Status and management of the Washington ground squirrel

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Description

Small-bodied ground squirrel
with short tail and
spotted back

Short-lived species
Produce 1 litter per year

Order: Rodentia
Family: Sciuridae
Species: *Urocitellus washingtoni*

Photo by Gordon Warrick, USFWS

Range

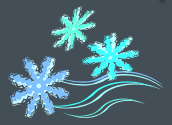
‘Ground-Dwelling Squirrels of the Pacific Northwest’
Eric Yensen & Paul W. Sherman, April 2003.

Annual Cycle

Jan Feb Mar Apr May Jun

Dec Nov Oct Sep Aug Jul

Hibernation (Winter)



DORMANCY

Aestivation (Summer)

Habitat Requirements

Deep (>6’) silt loams

Diverse forage throughout active season

Cover for predator avoidance and dispersal

Importance

Food Chain

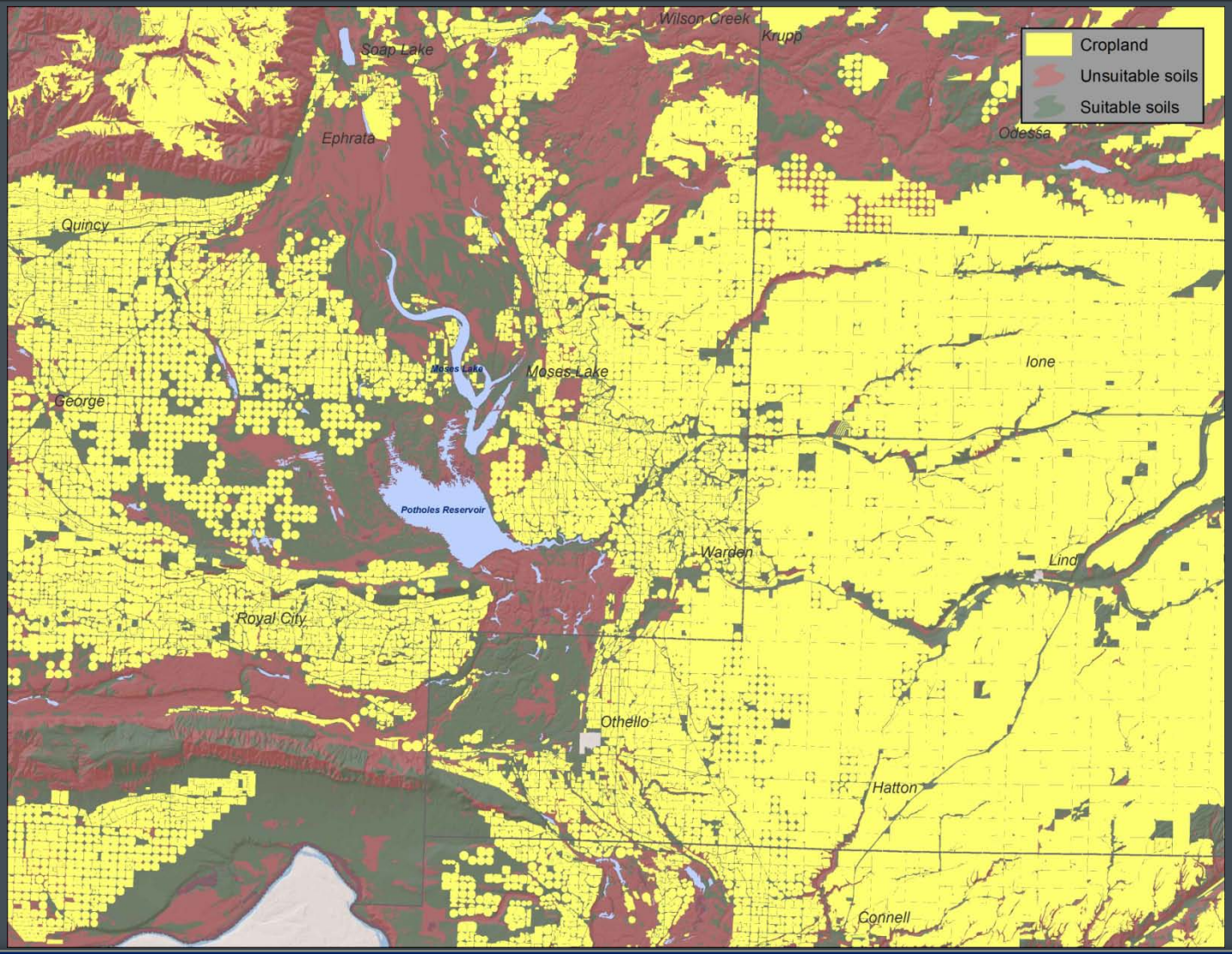
Ecological Function

Other ground squirrels in Washington

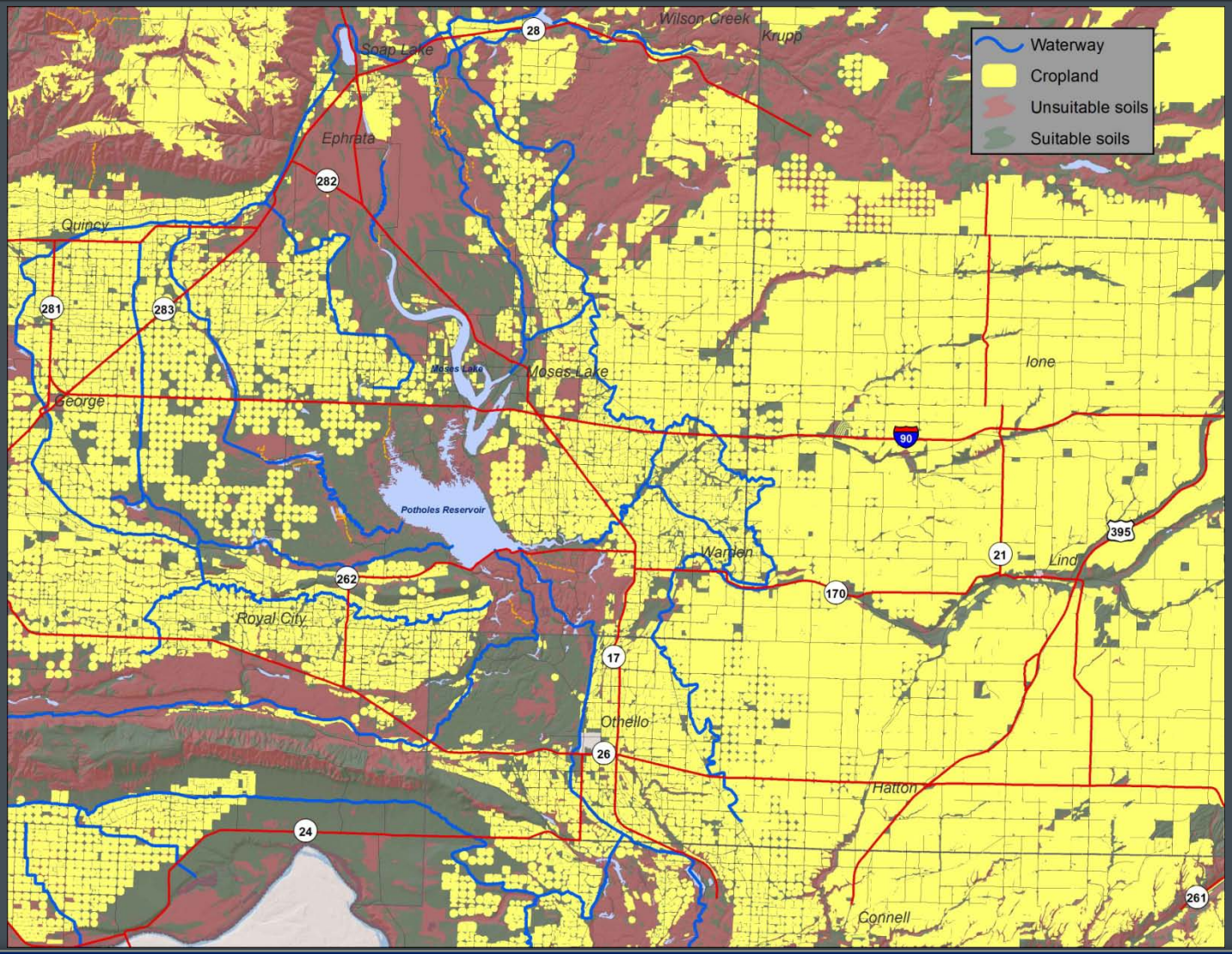
Townsend's ground squirrel *(Urocitellus townsendii)*	Southern Washington
California ground squirrel *(Urocitellus beecheyi)*	Southwest Washington
Columbian ground squirrel *(Urocitellus columbianus)*	NE & SE Washington
Cascade golden-mantled ground squirrel *(Urocitellus saturatus)*	Cascade Range

Historic Habitat within core range

Post-agricultural development



Additional Fragmentation



Timeline of Events

1930's
Extremely abundant

1940's – 90's
Agricultural conversion

1950's - 80's
Lethal control using 1080

Today
State Endangered in OR
State Candidate in WA
Federal Candidate

Human-related Threats

- Habitat Fragmentation
- Habitat Conversion
- Illegal Shooting
  (Protected since 1990's)
- Urban Sprawl

Additional Threats

- Wildfire
- Habitat Degradation
- Depredation

Research and Surveys

1979	Range & Distribution	Lewis & Clark Col.
1987-89	Occupancy Status & Recon	Eastern Oregon Univ.
1998	Occupancy Status	Eastern Oregon Univ.
1999-present	Behavioral Ecology	Cornell Univ.
2004	Occupancy Status	WDFW
2005-07	Demography Study	WDFW
2008-11	Detection Modeling	WDFW
2009-10	Odessa Subarea Study	WDFW
2006-present	Translocation	WDFW
2011-13	Habitat Enhancement Trial	WDFW
2011-12	Long-term Survey Design	WDFW
2011-12	WA Wildlife Habitat Connectivity	*

* Washington Department Fish and Wildlife, US Fish and Wildlife Service, US Forest Service, Washington Department of Natural Resources, University of Washington, Western Transportation Institute, Washington State Dept. Transportation, The Nature Conservancy, Bureau of Land Management, Conservation Northwest

Translocation

Objectives

1. Develop methodologies favoring long-term survival.
   - *Reintroduction logistics*
   - *Site selection*

2. Develop a cost-effective and efficient means for reintroduction of the species.

3. Reduce ground squirrel densities on golf course.

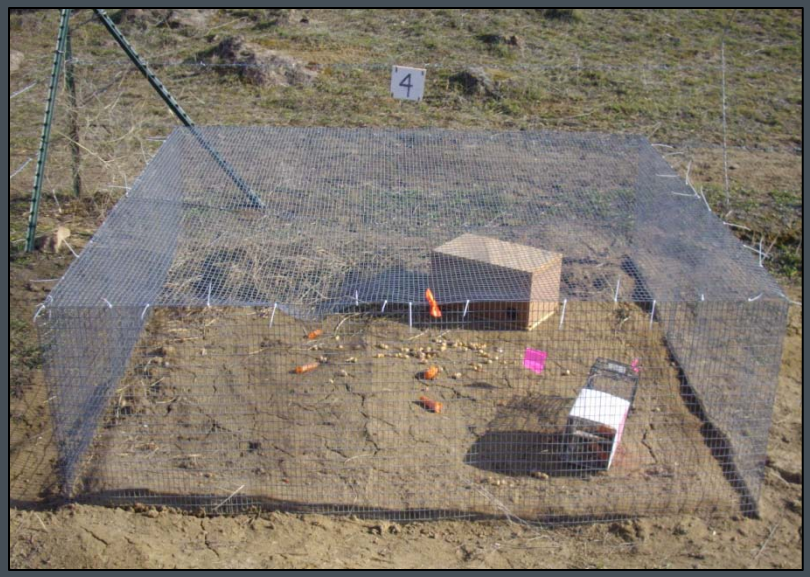
Translocation – Hard & Semi-Hard Release

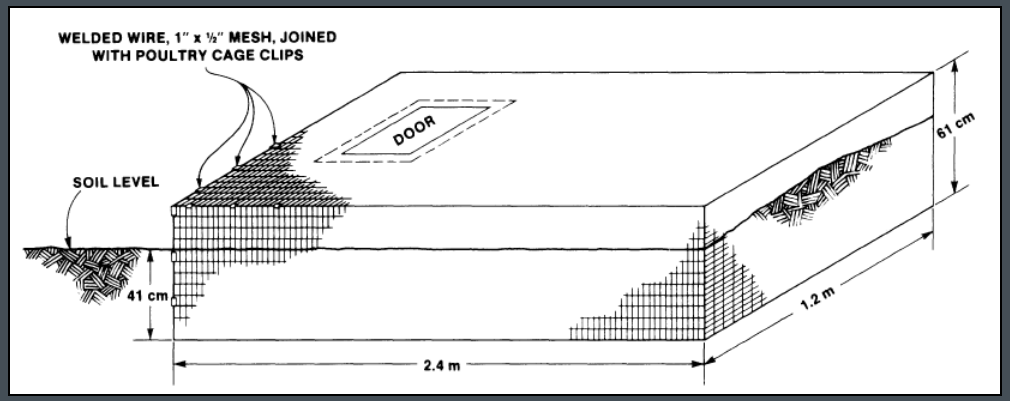
2007–10 → Apparent survival varied from low to none.

2010 → Pulled the plug on further attempts.

Translocation - Soft Release

Small Enclosures





Salmon and Marsh 1981

No. of squirrels

Detainment Period

Kinship

Site Preparation

Monitoring Tools - marking

Monitoring Tools - marking

Monitoring Tools – capture

Monitoring Tools – camera trap

Monitoring Tools - observation

Key Findings

1. Pregnant females can be translocated during February.
2. A squirrel held for 48 hours is likely to stay on site.
3. Advantages to kinship when placing together.
4. Small enclosures work very well.
5. The Verminator may be our #1 ally.

Habitat Enhancement Trial

Problem Statement

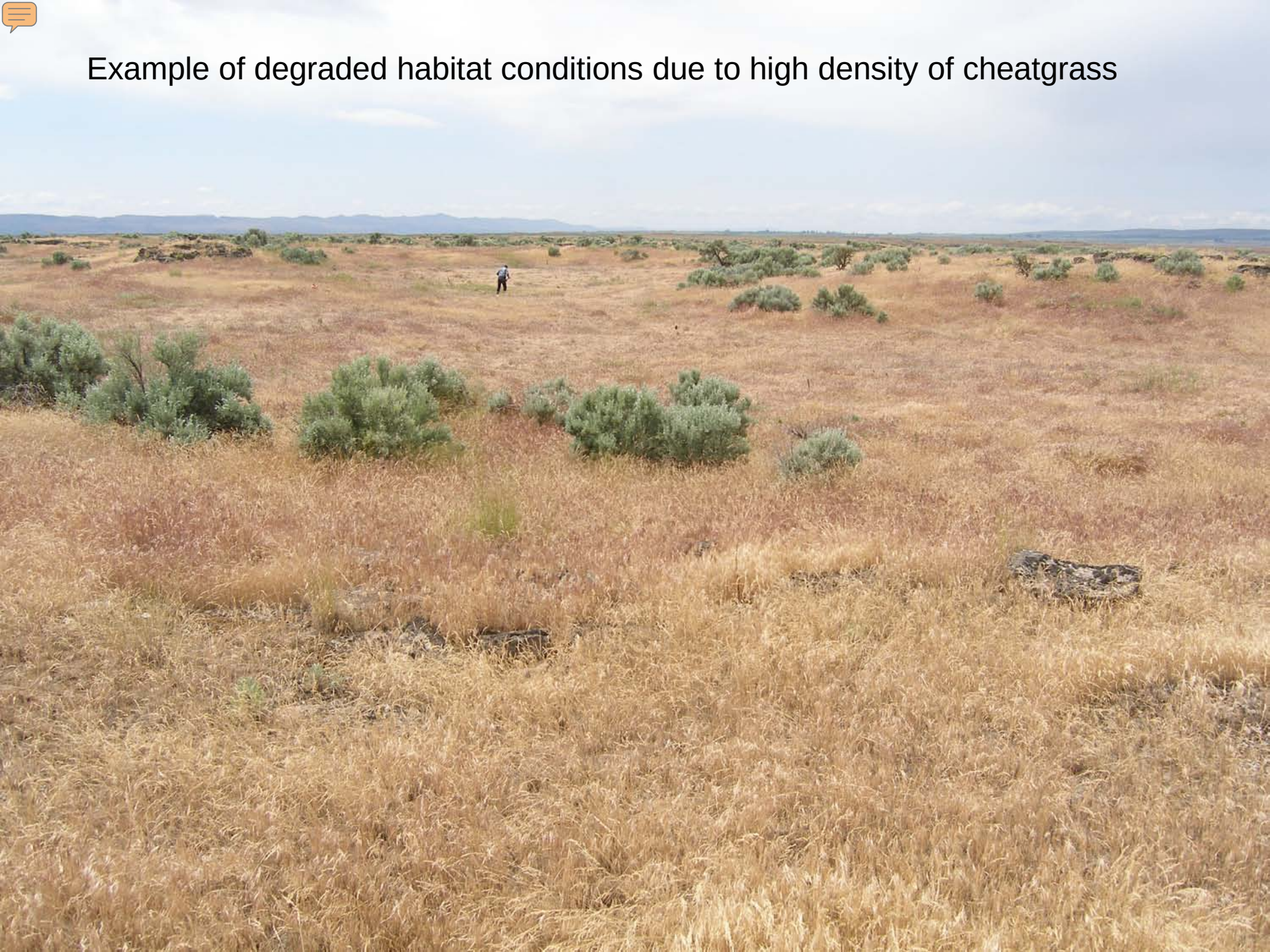
1. Much of Washington ground squirrel range is degraded by annual grasses and forbs.

2. Rangeland rehabilitation methods differ from site to site, no one approach fixes all.

3. Best to develop methods on small scale, before applying at large scale.

4. Lind Coulee is ideal site because soils are suitable, yet habitat is highly degraded over a large acreage.

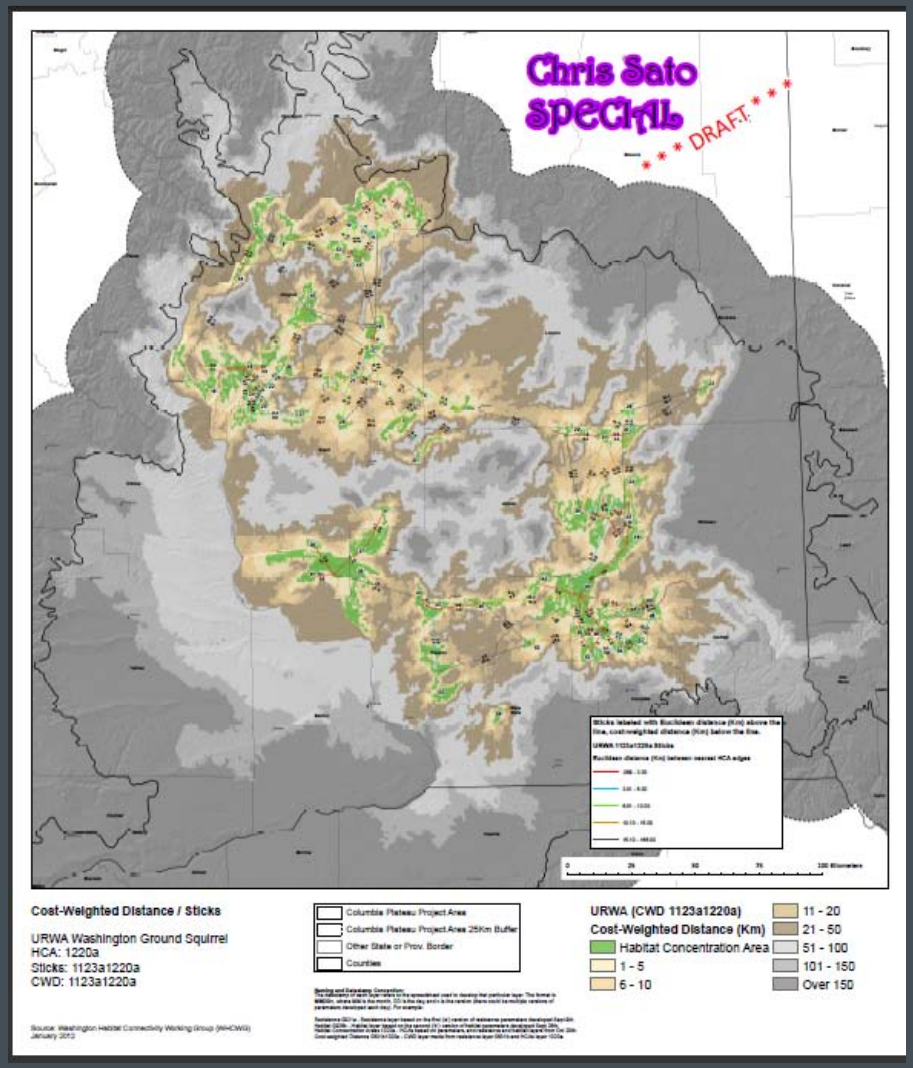
Example of degraded habitat conditions due to high density of cheatgrass

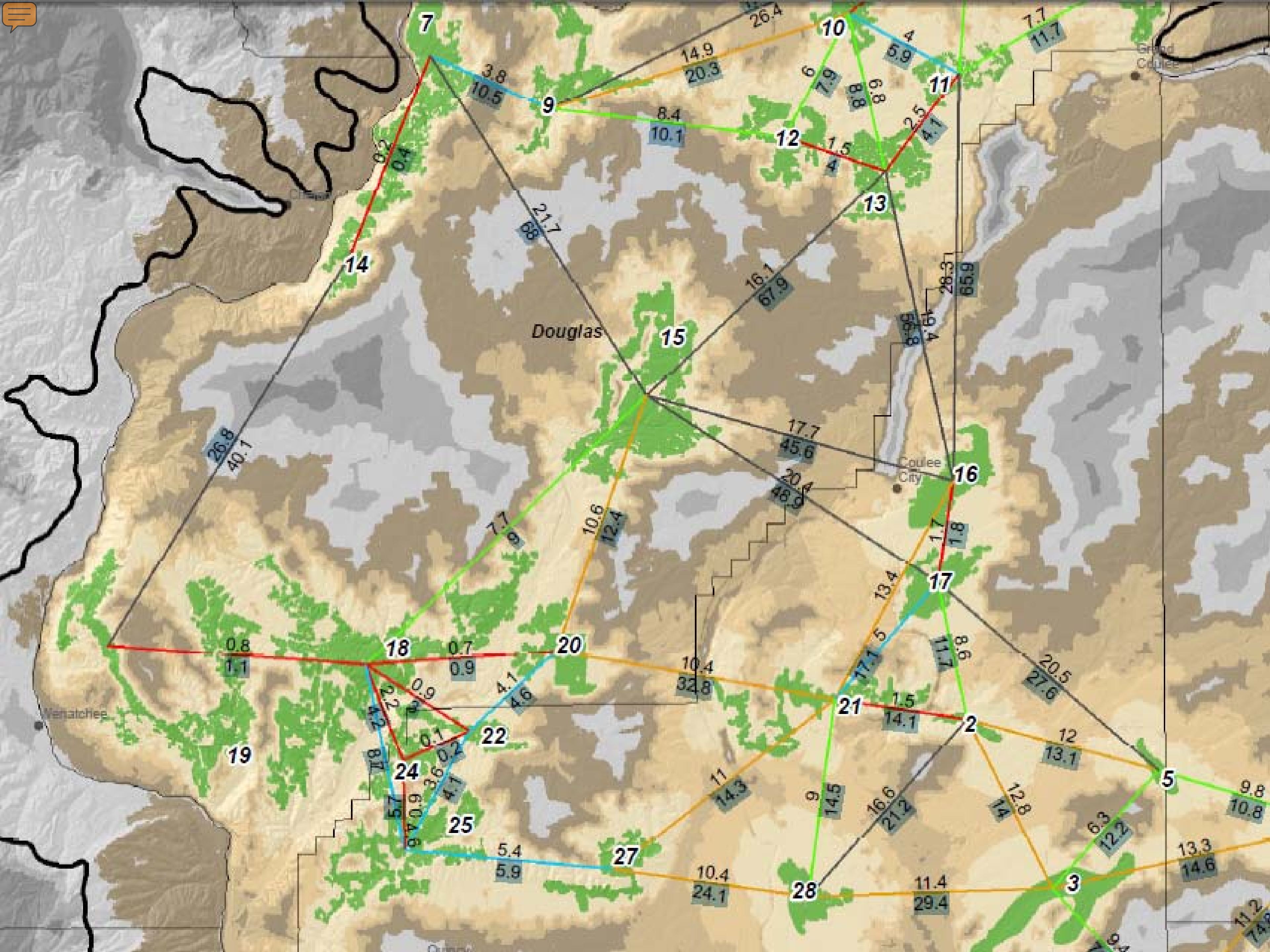


Objectives

1. Develop methods for restoring degraded habitats.
2. Implement restoration within ground squirrel range.
3. Evaluate response.
4. Adapt and proceed.

Connectivity





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Wenatchee
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Recovery Vision

1. Restore habitat.
2. Re-establish populations within core range.
3. Acquire strategic properties to restore connectivity.

Questions??

Funding and volunteer assistance by USFWS.

We thank Sage Hills Golf Course for their cooperation.