

THREATENED AND ENDANGERED SPECIES HABITAT RESTORATION: 2015 ANNUAL REPORT



2015

Report to the Bureau of Land Management
Agreement #L13AC00098-0018

Report prepared by Matt Schultz

Institute for Applied Ecology

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PREFACE

This report is the result of agreement L13AC000098-0018 between the Institute for Applied Ecology (IAE) and the Bureau of Land Management. IAE is a non-profit organization whose mission is the conservation of native ecosystems through restoration, research and education. Our aim is to provide a service to public and private agencies and individuals by developing and communicating information on ecosystems, species, and effective management strategies and by conducting research, monitoring, and experiments. IAE offers educational opportunities through 3-4 month internships.



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Cover photograph: *Erigeron decumbens* at Speedway, West Eugene Wetlands. Photo by Tyson Sandoval.

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REPORT TO THE BUREAU OF LAND MANAGEMENT

OBJECTIVES:

The purpose of the Threatened and Endangered species habitat restoration actions are to meet the recovery goals set by the USFWS in the Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington (2010) and include the following:

- **Cover of native vegetation:** Sites with populations of target species should have relative cover of natives of 50 percent or more.
- **Cover of woody vegetation:** For each site, woody vegetation should make up no more than 15 percent of the absolute vegetative cover, and woody species of management concern will make up no more than five percent (unless the site is savanna habitat, in which case the upper limit would be about 25 percent woody vegetation).
- **Prairie diversity:** For each population site, native prairie species richness must exceed 10 species (measured in 25-m² plots), of which seven or more must be forbs and one must be a bunch grass.
- **Non-native vegetation:** At each reserve, no single non-native plant will have more than 50 percent cover. Non-natives of particular concern will have no greater than 5 percent cover.

INTRODUCTION

The Institute for Applied Ecology was contracted by the Bureau of Land Management in 2015 to assist with habitat restoration of the West Eugene Wetlands for the benefit of threatened and endangered species. About 15 sites throughout the West Eugene Wetlands were prioritized for actions in 2015. Sites hosted a variety of rare plant species including Bradshaw's lomatium (*Lomatium bradshawii*), Willamette daisy (*Erigeron decumbens*), Kincaid's lupine (*Lupinus oregonus*), and other rare plants. The primary action completed at each site was the removal of encroaching woody species that threatened rare species populations, which included Oregon ash (*Fraxinus latifolia*), hawthorn (*Crataegus* sp.), rose (*Rosa* sp.) Himalayan blackberry (*Rubus armeniacus*), and scotch broom (*Cytisus scoparius*). Ash trees were also girdled at several sites and fences were repaired at Long Tom and North Taylor.

2015 ACTIONS AND 2016 ANTICIPATED ACTIONS

See Table 1 below for a list of actions completed in 2015 and actions anticipated in 2016.

Table 1: On-the-ground restoration activities completed under this project in 2015, compared with those anticipated in 2016.

Site	2015 Actions	2016 Anticipated Actions
Balboa	<ol style="list-style-type: none"> 1) removed woody species within rare plant populations 2) girdled or removed female ash trees 	<ol style="list-style-type: none"> 1) treat woody species in ERDE plots with herbicide 2) cut-stump treatments on woody species throughout site, especially female ash trees
Long Tom ACEC	<ol style="list-style-type: none"> 1) removed woody species from fence to protect rare species from unauthorized cattle use. 2) removed blackberry 	<ol style="list-style-type: none"> 1) grub blackberry or spot-spray with herbicide 2) continue fence maintenance 3) treat tall oatgrass with herbicide
Oak Hill	<ol style="list-style-type: none"> 1) pulled scotch broom on north side of hill with Looking Glass youth crew 2) girdled smaller firs in upland 3) visited site to explore options to remove encroaching fir trees 	<ol style="list-style-type: none"> 1) work with contractor to remove 14 remaining large fir trees 2) Haul out woody debris with youth crew

Site	2015 Actions	2016 Anticipated Actions
Oxbow West	1) girdled female ash trees on east edge 2) removed woody plants from the ERDE plot	1) Treat woody species in ERDE plots with herbicide 2) cut-stump treatments on woody species throughout site, especially female ash 3) remove scotch broom
Greenhill	1) girdled female ash trees 2) mowed woody species in ashgrove remnant 3) sowed ERDE seed	1) treat woody species in ashgrove remnant with herbicide, 2) cut-stump treatments on woody species in and near ashgrove remnant 3) treat blackberry near rare species plots in wet prairie 4) spot-spray reed canarygrass on edges of weed fabric
North Taylor	1) removed trees fallen on fence 2) maintained and repaired south fence	1) weed removal and control 2) woody plant removal 3) continue to conduct fence repair
South Taylor	1) Controlled woody species within rare plant areas.	1) Scotch broom removal 2) Spot-spray reed canarygrass in wet prairie
Speedway	1) pulled scotch broom and blackberry in rare species areas 2) removed woody species and trees in Horkelia area with Kalapuya high school crew	1) Scotch broom removal in rare species areas 2) spray woody species in rare species areas 3) teasel removal
Spectra Physics	1) Assisted BLM & Forest Service crew with removal of woody species within rare plant areas. 2) Assisted with chipping and hauling away woody material.	1) Scotch broom removal and control
Stewart Pond	Located & mapped false brome	1) mow or spray false brome
Turtle Swale	1) mowed edge of LUOR plot 2) weeded LUOR plot	1) mow edge of LUOR plot 2) weed LUOR plot
Willow Corner Annex	1) pulled shining geranium 2) removed blackberry	1) check site and remove woody plants that can't be mowed 2) girdle remaining female ash trees 3) burn or pull shining geranium 4) grub blackberry
Willow Corner Confluence	1) pulled scotch broom	1) continue to remove scotch broom
Isabelle	1) pulled scotch broom with Looking glass youth crew 2) mowed edge of LUOR plot 3) weeded LUOR plot 4) removed blackberries 5) mowed tall oatgrass on edge of LUOR plot	1) mow or spray tall oatgrass before seed set 2) mow edge of LUOR plot 3) weed LUOR plot 4) grub blackberries 5) pull scotch broom

Site	2015 Actions	2016 Anticipated Actions
Hansen	1) mowed LUOR plot 2) weeded LUOR plot 3) mapped knapweed with TNC LEAF interns 4) removed blackberry with near existing LUOR patches	1) hand-pull or spot-spray knapweed 2) mow edge of LUOR plot 3) weed LUOR plot
Vinci	1) weeded ERDE plot 2) collected ERDE seed 3) mowed woody species	1) girdle or cut-stump treatment of remaining female ash trees 2) pull Scotch broom 3) weed ERDE plot 4) mow edge of ERDE plot 5) treat woody species in rare species areas
Danebo	1) cut female ash trees 2) pulled scotch broom	1) pull scotch broom 2) cut-stump treatment on female ash trees

CONCLUSIONS

The actions taken in 2015 have been effective at reducing woody species encroachment into rare species habitat and at reducing the extent of specific invasive species. However, woody species can resprout and rapidly regrow after cutting and mowing and the ability to use carefully targeted herbicide applications, anticipated for 2016, should enhance the effectiveness of these treatments in the future.

FUTURE ACTIONS

In 2016, in addition to the actions listed above, site preparation for planting of rare species at several sites will occur. Potential sites include Hansen, Turtle Swale, Greenhill, Balboa, and Speedway.

Herbicides are expected to be approved for use in restoration across the West Eugene Wetlands in 2016. With this new tool available, the main change in this project will be the targeted use of herbicide in specific circumstances, such as wiping cut stems and stumps with herbicide after shrub and tree removal. Some limited spot-spraying of herbicide might also occur in high quality areas. All use of herbicide will be in accordance with the Resource Management Plan approved in 2015 and the USFWS Biological Opinion for the West Eugene Wetlands, Eugene Distric, Bureau of Land Management.