Fort Lewis Prairie Restoration

High quality prairie in the Artillery Impact Area on Fort Lewis

South Puget Sound (SPS) prairies and associated oak woodlands are unique and are one of the most endangered habitats in the US. In the past 150 years about 95% of the habitat has been lost to development, agriculture, conifer encroachment and habitat conversion by exotic species. Only 1% is now considered to be in it's historic condition. SPS prairies are home to many rare or endemic flora and fauna. Currently, there are four Federal Candidates and five Federal Species of Concern that occur on Fort Lewis prairies. Several more are listed as Threatened or Endangered by Washington State.

Two Taylor's checkerspots (Federal Candidates) nectar on Puget balsamroot within the Artillery Impact Area.

Approximately two thirds of the remaining SPS prairie habitat occurs on Fort Lewis, placing a disproportionate burden on the Army to recover federally-listed species. The open prairie landscape is used extensively for training, which could be negatively affected if one of the candidates were federally listed.

Many species have already been extirpated from the prairie landscape and many more have experienced precipitous declines in recent years and are also perilously close to being extirpated. These declines have emphasized the urgency to expand restoration efforts from a site-specific, species by species approach to a landscape level approach, to both preserve biodiversity and improve prairie quality, so that new populations of candidate species can be established through reintroduction efforts, both on and off Fort Lewis.

A key hurdle to implementing landscape level restoration is the limited availability of native prairie seed. To accomplish this goal, Fort Lewis is establishing two permanent nursery beds with Legacy support. Seed collected from these beds will be used for future large-scale restoration efforts. One 15 acre site will grow a prairie bunchgrass, Roemer's fescue, which is the keystone species of the prairies, and the other is a 17 acre site for herbaceous forbs. The fescue site will be drill-seeded this fall and approximately 200,000 forbs will be plugged into the herbaceous beds. More than 50 species will be grown out over the next several years using millions of plugs to fill the nursery beds.

Staff at Shotwell's Landing Nursery prepare plug trays.

Raised beds at Shotwell's Nursery are used to bolster seed production of rare prairie plants and species that are used by candidate species.

Taylor's checkerspot reintroduction site on Fort Lewis after supplemental augmentation of host plants grown at Shotwell's Nursery.

Legacy funding has also supported establishing and equipping Shotwell's Landing Nursery, which is operated by The Nature Conservancy (TNC). It's facilities are used by all the SPS prairie partners for research in establishing germination and growing protocols and for growing out over 150,000 prairie plugs each year. Most of these plugs are planted directly into restoration sites for Candidate species. Forty 32ft long raised beds are used to grow out rare plants to bolster seed production.

A co-operative partnership between the Washington Dept. of Corrections, The Evergreen State College and TNC has enabled the production of an additional 200,000 prairie plugs each year by inmates at Stafford Creek Correctional Center. Legacy funding purchased all the necessary plug growing materials, overhead sprinklers, seed cleaning equipment and refrigerated storage for this co-operative project to become a reality.

Inmates at Stafford Creek Correctional Center place seeds into cells. The Sustainable Prisons Project is unique relationship between Washington Dept. of Corrections, The Evergreen State College, TNC and Fort Lewis. The program focuses on teaching inmates new trades related to various environmental fields. Some inmates raise Oregon spotted frogs (Federal Candidate) that are then released into wetlands on Fort Lewis.

The Army Compatible Use Buffer Program (ACUB) has provided nearly $2m for habitat purchase and enhancement of degraded prairie habitat off Fort Lewis, and to support other SPS prairie projects by other regional prairie land managers. One of the primary goals of the ACUB funding is to restore habitat off Fort Lewis to establish new populations of Candidate species. Seed from the Legacy nursery beds will be used for these restoration projects.

A Mardon skipper (Federal Candidate) nectars on western buttercup in the Artillery Impact Area (AIA). The AIA on Fort Lewis is the largest SPS prairie and contains some of the highest quality prairie that remains. All four candidates species occur in the AIA.

Legacy support has exponentially expanded the restoration goals for all SPS land managers and partners, without which large scale prairie restoration would not be possible.

DEPARTMENT OF DEFENSE LEGACY PROGRAM

FORT LEWIS PUBLIC WORKS

The Nature Conservancy
Protecting nature. Preserving life.™

EVERGREEN
THE EVERGREEN STATE COLLEGE
OLYMPIA, WASHINGTON

Working Together for Safe Communities
DOC