

Habitat Restoration Program Overview

The City of Bellingham Environmental Resources Division is working to restore and revegetate native riparian corridors surrounding local streams, lakes and marine nearshore environments. Much of the restoration work is being done by [Washington Conservation Corps crews](#) that are sponsored by the Public Works Department. To date, the City of Bellingham has restored native vegetation at more than 30 project sites totaling almost 60 acres.

- [Map of restoration sites in city limits \(1,000K PDF\)](#)

Restoration Techniques

When assessing an area for restoration, the City of Bellingham takes into account the unique attributes of the site and applies the appropriate restoration techniques. In riparian areas plagued by a massive load of invasive vegetation, such as Reed Canary Grass, Himalayan Blackberry, or Japanese Knotweed, [invasive species](#) must first be removed or controlled.



Restoration work along Whatcom Creek, near Woburn Street. WCC crews removed invasive vegetation, stabilized the steep hill, and installed native plants and trees (above). The site after completion of work in 2008 (right).



Species planted in riparian restoration project sites are tailored to match site conditions (i.e soils, sunlight, landform). Species used at each restoration site are patterned after native plant associations that are currently (or were historically) found at similar sites. Environmental Resources staff completed an [assessment of historic forest conditions \(PDF\)](#) that would have occurred along city streams, and are using that to tailor current planting plans.

Once plants are installed, the sites must be maintained to ensure that native species survive and thrive. In areas where beaver are present young trees and woody shrubs are enclosed in wire fencing to deter browsing from deer, rodents and beaver. When the trees grow beyond a critical phase, where they are able to withstand natural browse, the wire cages will be removed to eliminate the inhibition of growth. The WCC Crews continue to control invasive weeds at each site, performing annual maintenance at least three times per year.



Wire caging used to protect seedlings.

Vegetation Monitoring

To ensure that the City is reaching its restoration goals we have developed a vegetation monitoring program that is implemented at each of our restoration sites. The program tracks plant survivorship and growth rates of replanted vegetation, while monitoring the success of invasive species removal. This monitoring data will facilitate future restoration efforts by allowing selection of appropriate plant species mixes and creating a record of the time commitment needed to complete our restoration goals. The monitoring program also ensures we are maintaining healthy plant diversity and may help us better understand the relationship between water quality and riparian health.

Riparian restoration sites have shown an 80-90% survivorship of planted vegetation after one year. The high survivorship of planted vegetation is attributed to extensive planning based on the site's habitat characteristics, and the skill of the Washington Conservation Corps in planting riparian vegetation and removing invasive species. For more information, visit the [habitat restoration monitoring section](#) of the City website.

Unity Street

An example of a typical urban riparian restoration project is the Unity Street site. The Unity Street site is a steep, north facing shoreline that was originally characterized by a monoculture of Himalayan Blackberry. After the invasive weeds were removed, cribbing was placed on the bare slope to stabilize exposed soils, then the entire area was covered with mulch. Native plants were installed in 2003. Today the site supports more than 25 species of native plants, improving riparian habitat and water quality for wildlife in and around Whatcom Creek.



*Unity Street site before restoration:
Himalayan Blackberry monoculture.*



Unity Street site after planting: 2003.



*Unity Street site during site preparation:
slope stabilization.*