

Beaverton Creek

by Shelley Matthews

YEAR

7

at 16535 SW Tualatin Valley Hwy., behind St. Mary's Home for Boys

BEFORE

Riparian forest along this section of Beaverton Creek was lost, and became dominated by reed canary grass



DURING

Stream studies and restoration activities became a focal point for class projects at the Levi Anderson School

The Beaverton Creek project was spearheaded by the Levi Anderson School at St. Mary's Home for Boys. The creek runs behind the school and is located in a highly urbanized, heavily used area that has contributed significantly to the degraded status of the creek and its riparian area. The project site is bordered by St. Mary's Home for Boys to the south and Tualatin Hills Nature Park to the north. It consists of two 50 foot by 300 foot areas on either side of Beaverton Creek, plus two circular 15 foot diameter plots (for a total of 1/3 acre). Through this project, the students of Levi Anderson School enhanced a portion of the Beaverton Creek riparian area.

The restoration project consisted of 4 goals: to 1) develop a water quality profile of the creek and disseminate findings to the Department of Environmental Quality (DEQ), Unified Sewerage Agency (USA) and the Student Watershed Research Project (SWRP), 2) enhance the

native plant community along Beaverton Creek, 3) maintain restoration plots along the creek, and 4) develop community and university partnerships and become a “Center for Environmental Research and Information.”

In 1996, the students determined that Beaverton Creek had low to average water quality. Over the next three years, they tested and developed monthly water quality indices, developed a computerized water quality data base, and regularly informed the DEQ, USA, and SWRP of their findings. Beaverton Creek was silty, homogenized, and highly channelized. The students added 10-20 cubic yards of large woody debris to enhance macroinvertebrate and fish habitat and promote the growth and diversity of both populations. This large woody debris trapped smaller pieces of wood and further improved wildlife habitat, and niche diversity.

To restore the natural plant community, invasive reed canary grass was removed from the two circular plots. One plot was planted with 24 riparian plants, and the second plot was left fallow. In addition, 200 native plants (Pacific willow, Douglas spirrea, nootka rose, ninebark, salmonberry, hawthorn, and ash) were grown from local cuttings or purchased from nurseries and planted along the two (50 feet by 300 feet) riparian stream segments. Students erected screens around the plants to protect them from deer, and established an ongoing maintenance plan to provide water, weed control, and replacement of dead trees.

Benefits

- Restored native vegetation and woody debris to a portion of Beaverton Creek, enhancing nesting, resting, and feeding habitat for macroinvertebrates, fish, and wildlife.
- Lowered creek water temperature and increased dissolved oxygen levels.
- Stabilized creek banks.
- Established a “baseline” of water quality indicators.
- Promoted a positive work ethic and provided hands-on education in water quality testing/assessment and urban greenspace restoration practices to emotionally and behaviorally delinquent adolescent boys, and created numerous new stewards of Beaverton Creek.
- The Levi Anderson School developed partnerships with community, scientific, and university groups, and established themselves as a resource for environmental research and data.

Budget

Total Proposed – \$11,700

Total Actual – \$11,700 (estimated)

Metro/US Fish and Wildlife grant award – \$3,340

Grant Dollars Spent - \$3,340

Helpful Hints – what worked, what didn’t

- Know your watershed and City/legal guidelines governing restoration projects.
- Know your own limitations and those of your grants. School teachers and special educators should consider their time, resources, contacts, and other commitments when planning and

implementing time-intensive projects like this. Read your contract, ask questions, plan, and be ready to compromise based on your available resources.

- Accept the slow timetable, changes, and bureaucracy inherent in habitat restoration.
- Don't allow personal/professional dislikes or incompatibility affect decision making.
- Find a local nursery that has good stock, delivers on time, and is reliable and inexpensive. Ask fellow grantees for recommendations.
- Build a strong network and be assertive in seeking out expert advice: attend meetings, ask lots of questions, invite the experts to your planting site or bring in samples to the meeting.
- Provide hands-on activities that keep the students' enthusiasm up.
- Plant a variety of tree and shrub species. Obtain a guide to Wetland Plants, check to see what's growing upstream, downstream or on the opposite side of the stream from your restoration site. Do sample tree plantings before putting in a large number of trees.
- Take lots of pictures.
- Solicit and attract community groups to your restoration effort. Personal calls are best. Give them a reminder call the day before you plant and have them bring their own gloves boots, shovels, and water containers (have a back-up supply and a first aid kit). Provide good directions, maps, R.S.V.P. number, and info. on what to wear and bring (be specific. Don't skimp on food and water. Take people's picture and send the photos to them along with personalized thank you cards.
- Enrich your restoration curriculum with guest speakers.
- Allow additional time for maintenance beyond what you had originally planned. Maintaining your plants is crucial and very time consuming.

Partners

Americorps
Friends of Beaverton Creek
Friends of Trees
Levi Anderson School at St. Mary's Home for Boys
Oregon Department of Fish and Wildlife
Pacific University
Portland State University, Science Center
Student Watershed Research Project
Tualatin Hills Parks & Recreation District
Unified Sewerage Agency

Contact

Paul Ferris, Science and Math Teacher, Levi Anderson School, (503) 259-3125

Timeline and Tasks

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| October 1997 | Tested water quality |
| April 1998 | Tested water quality; inventoried fish and macroinvertebrates |
| May 1998 | Planted native vegetation |
| June 1998 | Maintained plants and placed large woody debris and gravel |
| July 1998 | Maintained plants, tested water quality and inventoried fish and macroinvertebrates |
| August-September 1998 | Maintained plants |
| September 1998 | Tested water quality and maintained plants |