Sandee Palisades

on a small tributary stream, three and a half miles upstream from the confluence of the Sandy and Columbia Rivers, 15 miles northeast of Portland

BEFORE
Stormwater runoff goes directly into the Sandy River

AFTER
Meandering stream with wetland habitat improves stormwater quality into the Sandy River

The watershed area is approximately 27 acres. One hundred sixty-two homes, associated streets and a 4.6-acre neighborhood park drain to the detention basin.

The Sandee Palisades Detention Basin Naturalization Project converted a 1.5-acre grass bowl with a concrete trench into a meandering stream surrounded by native plants. The project goals were to improve urban storm water quality before the water enters the Sandy River (a federally designated scenic waterway), improve wildlife habitat value and aesthetics of the site, foster neighborhood interaction with the site and lessen maintenance duties and costs. By redesigning and naturalizing the site and including neighborhood participation in the design and implementation, all project goals were achieved. The project was designed and managed by Valerie Lantz, city of Troutdale Parks Department, with assistance from neighbors, Scouts, students and some contracted technical services. City staff had most of the technical skills needed to design, select plants and manage, install, maintain and monitor the project.

The project length was two years, including project conception and design, obtaining permits, public outreach, site assessment, site construction and grading, planting, watering, monitoring and some remediation. Once the project design was completed and permitted, the largest task was project coordination including public outreach and education, soliciting and supervising volunteers and making sure that all tasks were completed. Creative solutions were needed to provide irrigation as some of the plants were installed in June through August, the hottest, driest time of the year. An adjacent neighbor to the project site agreed to provide water connection in exchange for the city paying his water bill for the five months of the growing season.

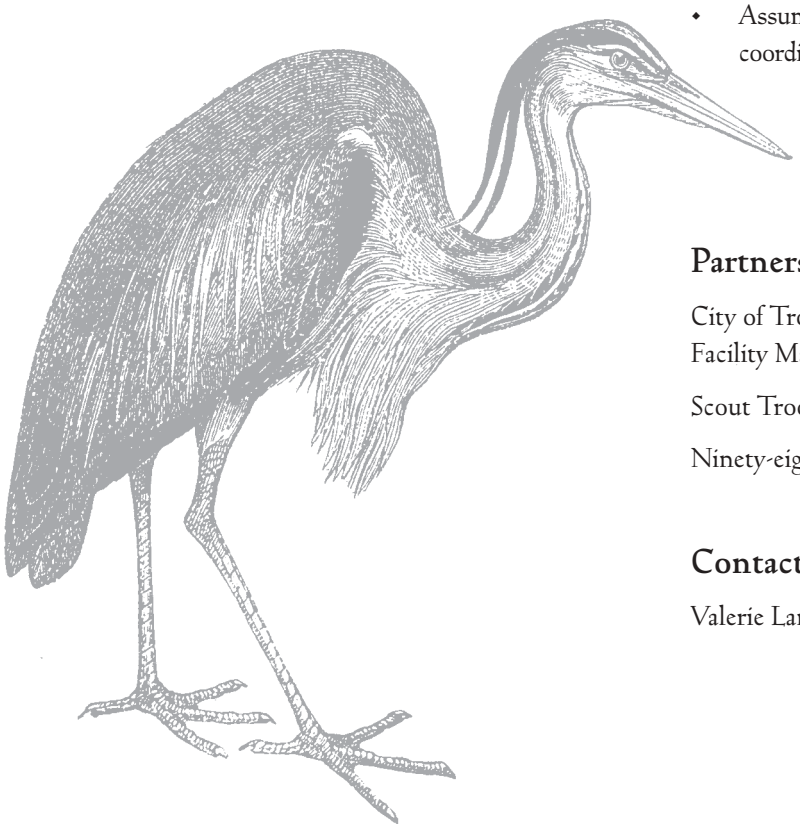
The excavation was done later than originally planned. Permits took longer to obtain than expected, pushing back the time when the construction bids could go out. Construction bids finally went out in June, the busiest time for contractors, hence there was no response to the

proposal. Bids were received in late August and excavation took place at the end of the month.

Benefits

Community education and awareness was one of the major benefits from the project. Four work parties took place during a 12-month period, allowing an opportunity to observe the changes taking place through seasons and time. Fifteen to 75 volunteers attended the work parties, allowing them to learn about natural resources and how human activity, weather and time change and influence natural areas. Prior to work on the project, students and adults wrote letters to the city council regarding concerns about the need for a strong erosion control and natural resource protection ordinance.

As hoped, maintenance costs have decreased after three years. The initial weeding and watering are no longer needed. Changing from grass and concrete to wildflowers, trees and shrubs, rocks and open water have changed the wildlife habitat value. Children and neighbors have already noted increased birds and insects. Neighborhood attitude and use have also changed, less debris dumping has occurred since project completion and a greater neighborhood pride and stewardship has developed. Finally, water quality has improved.



Budget

Proposed – $29,775
Actual – $30,706
Metro/US Fish and Wildlife grant award – $13,500

Helpful hints – what worked, what didn't

- Expect that the project will take longer than anticipated, especially when obtaining permits that are out of the project coordinators' control.
- Schools and Scout troops were a great source of volunteers.
- In order to choose the most appropriate design and plant materials, dig through all possible old files, photographs and maps, even those that seem obsolete. The engineer's original design and calculations for detention function were found for this project.
- Allow volunteers to be involved in the creative portions of the project, in addition to the installation. It keeps them interested and more committed.
- Think about irrigation and maintenance, who can do it at what expense and how often.
- Have backup plans and sources of labor when volunteers tire of the process and don't show up.
- Assume that it will take more of the project coordinator's time than expected to complete the project.

Partners

City of Troutdale Parks Department, Public Works, Facility Maintenance

Scout Troop 174

Ninety-eight volunteers

Contact

Valerie Lantz, city of Troutdale, 665-5175

Timeline and tasks

July - December 1992	Project planning, design, initial drawings and scheduling
March - July 1993	Obtained all required federal state and local permits
March 1993 - May 1994	Neighborhood, Scout, school and community outreach to recruit volunteers for a variety of project tasks
April 1993 and	
June 1993	Used Round-up on existing weeds, two applications, two months apart
April 1993	Inventoried existing vegetation in adjacent natural area
May 1993	Identified nurseries with inventory of plants needed for project; Boy Scout project, bird and bat house construction and installation. Purchase soil amendment and plants. First work party had 75 volunteers
June - September 1993	Boy Scout project, rock research, collection and placement
June 1993	Second work party had 15 volunteers and two staff; source and specs for liner. Began watering contract
August 1993	Remove concrete channel, graded stream bank and walkway; installed liner, boulders and logs
September 1993	Third work party had 75 school children and parents; fourth work party had 20 school children
October 1993	Project completion
November 1993	Monitoring begins with training maintenance staff.
March 1994	Heavy rainstorms coupled with intensive activity upstream result in 6-inch silt deposits in the detention basin
April - May 1994	Students, parents and neighbors remove silt deposits by hand and weed site
May 1994 - ongoing	Monitoring and maintenance of the site
Spring 1995	Trefoil infestation is controlled using hand pulling and follow-up spot spray with Round Up.
Spring 1996	Plant material shows excellent growth
September 1996	Willow whips are selectively harvested for another restoration site on Beaver Creek.