

**June 15, 2004**

**Final Report**

**Alpha High School's Gresham Woods Restoration and Education Outreach Project**

**Contract #: 924578**

## Alpha High School's Gresham Woods Restoration and Education Outreach Project Final Report



**Nate leads a group of Alpha Conservation Corps members touring Gresham Woods**

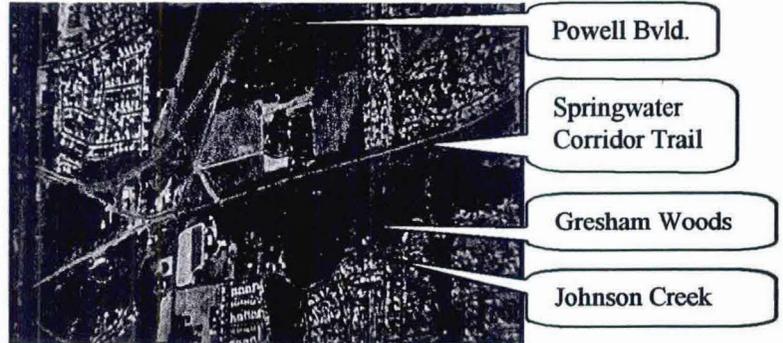
and Johnson Creek, between 223<sup>rd</sup> and 190<sup>th</sup> streets. The site was an ideal natural laboratory as it had been largely neglected and overrun with Himalayan blackberries and other invasive species, though it also retains healthy stands of native trees and shrubs. The creek was readily accessible throughout the site, with stretches of healthy banks and even more stretches in need of restoration. The site is located along a heavily traveled portion of Gresham Woods, affording high visibility for the project.

The Alpha Conservation Corps, a group of Alpha High School students whose environmental studies is woven into hands-on restoration projects, began its Metro Greenspaces Education Grant-funded project mid-March, 2003.

Our project site involved a chunk of land owned by the City of Gresham along the Springwater Corridor Trail known as Gresham Woods. The site included about 50 acres total and lies largely between the

Springwater

Corridor Trail



**Infrared bird's-eye view of Gresham Woods**



**James Allison, Natural Resources Ecologist for City of Portland's Bureau of Environmental Services, explains to ACC students how organic matter helps create a healthy forest floor**

time from every week was devoted to integrating field and classroom work.

The City of Gresham and the City of Portland's Bureau of Environmental Services, with other partners, have been focusing on restoring portions of Gresham Woods for a couple of years and Alpha High School students have been assisting them in their efforts since early last fall. Much of the blackberry removal had already taken place once and some trees and shrubs had already been planted, though there was much work to do.

Alpha's project at Gresham Woods involved both classroom and field work. We alternated our weeks, so that one week was concentrated in the field and the next in the classroom. That schedule allowed us to focus on restoration work and then focus on related academics. Much

time from every week was devoted to integrating field and classroom work.

One of our missions for the project was to inventory native species, with each of our nine students becoming experts on several native and/or nonnative plants. Each student has written about the ecological niche, historical human uses, and other facts of their plants and found photographs to document their plant.



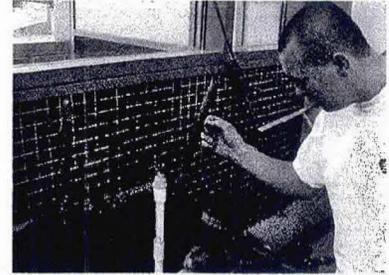
**Jonathan installs tubing on a Hawthorn**



**Becca examines flooded plants**

watched the creek rise up and over many of those plants in what has been called a “five-year flood event.” We placed tubing around each plant to protect them from rodents. (A few of those plants got washed away, but most appear to have survived).

With our partners’ help, our students selected native plants that would thrive in our selected area. They selected Big Leaf Maple, Red Alder, Hawthorn, Oregon Ash, Douglas Fir, Cascara, Western Red Cedar, Pacific Ninebark, and Red Elderberry. In the course of one, rain-drenched week, we planted about 850 native trees and shrubs – and



**Nate discovers new growth on an experimental dogwood cutting**

Students worked independently and in small groups on testing Johnson Creek for different water quality parameters. They tested Johnson Creek for temperature, turbidity, pH, nitrate-nitrogen, phosphorous, alkalinity, and dissolved oxygen. They made video clips about the tests and water quality.



**Sarah performs nitrate-nitrogen test**

ACC students identified dogwood and willow stands and took cuttings, which they then placed into the stream banks to take root and eventually provide shade and erosion protection. We collected and placed about 500 cuttings.



**Tyler tests Johnson Creek pH levels**

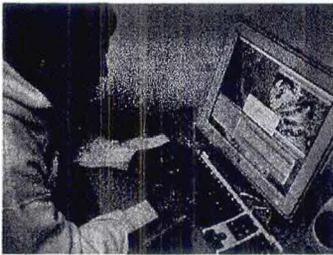
ACC students also participated in three community planting days, organized by Friends of Trees, Portland’s BES, Gresham and the Johnson Creek Watershed Council. ACC students hung up posters around Gresham and delivered ACC-made flyers door to door in neighborhoods near the Gresham Woods planting site. Several students attended the training to become Friends of Trees Community Crew Leaders and have spend several Saturdays leading teams in Gresham Woods and at other restoration sites. All ACC students volunteered for the Saturday morning events scheduled for Gresham Woods.

To provide nutrients and moisture to the trees and shrubs ACC students planted, and to suppress competing weeds, ACC students put three to five gallons of mulch around each of the 850 trees and shrubs, as well as around many that had been planted earlier. The mulch pile was delivered quite a ways from the planting site. ACC students developed plans to efficiently wheelbarrow the mulch and spread it around each tree and shrub. It was hard work that required a lot of effort and dedication to accomplish. In the process, they fixed tubes that had been vandalized and those that had been swept away by the flood.



**Thomas places dogwood cuttings along banks, near tubed trees and shrubs**

Curtailing the spread of Himalayan blackberries at Gresham Woods is an ongoing effort. We've already spent a considerable amount of time cutting stands down, and we will continue to do so throughout the remainder of the school year and into future school years. English Ivy is also working its way into Gresham Woods and considerable time will be devoted to pulling it.



**Jonathan dubs in audio over his native plant video footage**

One of the highlights of the project has been ACC's collaboration with Alpha middle school students. The middle school component is new to Alpha and has been kept separate, for the most part. Alpha staff members have been making a big effort to bring the two groups together. The Gresham Woods project has provided an incredible opportunity to make those connections. Middle school class time has also been devoted to Johnson Creek watershed ecology and restoration. Middle school students have

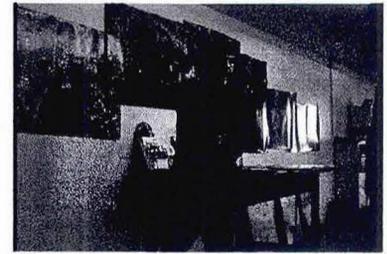
joined the ACC one day per week on site. ACC students have served as crew leaders to the middle school students. The students have spent group time collecting garbage from the site. ACC students taught them about the watershed and native plants. They taught them how to collect cuttings and how to mulch and maintain the trees and shrubs. They taught them the value of service to the community. In short, they have served as in-house mentors, which has been a huge value to the school by knocking down some of the barriers that had separated the two programs. The experience has also reinforced many of the ideas, concepts and lessons the ACC students had learned by having them become the experts teaching the middle school students.

ACC students have also worked with the first and fourth grade classes from Hollydale Elementary School on stream stewardship projects. Our most successful event was a mulching project in which the Alpha Conservation Corps students served as mentors for small groups of elementary students as we mulched over an acre of native plant species.

Several students participated in the "Gresham Woods Open House" event on the Springwater Trail to inform trail users of the work they had been doing. The students created a display that they used to discuss riparian area ecology and restoration that they had been working on that trimester.

Finally, students prepared for and made a presentation at the Student Watershed Research Annual Summit that documented the science, restoration, and education that they have accomplished with the support of this grant.

ACC students have continued to take part in community planting days and the outreach efforts associated with them. Field time has been spent to ensure the survival of the newly planted trees and shrubs by ongoing maintenance, such as mulching, watering and vandalism repair.



**David Reid, of the Johnson Creek Watershed Council, highlights land-use patterns and issues facing the creek**



**McLean discovers that Oregon Ash deters snakes**



**McLean places dogwood cuttings along stream bank**

**Follow-up Activities:**

In the second year of the grant period we spent thirteen days working to maintain the site we planted. The crew removed invasive species, planted six hundred more trees and shrubs, and mulched 3 acres of the restoration project. The City of Portland and the Friends of Trees staff spent time working with and educating this years crew on the project. We plan to continue both of these partnerships next year to continue to ensure the success of this project.

**Community and Agency Partners Involved in Project:**

- City of Gresham – Financial and Technical Support; Project Planning
- City of Portland Environmental Services – Financial and Technical Support; Project Planning
- Johnson Creek Watershed Council – Volunteer Recruitment, Training, Supervision and Education
- Gresham Butte Neighborhood Association – Volunteer Stewardship Support
- Friends of Trees – Volunteer Recruitment, Tools, Event Management
- OWEB, USFW Service, National Fish and Wildlife Foundation – Financial Support

**Total Volunteer Hours:**

<b>Participants</b>	<b>Number</b>	<b>Days/ Hrs</b>	<b>Ttl Hrs</b>
• Hollydale Elementary	60	1/3	180
• Alpha Middle School	8	6/4	192
• Friends of Trees Community Crewleaders	18	3/6	324
• <u>Gresham Woods Planting Days</u>	<u>40</u>	<u>3/5</u>	<u>600</u>
		<b>Total Hours</b>	<b>1,296</b>

# GRESHAM WOODS RESTORATION AND EDUCATION OUTREACH PROJECT

## ENVIRONMENTAL EDUCATION GRANT FINAL PROJECT BUDGET

CATEGORY	GRANT FUNDS	MATCHING FUNDS*	MATCHING IN KIND*
PERSONNEL	0	0	\$17,070
VOLUNTEER LABOR @ minimum wage for manual labor, local rate for professional labor	0	0	\$9,201.60
PROFESSIONAL SERVICES (TECH SUPPORT AND PLANNING, NURSERY SERVICES AND TRUCKING, LAND CLEARING AND VEGETATION SERVICES, MONITORING, OUTREACH)	\$5,400	0	\$14,781.50
MATERIALS & SUPPLIES list items and approximate costs		\$4,875 ( plants, planting material, erosion control, and plant protection supplies will be provided under the NOAA grant to the City of Gresham)	0
TRANSPORTATION	0	0	14,715
PROGRAM HOUSING	0		\$10,000
<b>TOTAL</b>	5,400	\$4,875	\$65,768.10

**TOTAL: \$76,043.10**



CITY OF PORTLAND  
**ENVIRONMENTAL SERVICES**



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June 14, 2004

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Portland, OR 97232-2736

**Re: Alpha High School Restoration & Education Grant**

**To Whom It May Concern:**

During the first year of this grant Alpha students have provided outstanding leadership in helping to restore the Johnson Creek Watershed. City of Portland manages more than 20 restoration sites on Johnson Creek, including Gresham Woods. This project is one of the most significant riparian natural areas in the Portland-metro area and is a key part of the Johnson Creek restoration strategy.

Like many natural areas, Gresham Woods has a history of human-disturbance and invasive weed colonization. The site is over 70 acres and is surrounded by sub-urban development. There are many challenges and opportunities that Alpha Conservation Corps is addressing. Students are removing weeds, seeding native grasses, harvesting and planting native pole cuttings, planting bare-root nursery stock, applying beaver guards, and mulching new plantings. At the same time, students are taking a leadership role in teaching citizens how to conduct natural area restoration. Alpha students have led weekend work-parties where they serve as leaders and facilitators for local volunteers. They have brought hard work, positive energy, and practical knowledge and education to this process.

I work with many different groups, from school groups to private contractors, and the Alpha Conservation Corps is one of the best. Alpha staff are motivated, focused, and they understand the needs of partner organizations. More importantly, though, they understand the needs of the kids and the importance of connecting them with nature, job skills, and organization.

City of Portland and our restoration partners will be working at Gresham Woods for the next seven years. We need partners like Alpha High School to help us accomplish our on-the-ground goals. As importantly, we need a local presence from the students and citizens who live near this site. Alpha is a key part of that community.

Again, it is a pleasure to partner with Alpha High School and the Alpha Conservation Corps. Please contact me if you need more information.

Sincerely,

James Allison  
Natural Resources Ecologist  
Watershed Revegetation Program  
City of Portland Environmental Services

## **Evaluation of Alpha Conservation Corps' Involvement at Gresham Woods**

In the fall of 2002, Friends of Trees formed a partnership with Alpha Conservation Corps to restore a 1-acre riparian section along Johnson Creek using a community-based restoration model. The concept involved Alpha Conservation Corps utilizing the site's incredible resources as a field laboratory to drive home critical academic lessons on the importance of functional streamside ecosystems, as well as engaging the Alpha students in hands-on restoration activities. I am delighted to say that the partnership has been an overwhelming success. So much so, that Friends of Trees has partnered with Alpha Conservation Corps at several other urban natural areas throughout the Portland Metropolitan area: Friendship Park, Brookside, Arata Creek, and the Tualatin River National Wildlife Refuge.

Alpha Conservation Corps' involvement in restoration activities at Gresham woods included invasive species removal, installation of native trees and shrubs, and the accessorization of native trees with protective tubing and biodegradable weed mats. In addition to the aforementioned activities, several Alpha students attended Friends of Trees' Natural Area Restoration crew leading training. The 6 hour training is designed to provide attendees with the skills needed to effectively lead volunteers in natural area plantings, as well as serve as an environmental education forum. Moreover, by becoming a Friends of Trees' crew leader, Alpha students are actively learning about responsibility, leadership, community involvement, and numerous environmental issues. At the completion of the event, attendees sign up to crew lead at 4 natural area planting events throughout the Friends of Trees' planting season (December through March). Alpha students attending the training were required to include Gresham Woods as one of their chosen sites. Therefore, the students were able to utilize the skills they acquired both in the field and at the training to teach planting volunteers about the importance of natural area restoration. I am happy to say that the Alpha students successfully fulfilled their crew leading commitment.

It is clear that most of the youth involved with Alpha Conservation Corps genuinely enjoy the work they do; also, they clearly have a deeper understanding of ecological issues (including stormwater run-off, invasive species, and salmon-related issues) and appreciate their role in making a difference. It is my belief that these positive traits stem from strong leadership both in the classroom and in the field. That said, Stefan Aumack deserves credit for providing the aforementioned leadership, and for doing an exceptional job in promoting a work environment that is conducive to education, team building, and meaningful work.

Please feel free to contact me if you have any further questions.

Sincerely,

Anil Devnani  
Natural Area Restoration Manager  
(503) 282-8846 x 15