

A Phased Approach to Oak Release on Turtleback Mountain, Washington

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San Juan County Land Bank



Turtleback Mountain Preserve, Orcas Island



Garry oak savannah and woodland



Grasslands and herbaceous balds



A photograph of a sharp-tailed snake resting on dark, crumbly soil. The snake has a reddish-brown body with a lighter, patterned underside. It is coiled slightly, with its head pointing towards the left. The soil is dark brown and black, with some dry plant matter and roots visible. A white text box is overlaid in the bottom left corner.

Sharp-tailed
snake



Common
Nighthawk





GARRY OAK SAVANNAH

You stand in a rare habitat known as Garry oak savannah or woodland.

It supports a marvelous diversity of life. Shown here are just a few of the many animals that depend on Turtleback Mountain's Garry oak savannah for food and shelter.



PROPERTIUS DUSKYWING BUTTERFLY. The caterpillar of the Propertius duskywing butterfly eats only Garry oak leaves, and overwinters in leaf litter.

All illustrations by Jennifer Rigg.



GOLDEN EAGLE. A pair of golden eagles frequents the grassy slopes of Turtleback, hunting rabbits and other small animals.

Garry oak savannahs are in decline throughout our region and on Turtleback too. Wildfire once kept the habitat relatively open and hospitable to these sun-loving, fire-resistant trees. Without regular fire, Douglas-fir trees and invasive shrubs have taken hold, competing with the oaks for ground moisture, and shading them out.

On Turtleback, young oak trees rarely survive because of heavy browsing by deer. Predators of deer have been eliminated from Orcas Island by people. The resulting high numbers of deer cause considerable damage to many native trees, shrubs, and wildflowers.

GARRY OAK, also known as Oregon white oak, is the only oak native to Washington.



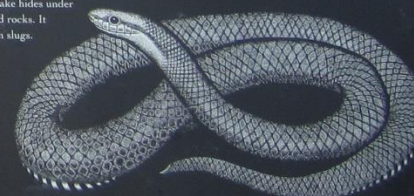
BAND-TAILED PIGEON. Flocks of band-tailed pigeons feast on acorns in the fall.

The Land Bank is restoring some of Turtleback's best Garry oak habitat before it converts to dense conifer forest.

Wire cages protect young oaks from deer. Douglas-firs and blackberries are removed so that oaks, wildflowers, and the associated wildlife can thrive.

Funding in support of this restoration has been provided by the U.S. Fish and Wildlife Service, the U.S. Department of Agriculture, and the San Juan Preservation Trust.

SHARP-TAILED SNAKE. The small (up to 16 inches long) and secretive sharp-tailed snake hides under rotting logs and rocks. It feeds mainly on slugs.



Public Access



Turtleback Mountain - 1895 and present



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LAND BANK



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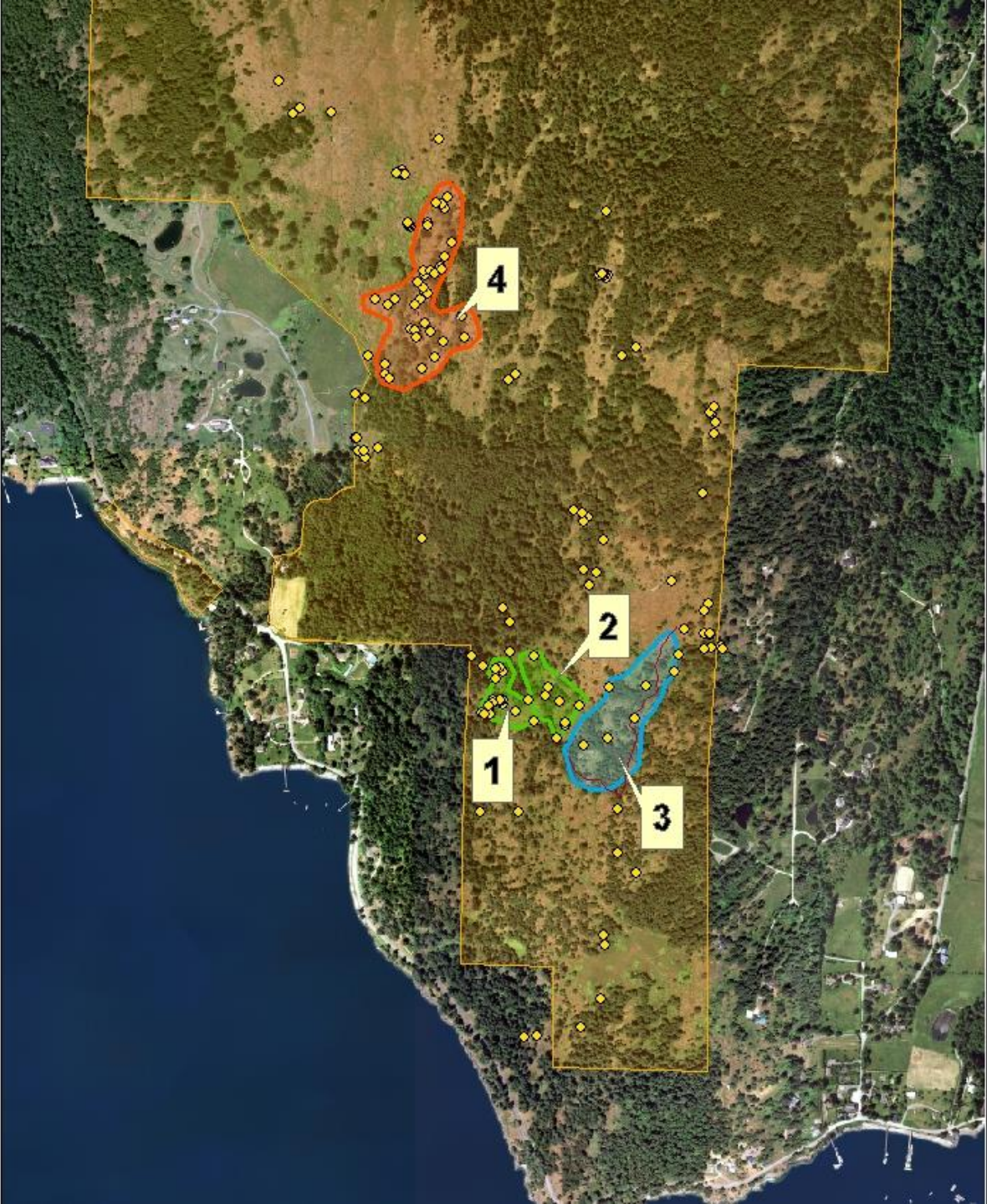
Turtle Back

1895 Turtleback Mountain Preserve

TURTLEBACK MOUNTAIN PRESERVE

OAK RESTORATION UNITS 2009 - 2016

- Partners Program
- State Wildlife Grant
- WHIP



Project objectives

1. Save big oaks
2. Restore a savannah habitat structure
3. Control invasive shrubs
4. Establish young oaks
5. (Understory enhancement)

Objective 1. Save big oaks



May 2013



March 2014

Objective 1. Save big oaks



Objective 2. Reestablish a savannah habitat structure



Tree Cutting and Removal





Burn Piles

Burn pile rehab





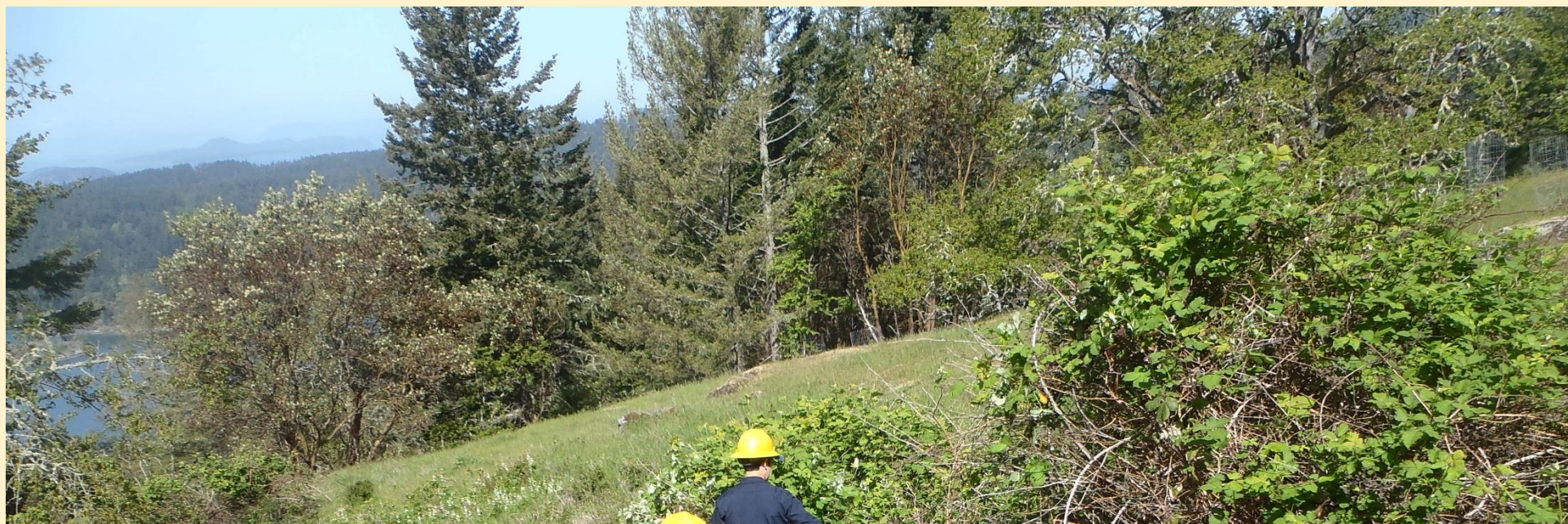
Girdling



Phasing – Tree cutting and removal

- Work conducted October – March
- Girdling timing
- Burn pile curing
- 2 – 3 entries to fully “release” an area

Objective 3. Control invasive shrubs



Objective 4. Establish young oaks.



Deer cages



Direct seeding acorns



Objective 5. Understory enhancement



Cost

- 5K – 20K per acre
- Depends on size and density of Douglas-fir and invasive shrubs, other site characteristics
- Depends on objectives

Thanks

- San Juan Preservation Trust
- U.S. Fish and Wildlife Service
- Natural Resources Conservation Service
- Washington Conservation Corps
- Washington Department of Fish and Wildlife
- Center for Natural Lands Management
- Rain Shadow Consulting

