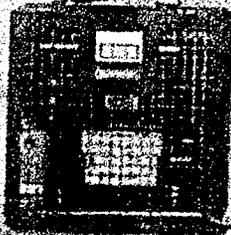
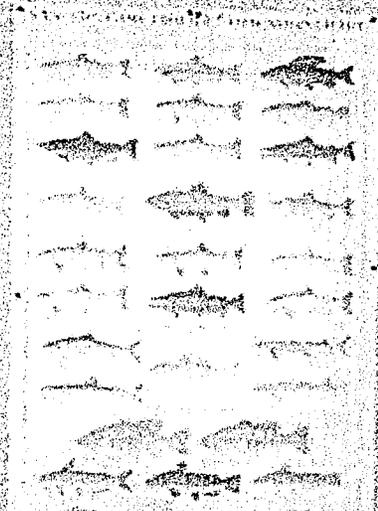
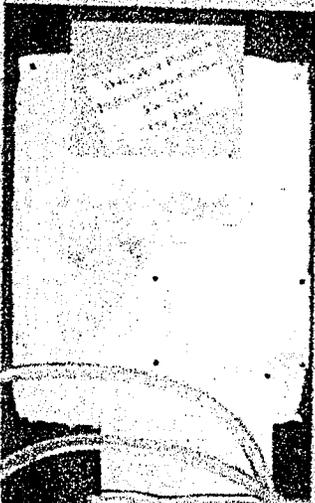
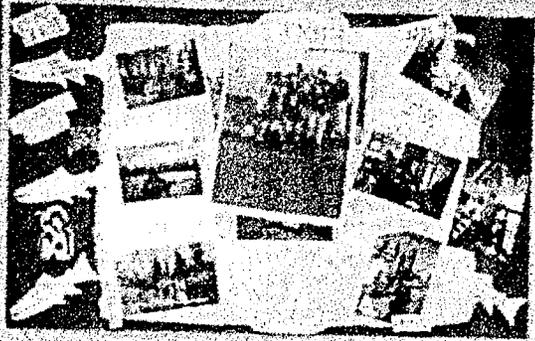
2. To avoid problems, we had conferences with various teachers to critique the curriculum in order to adjust for each grade level. The only problem was that some over-enthusiastic students got wet and muddy while collecting the macroinvertebrates.

3. Photos and video tape showing activities enclosed.

Respectfully submitted,

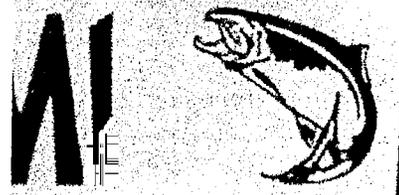
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Education Director Northwest Steelheaders

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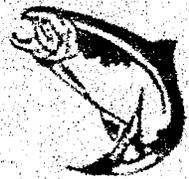


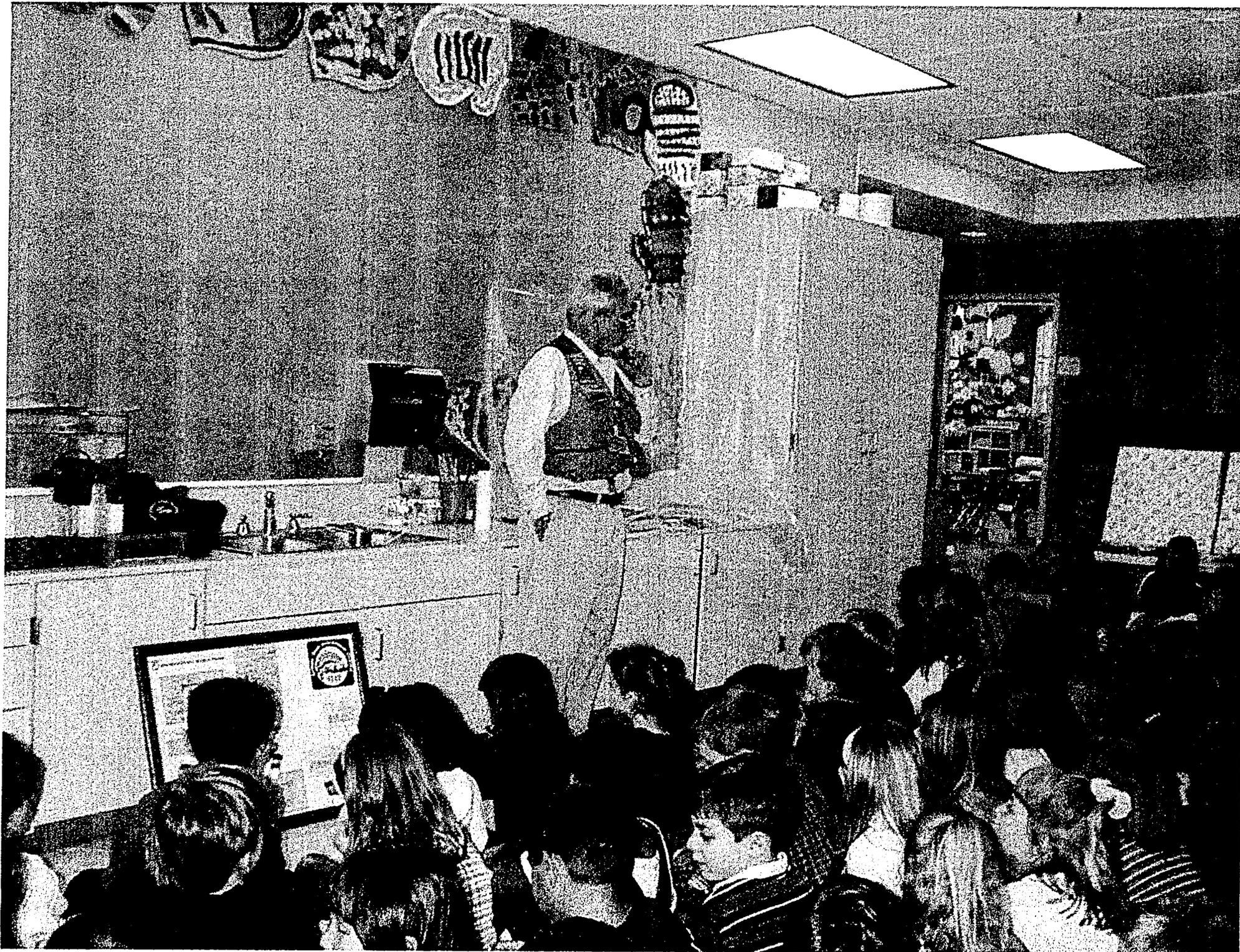
SALMON

HELP OUR SALMON



PROGRAM!





WATERSHED EDUCATION PROJECTS

E 1. Category: Primarily school group but, through them, public awareness. The study will be local but will have regional implications to the entire Columbia Slough. Our teaching and study will be in the lower Columbia Slough

E 2. Present situation and why work is needed: While saving or restoring salmon is a top priority with the state, the average citizen considers the remedies lie within the government and they have little or nothing to do about it. Our program teaches the importance of the watershed and what is the average person's responsibility to the watershed. The students talk to and influence their parents. We relate what others, i.e. State, Metro, ODFW, farmers, loggers, BES, etc., are doing and what the average person can do to help the salmon.

Prior to the blocking of the Columbia Slough, the slough was a wintering water for salmon fry but after the blocking the slough was written off as a non factor as far as salmon habitat. There are salmon fry in the lower slough. They come in from the Willamette river and winter in the slough. Further study of the environment and ecology is needed. Assessment and data before restoration is a must, therefore, a habitat survey will be conducted.

E 3. Learning strategies and what the end product will be: There will be four stages to the program: The first stage will be classroom instruction which will include lectures, slides, videos, maps, posters and models. The purpose of the classroom work will be to introduce the students to the watershed and its importance in the life cycle of the salmon. We will place refrigerated tanks in many schools as part of the STEP (Salmon, Trout Enhancement Program) which will illustrate the eggs- to- fry stages in the development of the salmon. This program under the direction of ODFW. We shall also report on what other groups such as State, Metro, ODFW, loggers, farmers, BES are doing to help the salmon and what they and their parents can do toward salmon

restoration.

The second stage will be field trips that will instruct the students the different methods be used in conducting a basic habitat survey. These will be the practice sessions learning to use the various equipment and procedures.

The third stage will be the habitat survey, on the slough, which will follow the requirements of ODFW. We shall gather all the required data prior to the final report. The biologist from ODFW will be directing these activities. Due to tidal influences most of the data will have to be gathered twice in order to monitor incoming and outgoing tides. The third stage will also include lab work.

The fourth stage will be compiling the data for a final report which will be audited by ODFW prior to releasing to interested parties.

The end product will the survey report and students who understand the ecological balance necessary to maintain a healthy watershed which is required if we are to restore our salmon. The final report will be given to interested parties such as the ODFW, Columbia Slough Watershed Council and Metro. An additional product will be that Salmon Corps staff will learn to do a habitat survey so they, in turn, can teach students in the Columbia Slough and other watersheds.

E 4. Instructional goals and objectives: The basic approach is as outlined above but the objectives can be slanted to the wants and mandates of the individual teachers. Some will use the program as local watershed study while others have requested general science or basic ecology. Depending on the interest and skills of the students we can go into more sophisticated data gathering and lab work. Some of the goals will be dictated by the wants of the biologist from ODFW who will monitor the projects and insure meeting the requirements of ODFW.

Some of the inner city school students have had little contact with the outdoors so if we can instill the sense of awe and wonderment of nature and the inter-relationship and dependence of the

ecological parts and their relationship to the salmon we will have fulfilled a main goal. The objectives, in addition to providing meaningful data, are that the students take home to their parents the importance of their watershed and the responsibility we all have to it. If we can help establish a healthy watershed which the salmon require, we will have reached our objective.

E 5. Audience we will reach and how will we deliver our product: We will first contact the schools that are in the Columbia Watershed area and then extend our services city wide and perhaps further. (we have a request to do a study on the Salmon river in Mount Hood). There are no problems recruiting classes. BES has been working with schools for years. The coordinator has also had vast experience working with and teaching students of all grades. We plan to work with ?? middle and high schools. Telephone calls to principals and teachers are all that should be required. We are in touch with most on a monthly or weekly basis. The students themselves are the best form of getting out the word. They tell other students in different classes how much fun and how interesting it is and those students request the program from their teachers. Our biggest problem will be in the scheduling of all the classes.

E 6. Can project be used in other locations without major modifications? The curriculum and the materials are available to anyone interested in conducting a program such as ours. One of our goals is the training of the Salmon Corps staff so they may take the program elsewhere. Our program can be used in any watershed.

E 7. Credentials and related experience of the project leaders: The coordinator is the Education Director of the Association of Northwest Steelheaders and was inaugurated into that association's Hall of Fame based on his teaching and working with students for the past six years. Prior to that he was a management consultant specializing in teaching and training. He has worked with over twenty schools and thirty-four classes. He has placed STEP tanks in twenty schools and lectured

to schools and churches on salmon.

The biologist is the fisheries biologist for this area for ODFW.

The naturalist is

E 8. Who will evaluate the education results, the elements that will be evaluated and the evaluation methods used: The individual classroom teachers will evaluate the overall results of the program. They will conduct pop quizzes and require written reports on various parts of the program. The biologist will evaluate the data gathered as to the standards required by the ODFW. The Columbia Slough Watershed Council will evaluate the findings and their application to the needs of the Council. We, who lead the program, will be constantly evaluating the classes so we can recognize skill levels and bring them to the highest level of their capacity. We are sometimes prone to selling young people short. We must evaluate their potential. At present there are companies who are hiring twelve year old students to lick the Y2K bug. The final evaluation will be in about ten years when they vote on ecological issues.

E 8. Elements of the project OWEB funds will be used for? The funds requested will be used for salary for a full time naturalist and a half time coordinator.

Transportation for the school groups for chartered buses when no local buses service the intended site. Bus tickets for students to get to sites serviced by a local bus.

Supplies ?