

# Oaks Bottom Wildlife Refuge

160-acre natural area in Southeast Portland along the east bank of the Willamette River



## AFTER

*Fill area re-seeded with native grasses and forbs to provide wildlife habitat*

The 12-acre south fill area of Oaks Bottom Wildlife Refuge is a flat area bounded on the west by an elevated railroad berm and overhead transmission line. The fill itself is a former landfill capped with clay soil. The project was to improve the conditions of the south fill area of Oaks Bottom. Due to poor soil quality, the area was not conducive to growing native vegetation. Vegetation in the area included Himalayan blackberry, black cottonwoods and invasive forbs. The project was phased over manageable sections of the project area. The first phase completed the site cleanup and repair of the south fill and treated an area of approximately six acres in the northwest corner of the fill.

Site preparation prior to revegetation included eradicating the cottonwoods that sprouted along the water main. Clean up and consolidation of temporary debris was necessary to provide more space for the debris accumulated during the project. Exotic vegetation was removed from along a portion of the railroad berm and from a section of the north edge. An additional 6 to 10 inches of topsoil/compost mix was placed to improve the growing conditions. The topsoil/compost mix was contoured to create some differential in soil depth and surface moisture. The area with newly placed soil was planted with native grasses and forbs to attract wildlife of open meadow

habitats. The plants were to attract Western meadowlark, Savanna sparrow, voles, butterflies, etc.

## Benefits

The project preserved and improved valuable open meadow habitat. The spread of invasive exotic woody vegetation into the wildlife refuge was reduced. The importance and usefulness of native grasses and forbs was demonstrated by

restoring the area and bringing the wildlife back. Wildlife habitat was improved in a significant natural area in the city. Environmental education opportunities have been increased especially in the areas of restoration and ecology of native meadow systems. The aesthetic quality of the south fill area was also improved.

## Budget

Proposed – \$19,842

Actual – \$26,755

Metro/US Fish and Wildlife grant award – \$8,000

## Helpful hints – what worked, what didn't

- Exotic grasses and forbs can be difficult to remove. Time in combination with other methods may be necessary to eradicate exotic species without herbicides.
- Ploughing should be done prior to disking. Disking alone may not reach deep enough to rid seed bank of some perennials.
- The intent of the project was to avoid using chemicals. Without enough time and people, however, the removal of invasive vegetation without herbicides can be difficult.
- Have an irrigation plan designed and installed, prior to installing project.

## Timeline and tasks

Spring 1993 .....	Remove cottonwoods; consolidated debris dumping; sprayed blackberries on railroad berm with Garlan; took soil samples to determine quality and depth of soil on top of clay cap
August 1993 .....	Decided to enlarge project area to include the entire south fill area; applied for additional funding
Fall 1993 .....	Mowed meadow
April 1994.....	Mowed meadow a second time and disked
May - August 1994 .....	Disked the site every three weeks
September 1994 .....	Application of Round-up to get rid of exotic plants; left to sit all winter
December 1994 .....	Planted native trees and shrubs along the base of the bluff
March 1995 .....	Polished the entire site
April - August 1995 .....	Disked every three weeks, with the intent of seeding with native seeds in the fall
September 1995 .....	Evaluated the site for exotic plant growth; decision not to seed; placed log on front of cat and compacted area, preparing seed beds for planting
October 1995 .....	Partial application of Round-up and Confront
Nov. 5, 1995 .....	Planted two islands of native tree and shrub species in the south fill to create some contiguous small bird habitat throughout the entire Oaks Bottom Wildlife Refuge
March 29, 1995 .....	Second application of Round-up and Confront
June - August 1996 .....	Use rotara (an egg beater-like disc) and disc site to a shallower depth than previous years
Sept. 15, 1996.....	Seed with native grasses
Spring - summer 1997 .....	Monitor plant growth; irrigate plants; control establishment of non-native vegetation
1997-2002 .....	Continue monitoring and maintenance of site

- Develop a vegetation management plan prior to installing project. Look for trails or road access that can allow for machine access (mowers) to site for vegetation management.
- Fire may be used as a vegetation management tool once the native meadow community has been established.
- Plan to monitor and maintain a project for a minimum of five years.

## Partners

Portland Parks and Recreation  
 East Multnomah Soil and Water Conservation District  
 US Soil Conservation Service  
 Sellwood-Moreland Improvement League  
 Multnomah County Vector Control  
 Friends of Oaks Bottom Wildlife Refuge

## Contact

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