

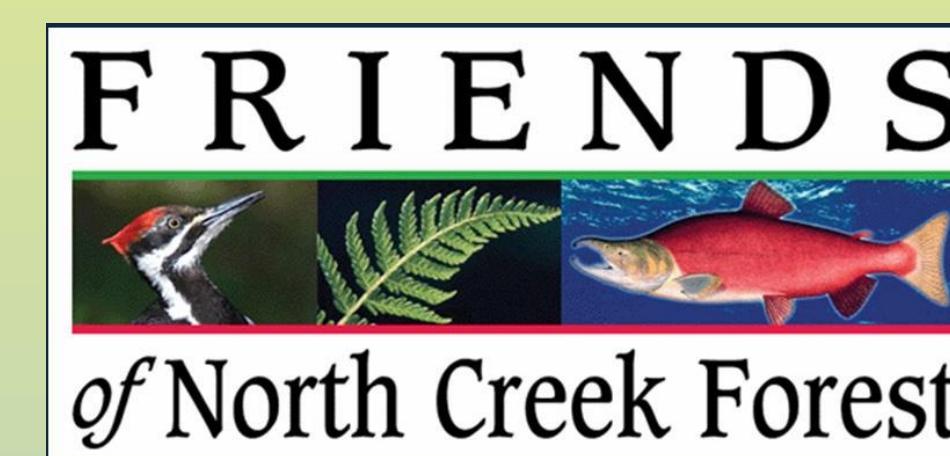
North Creek Forest UW-REN Capstone 2013-2014

Ryan Isaacson, Janice Jap, Spencer Murray, Sarah Park, Carolyn Stapp, Deanna Yip

Friends of North Creek Forest

Community Partner

- Our community partner for the 2013-2014 UW-REN restoration project is the Friends of North Creek Forest.
- They have spent several years working with UW-REN and have played a pivotal role in protecting and restoring North Creek Forest.
- Their mission is: "To maintain and improve the biological function of North Creek Forest through education, stewardship, and conservation in perpetuity."
- Their website can be found at www.friendsnorthcreekforest.org



Site Description

- Our site is approximately 0.53 acres of an upland mixed conifer forest edge disturbed by invasive plant species and abandoned anthropogenic debris.
- The western edge of the site directly borders the seral North Creek Forest, with a steady decrease in the elevation gradient and canopy cover from west to east.
- Dense stands of Himalayan blackberries (*Rubus bifrons*) invaded about two thirds of the site, reducing native plant species diversity and limiting resources for wildlife.
- It is a crucial transition zone for migratory and priority species such as the pileated woodpecker (*Dryocopus pileatus*).
- The site is divided into three distinct polygons based on site topography, plant species composition, and structure. Restoration treatments were adjusted to serve each section's needs.

Restoration Approaches

- Remove invasive plant species including: Himalayan blackberry, reed canarygrass (*Phalaris arundinacea*), and English holly (*Ilex aquifolium*).
- Minimize re-invasion of unwanted invasive plant species through wood chip mulching and establishment of shade producing plants.
- Plant a diverse array of native plants that will establish in the site's microclimates, support native fauna, and create vertical and horizontal structure through layering. Over time these plants will develop into a habitat that will assimilate with the existing, adjacent seral forest.
- Promote community involvement to encourage both education and stewardship of our site and North Creek Forest.

Site Before Restoration



Site After Restoration



Future Prospects / Challenges

- Minimizing the re-invasion of undesired and problematic invasive plant species.
- Minimizing plant mortality through sufficient watering and by protecting planted native species from pests to ensure successful establishment.
- Maintaining a relationship with the community to encourage perpetual stewardship.

UW-REN Team Members

Ryan Isaacson is majoring in Community Psychology at UW Bothell.

Janice Jap is majoring in Environmental Science at UW Bothell.

Spencer Murray is majoring in Environmental Science at UW Bothell.

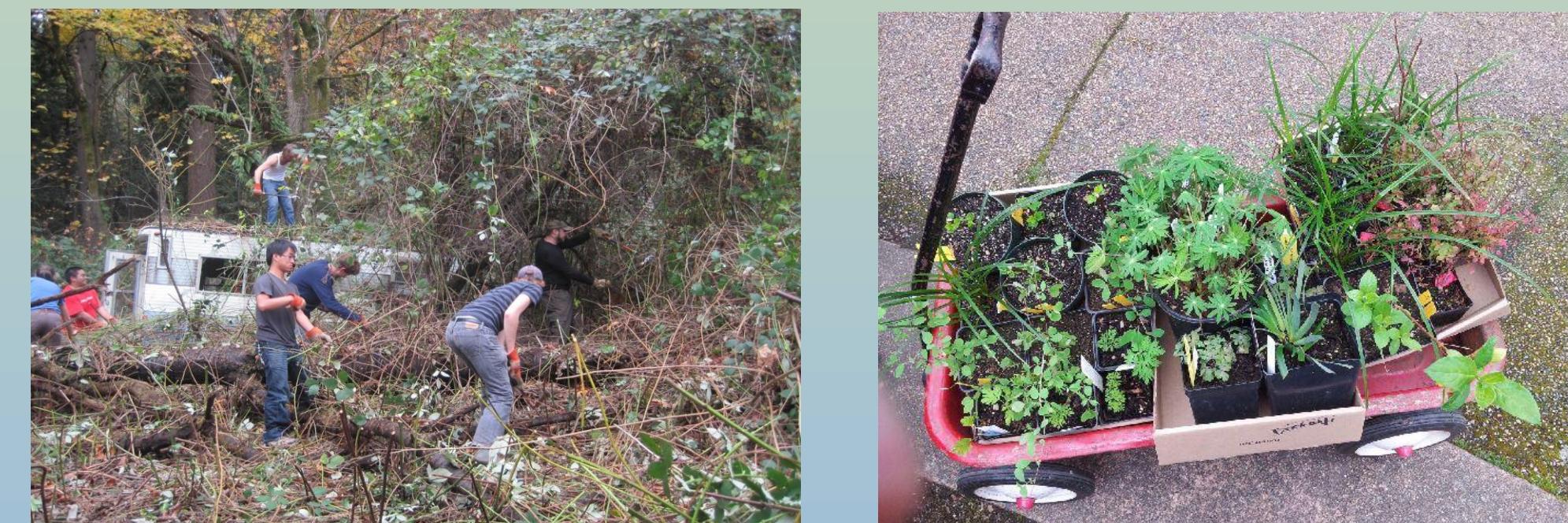
Sarah Park is majoring in Environmental Science at UW Bothell.

Carolyn Stapp is majoring in Community Psychology and Environmental Science at UW Bothell.

Deanna Yip is majoring in Environmental Science at UW Seattle.



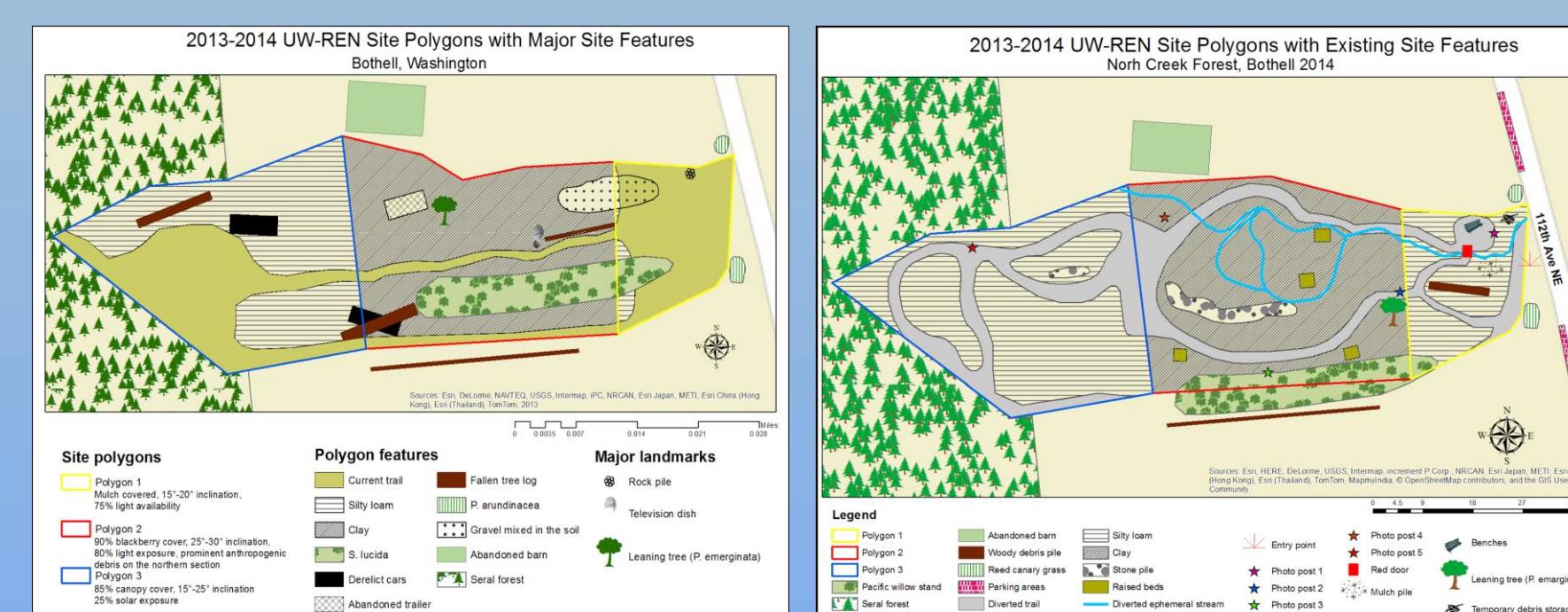
Project Needs and Objectives



- Our site is positioned on the eastern edge of North Creek Forest in a predominantly urban area. The location is part of a transition zone for migratory species and restoring the site will increase its value for wildlife.
- Invasive species need to be removed because they have arrested the succession of this site by smothering native species, significantly limiting the area's ability to develop and mature into part of an upland forest.
- Minimize anthropogenic disturbances and dumping to ensure that our project encourages a healthy, clean environment.
- Restoring the site with a diverse array of native plants will:
 - Provide shade to prevent or minimize possible regrowth and spread of invasive plant species.
 - Enhance the growth of shade-thriving plants to help drive succession forward to assimilate with adjacent seral forest.
 - Create habitat and provide resources for native fauna.
- Our site is part of the largest remaining urban forest in Bothell. One of our objectives is to educate the community about the value of this habitat and the importance of restoration ecology by getting them involved.

Restoration Site Map

- The trail was diverted to prevent trampling of newly established plants and to enrich visitor experience on site.
- The ephemeral stream was diverted to slow down surface runoff during storm events and to decrease surface erosion.
- Our planting plan was continually updated to adapt to new site conditions.
- Several new site features include raised beds and rock piles for wildlife.



Restoration Accomplishments

- Successful removal of invasive species on site, including Himalayan blackberry and English holly.
- Removal of anthropogenic debris scattered on site, including 2 derelict automobiles and 1 abandoned trailer.
- Successful installation of many native plant species.
- Recruitment of new volunteers for work parties with Friends of North Creek Forest, as well as the return of many past volunteers.
- Obtainment of donations from the community and community businesses in the form of plants, mulch, food, and a dumpster for invasive species removal.



Friends of North Creek Forest, Jim and Carolyn Freese, Crescent Calimpang, Kern Ewing, Jim Fridley, Warren Gold, Amy Lambert, A to Z Tree and Stump, Evergreen Karate and Jiu Jitsu, Mike Hughes, Tyson Kemper, Kristin Kinder of Waste Management, Northwest Arbor Care, Outdoor Adventures, Rod Styles, Soundview International Baccalaureate School, Tulalip Higher Education Program, Whale Scout, Woodinville Montessori School, YMCA of Bothell, and all the volunteers that have come out to help us. Thank you!

