



## Restoring Native Plant Communities to the Prairie Overlook

### Introduction

Prairies and Garry Oak woodlands once dominated the landscape of the Puget lowlands. These grass dominated landscapes developed during the warmer climates of the early Holocene on the gravelly, outwash soils that remained following the last glacial episode, the Vashon stade (13,000 -15,000 years ago).

As cooler and wetter climates returned, many prairies were maintained by periodic burning by Native Americans to remove encroaching trees and shrubs and to encourage important food and medicinal plants such as camas (*Camassia quamash* and *Camassia leichtlinii*), chocolate lily (*Fritillaria affinis*), and Garry oak (*Quercus garryana*). By the mid-1800s, Europeans started converting the prairies to farmlands. Later, fires were excluded from oak woodlands and urban development continued to fragment or remove most of these important ecosystems.

Today, less than 3% of the once extensive prairies and oak-prairie savannahs remain in western Washington. The small remnant prairies that remain in Ebey's Landing National Historical Reserve are important areas for biodiversity and for the open vistas they provide of the cultural landscape.

### What are we doing?

Through a multi-year Cooperative Agreement with the Pacific Rim Institute ([www.pacificriminstitute.org](http://www.pacificriminstitute.org)), the National Park Service is restoring the 2.5 acres of abandoned farmland at the Prairie Overlook to a native prairie habitat. Currently, most of the plants in this patch of grassland are perennial pasture grasses such as orchard grass (*Dactylis glomerata*) and tall fescue (*Schedonorus arundinaceus*) and introduced weeds such as Scotch broom (*Cytisus scoparius*), Canada and bull thistles (*Cirsium arvense* and *C. vulgare*), English plantain (*Plantago lanceolata*), and burr chervil (*Anthriscus caucalis*).

We started experimenting with restoration methods in 2004. We found that using a combination of herbicides and tilling was the most effective means of controlling the perennial exotic grasses. Planting with Roemer's fescue (*Festuca roemerii*) plugs grown by the Pacific Rim Institute on Whidbey Island rapidly provided native cover with plant material adapted to our local environmental conditions. We will expand our efforts from small experimental plots to the entire site.



Tilling the original experimental plot (fall 2004) after killing the introduced grasses with herbicide.



Planting with Roemer's fescue plugs in December of 2004.



View of experimental plot in July 2005 showing Roemer's fescue and Oregon sunshine (*Eriophyllum lanatum*).

## Next steps

In the spring of 2016 we are starting on a 3-5 year project to convert the Prairie Overlook from weedy grassland to a functioning prairie ecosystem. We will work systematically through the area until we have restored the entire 2.5 acre site.

### Steps in site restoration

- Control exotics in study plots that were planted with native species between 2004 and 2009 (see map)
- Spring 2016: Remove exotic grasses and plant Roemer's fescue in untreated Phase I areas. Areas will be treated with a selective herbicide and tilled prior to planting.
- Monitor and kill exotic plants in treated areas with selective herbicides. Pull Scotch broom throughout the site. Mow invasive weeds to reduce seed development and spread.
- Add native plant diversity to areas that are dominated by Roemer's fescue by planting with native forbs such as yarrow (*Achillea millefolium*), showy fleabane (*Erigeron speciosus*), field chickweed (*Cerastium arvense*), and Oregon sunshine.
- Fall 2016: treat Phase 2 areas to remove exotic grasses and plant with native grasses
- Continue to monitor and maintain sites by controlling weeds and adding native plant plugs or seeds.
- Continue to add native forbs to sites by seeding or planting plugs grown from native seed
- 2017: Remove weeds in Phase 3 areas and plant with native grasses and forbs
- Continue to monitor sites for weeds, native plant growth, and remove exotic species as needed.

## What is our Goal?

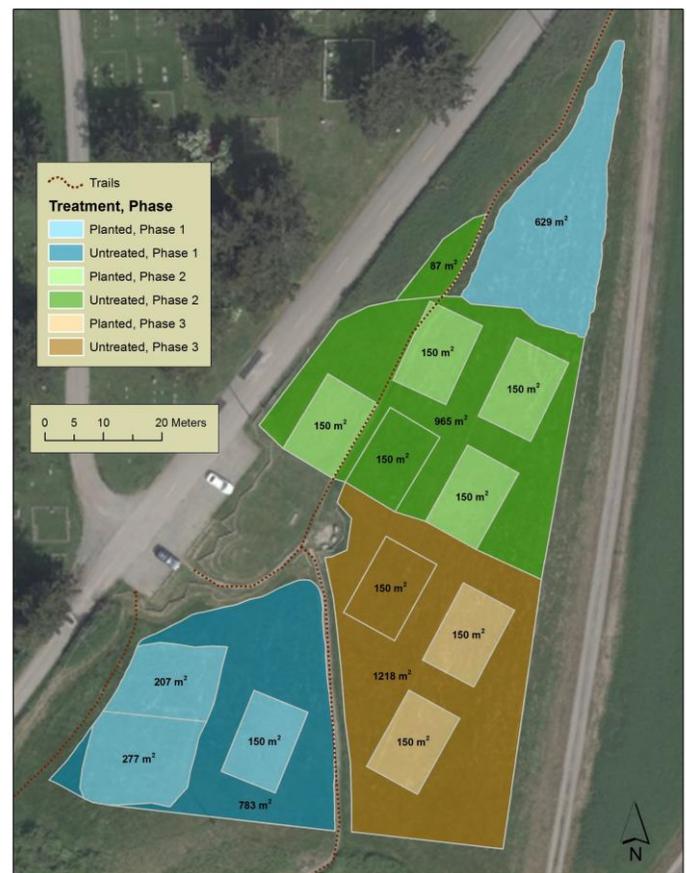
Our goal is to restore a functioning prairie dominated by native grasses and forbs. Because the site has been covered with exotic plants for decades, there will always be some exotic species – but we will keep them to a minimum.



Western blue flag (*iris missouriensis*), a native iris found on Whidbey Island



Chocolate lily, Camas, and western buttercup in a Roemer's fescue patch



Map illustrating previously planted study plots and future restoration areas.

## More Information

Regina M. Rochefort, Ph.D.  
Science Advisor & Project Lead  
Email: [regina\\_rochefort@nps.gov](mailto:regina_rochefort@nps.gov)  
Phone: 360-854-7202

Cheryl Decker  
Exotic Plant Control Specialist  
Email: [cheryl\\_decker@nps.gov](mailto:cheryl_decker@nps.gov)  
Phone: 360-854-7336