

# Northern Spotted Owl Recovery

Department of Natural Resources &  
Department of Fish & Wildlife

Presentation to the Forest Practices Board

August 14, 2012

Joseph Buchanan, WDFW

Darin Cramer, DNR

Andrew Hayes, DNR

# Northern Spotted Owl Recovery

## Biological Background

Listing, population trends, and risk factors

**Joseph Buchanan, WDFW**

## Conservation in Washington State

Overview of key federal and state conservation efforts

**Darin Cramer and Andrew Hayes, DNR**

## Moving Forward

Next steps

**Darin Cramer, DNR**



# Spotted Owl status, distribution, ecology and limiting factors in Washington

Joseph B. Buchanan

Washington Department of Fish & Wildlife

14 August 2012

# Presentation outline

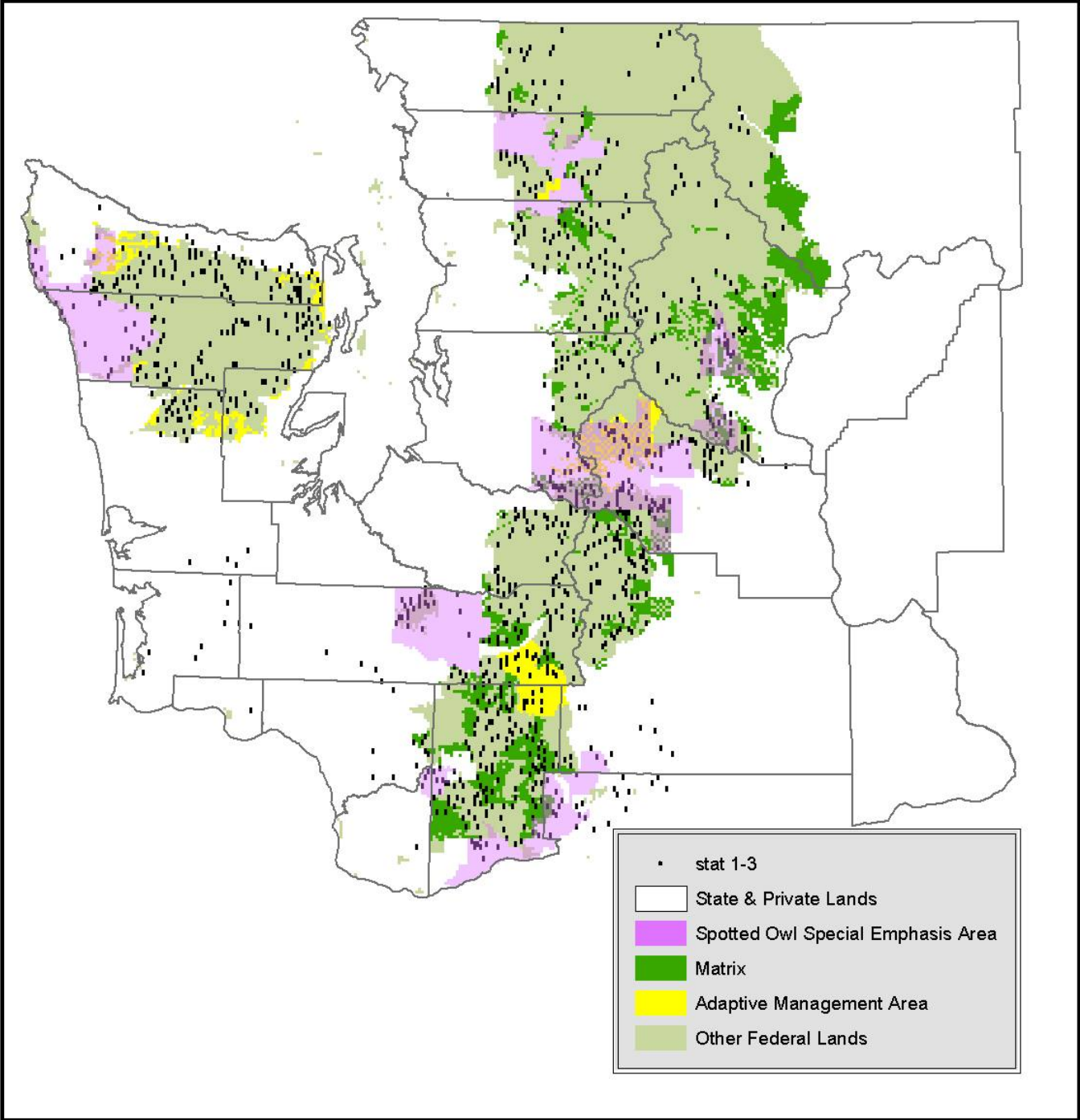
- Status
- Distribution/abundance
- Ecology & behavior
  - Habitat/prey
  - Home range
- Limiting factors
- Current situation
  - Trends
  - Barred Owl



# Status

- 1988: endangered by WA F. & W. Comm.
- 1990: ESA listed as threatened
  - Loss & adverse modification of habitat
  - Inadequacy of regulatory mechanisms





# Number of sites in Washington by land ownership

Own.	Status 1	Status 2	Status 3	Total
Non- fed.	505	14	78	597
Fed.	401	7	39	447
Total	906	21	117	1044



# Ecology and Behavior





# Habitat

- Nesting, roosting, foraging & dispersal
- Structurally complex mature and old forest
  - Snags & downed wood of large size, defective trees, multiple canopy layers, moderate to high canopy closure
  - Mistletoe-infected trees in eastern Cascades



# Habitat (2)

- Spotted Owls do not build their own nests
  - Cavities
  - Broken-topped trees
  - Nest built by other species (N. Goshawks)
  - Mistletoe-infected branches
  - Large, flat limbs



# Home Range

- Annual use area
- WA home ranges are largest documented
- Olympic Peninsula: median annual home range = 14,232 acres (4,411 - 27,298 acres)
- This is the area of a 2.7-mile radius circle
- 1.8-mile radius circle in Cascade Range





# Limiting Factors

- Habitat loss
  - Harvest
  - Fire
  - Windthrow
  - Insects/disease
- Other factors:
  - Barred Owls
  - Predation
  - Weather
  - Disease (e.g. West Nile Virus)



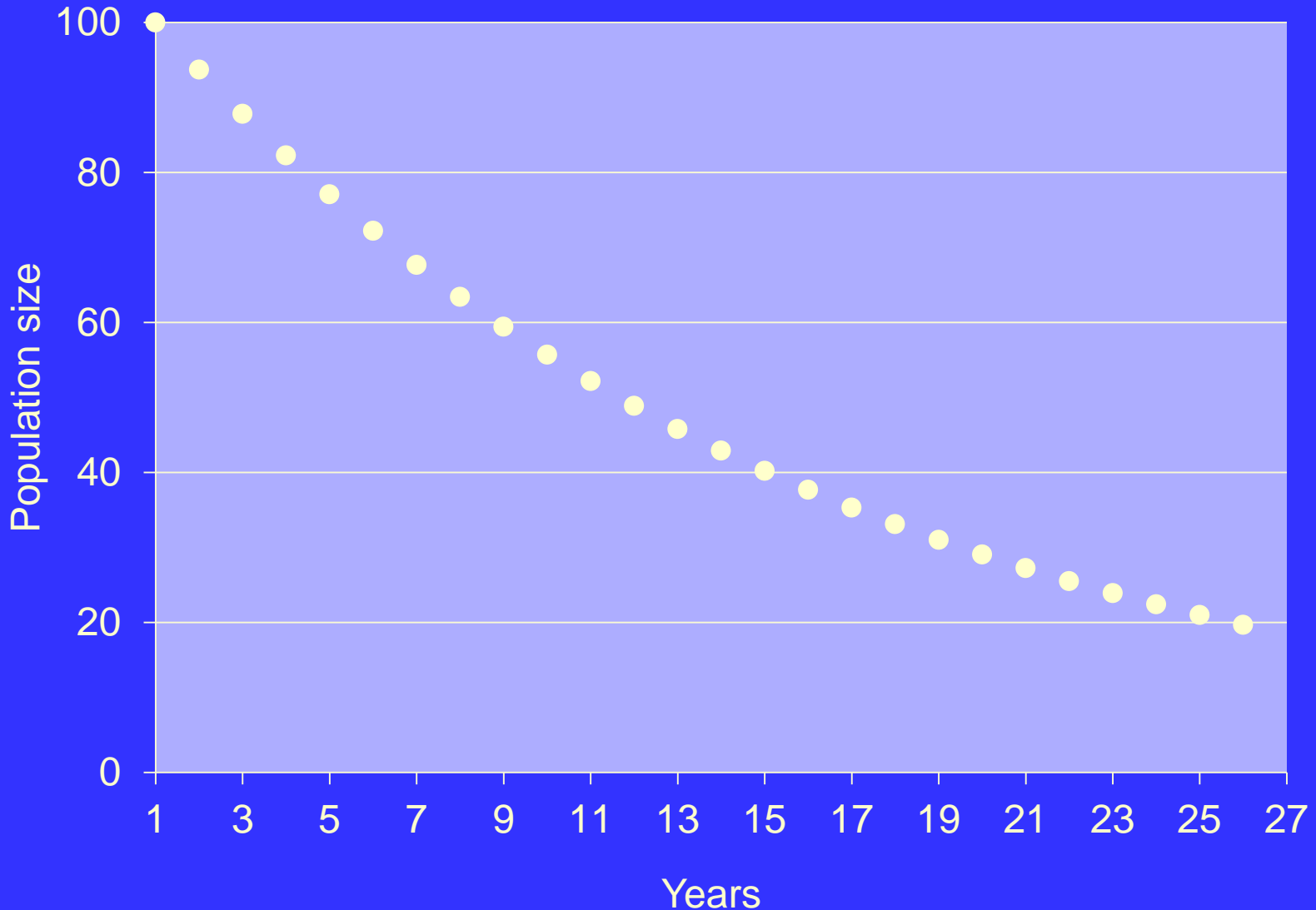


Current  
situation

# Population Performance

- NSO populations declining in 7 of 11 study areas range-wide
- Declines most substantial in WA and n. OR
- Three demography study areas in WA:
  - Cle Elum:  $\lambda = 0.937$ ; - 6.3% / year
  - Olympic NP:  $\lambda = 0.957$ ; - 4.3% / year
  - Rainier:  $\lambda = 0.929$ ; - 7.1% / year

# Rate of change when $\lambda = 0.937$ (-6.3%/yr)





# Competition with Barred Owls



# Background

- Barred Owl arrives in 1960s; occupies entire NSO range
- Evidence suggests a negative effect of NBO on NSO.
- Life history traits favor NBO:
  - Habitat & prey generalist
  - Much smaller home range (5-30%)
  - Much greater dispersal ability
  - Larger & more aggressive



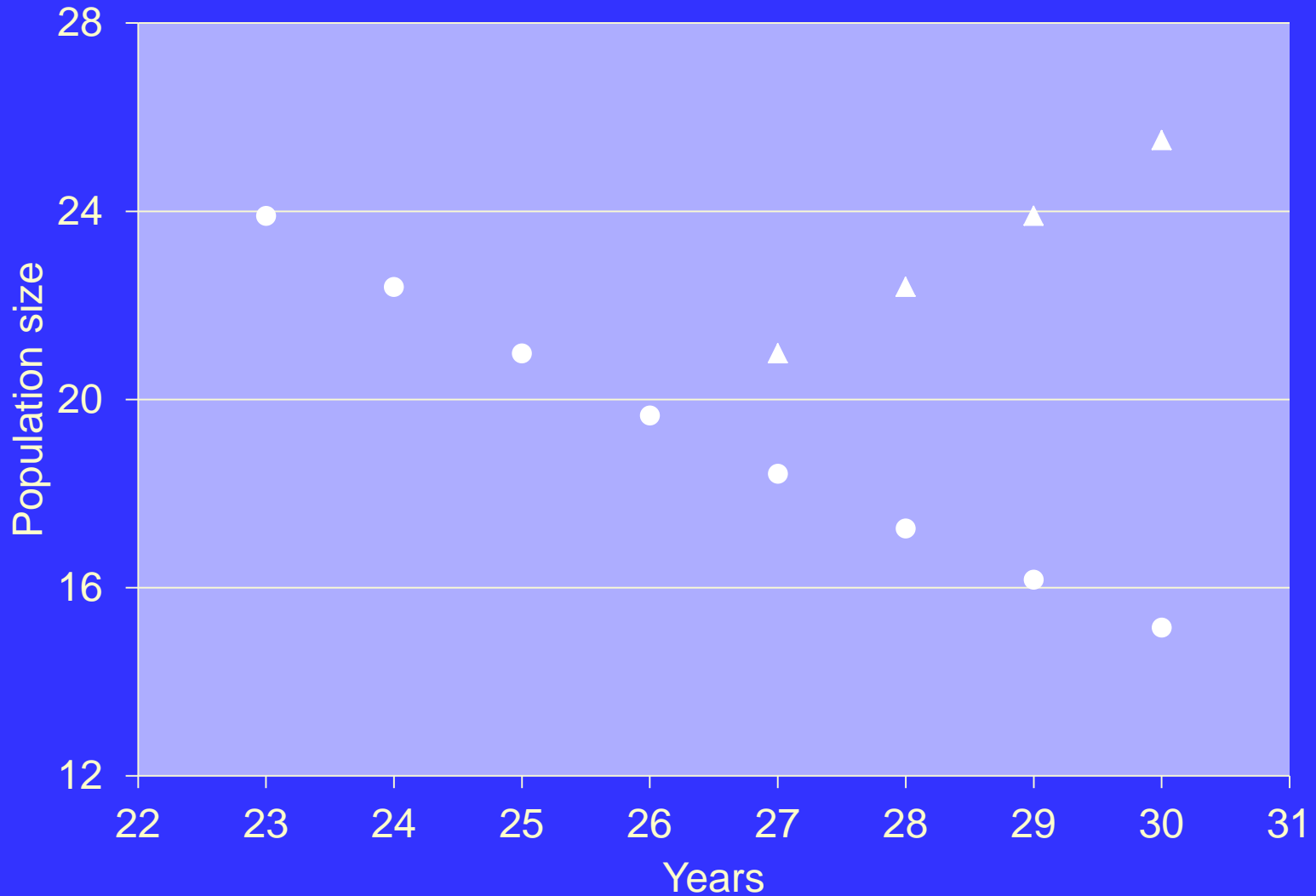
# Barred Owl Removal Experiments

- Recent USFWS EIS released for public comment
- Study goals:
  - Facilitate a better understanding of the impacts of NBO on NSO populations.
  - Allow for assessment of our ability to reduce NBO populations to a level that permits NSO population growth.
  - Allow for an estimate of the cost of NBO removal.

# Barred Owl Removal Experiments (2)

- Likely three study areas; may include one WA study area; best candidate sites are in Oregon
- Will involve large landscapes
- Experiment design: treatment (removal) areas and control (no removal) areas
- Four years
- Evaluate data; assess feasibility of other types of implementation

# Anticipated result of removal experiment





Photographs: Jared Hobbs,  
Lauren Burnes



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**Peter Goldmark** - Commissioner of Public Lands

# Conservation in WA State

Overview of key federal and state  
conservation efforts

**Darin Cramer and Andrew Hayes, DNR**





# Presentation Outline

## Federal Overview

- Listing under Federal Endangered Species Act
- Northwest Forest Plan

## State Overview

- State listing as endangered
- Timeline: Forest Practices Board (FPB) NSO Rules
- NSO Policy Working Group
- NSO Implementation Team

## Moving Forward



# Federal Endangered Species Act

## 16 U.S.C. §§ 1531-1544

- Listed as threatened in 1990 under the ESA
- Protections under the ESA
  - Prohibition of “take” without a permit
  - Development of a Recovery Plan
  - Section 7 Consultation for **federal** actions
    1. Jeopardy analysis
    2. Adverse modification of Critical habitat



# Northwest Forest Plan

- Initiated to end the impasse over management of Federal forest lands in the Pacific Northwest within the range of the NSO
- Signed in 1994, the NWFP adopted a series of reserves and management guidelines intended to protect the NSO and their habitat in addition to other species
- A primary pillar of the Federal government's strategy for recovery of the NSO



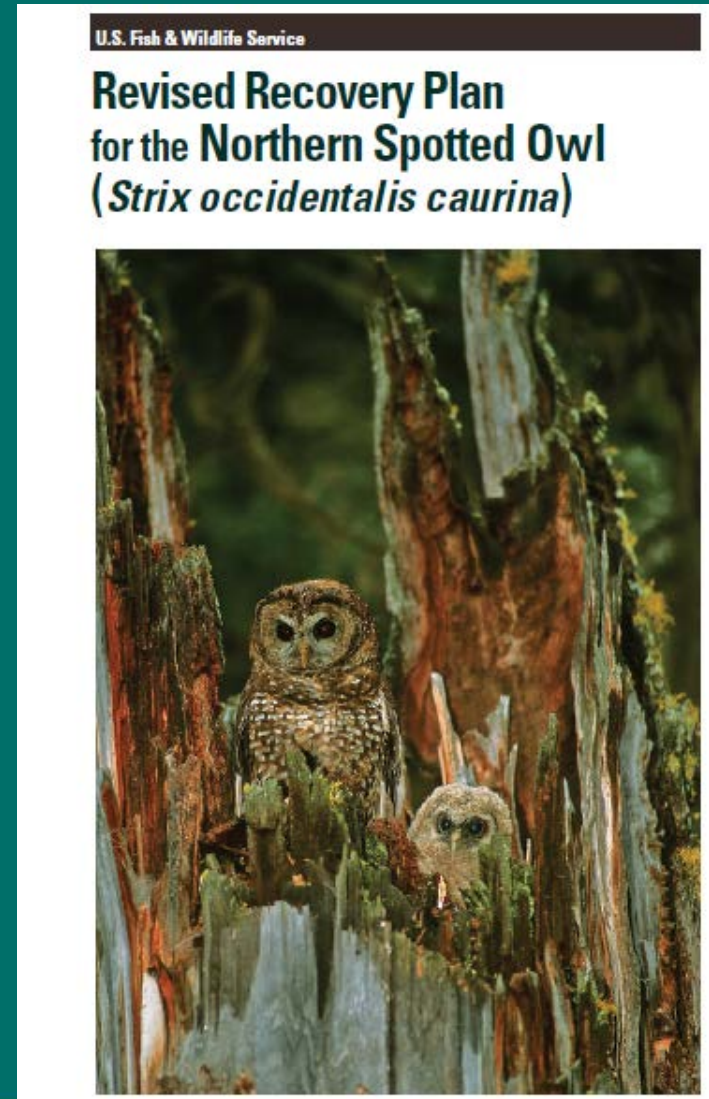
# Federal Endangered Species Act

## Recovery Plans

**1992:** Written by the Service but never approved as final.

**2008:** First recovery plan finalized. 2008 Critical Habitat and Recovery Plan (RP) were legally challenged, RP remanded to the Service.

**2011:** Revised recovery plan for the NSO finalized.



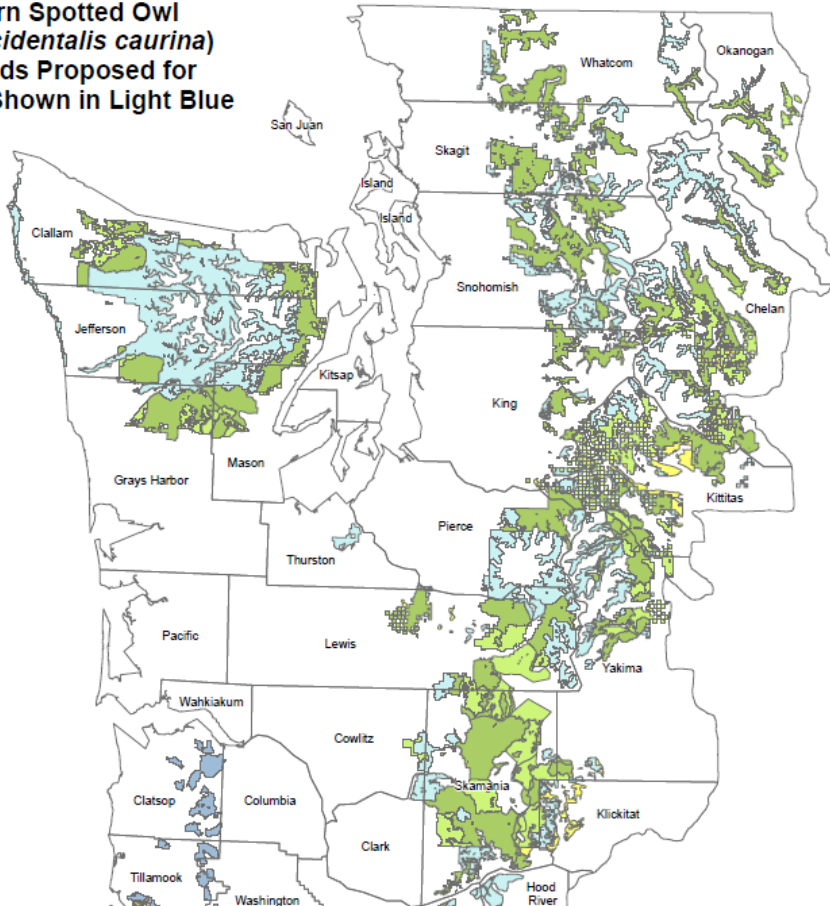
# 2012 Draft Federal Critical Habitat

- Two final (1992 & 2008) and one draft (2012) critical habitat rules have been released by the Service.
- 2012 proposal includes some WA nonfederal lands (all occur within SOSEAs), new from previous (1992 and 2008) designations.
- Uncertainty regarding what the final CH land allocations will look like.



# 2012 Draft Federal Critical Habitat

Proposed Critical Habitat for  
Northern Spotted Owl  
(*Strix occidentalis caurina*)  
with Lands Proposed for  
Exclusion Shown in Light Blue



- Final 2012 Critical Habitat rule will be released on **November 15, 2012**
- Pursuant to WAC 222-16-080(4), DNR , after consultation with WDFW, is required to report to the Board within 30 days of the Federal Register publishing the final critical habitat rule.

# WAC 222-16-010

## Definitions:

### ***Critical Habitat (federal):***

- “means the habitat of any threatened or endangered species designated as critical habitat by the United States Secretary of the Interior or Commerce under Section 3(5)(a) and 4(a)(3) of the Federal Endangered Species Act.”

### ***Critical Habitat (state):***

- “means those habitat designated by the board in accordance with WAC 222-16-080”



# Conservation in WA State

## State Conservation Highlights

- 1988: Washington Fish and Wildlife Commission lists Spotted Owl as endangered in Washington
- 1992-Present: Forest Practices Board (FPB) NSO Rules Timeline
- 2009-10: NSO Policy Working Group
- 2010-Present: NSO Implementation Team





# FPB NSO Rules Timeline:

## 1992

### “500 acre” rule:

- New rule, WAC 222-16-080 *Critical wildlife habitats (state) ... of T/E species*, includes NSO
- Class IV-special for certain forest practices on the 500 ac. of suitable NSO habitat surrounding Status 1, 2, or 3 activity centers
- Rule *“intended to be interim”* while FPB obtained the latest scientific information on NSO habitat needs



# FPB NSO Rules Timeline: 1993-1994

- “500 acre” rule amended to expire February 9, 1994
- emergency rule adopted 2/9/1994 with same language in “500 acre” rule
- FPB goal for permanent rule: *long term viability of NSO in WA*
- NSO Scientific Advisory Group reports on *Spotted Owl Habitat in WA* provided alternatives for management and habitat definitions
- *WDW v. Department of Natural Resources*



# FPB NSO Rules Timeline:

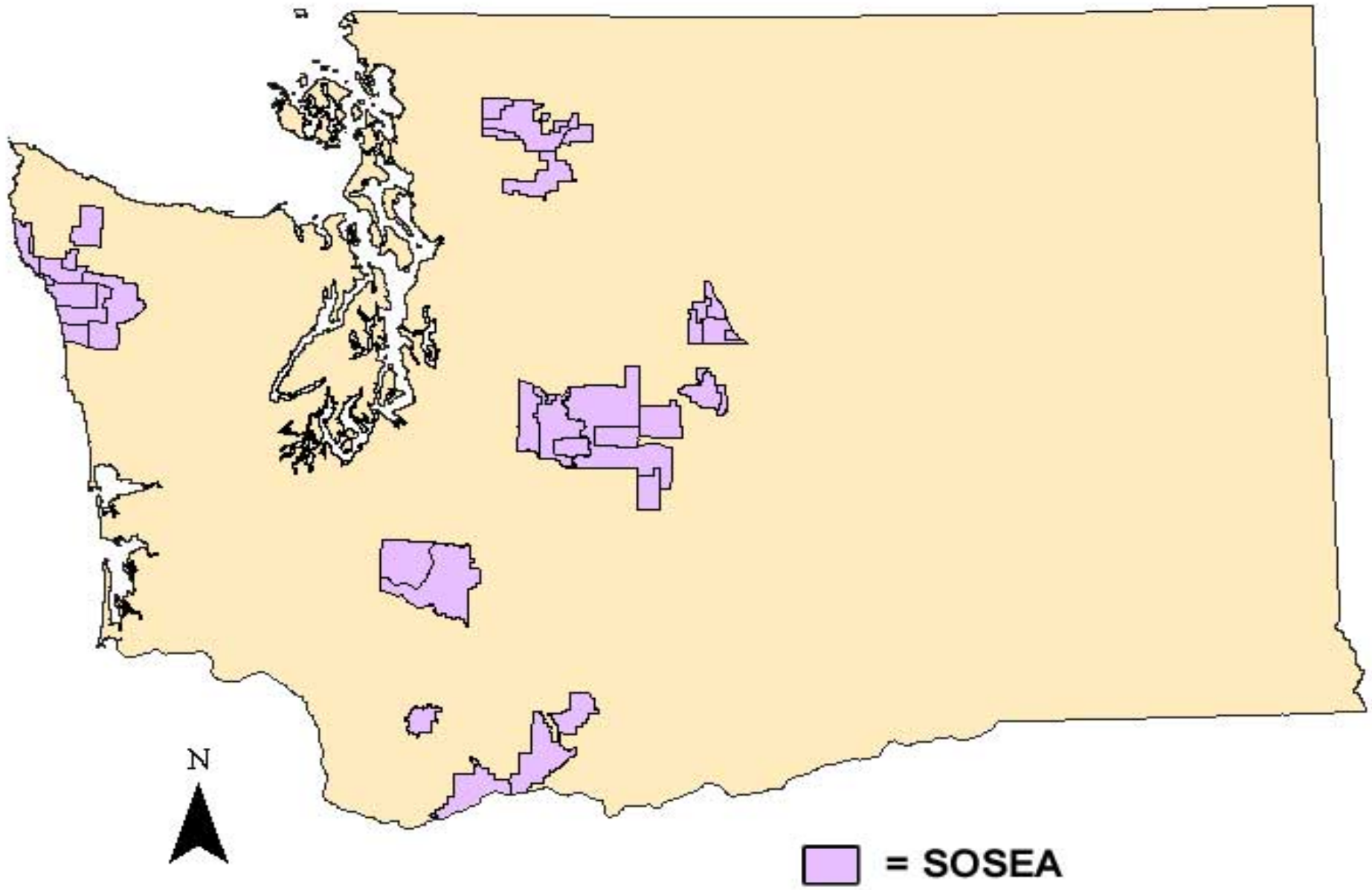
## 1996

**New permanent rule adopted (WACs 222-10, -16, -24, and -30)**

- T/F/W NSO policy group recommendation
- 10 SOSEAs, each with conservation goals
- Critical wildlife habitat (state) designated for the NSO within site center circles within SOSEAs (Class IV-Special trigger)
- Site centers outside SOSEAs, Class IV-Special is triggered during nesting season when action occurs within 70 acre core area.



# Spotted Owl Special Emphasis Areas



# SOSEA Conservation Functions

- *"...to complement the northern spotted owl protection strategies on federal land within or adjacent to the SOSEA"*  
[WAC 222-16-010]
- SOSEAs have different conservation goals:
  - **Demographic Support:** provides sufficient spotted owl habitat to maintain the viability of northern spotted owl sites
  - **Dispersal Support:** provides a variety of dispersal and higher quality habitat to support interchange of northern spotted owls within or across the SOSEAs
  - **Combination of Demographic and Dispersal Support**
- SOSEA maps and conservation goals available in WAC 222-16-086



# NSO Habitats

## WAC 222-16-085

### Suitable spotted owl habitat

- Old forest habitat
- Sub-mature habitat and young forest marginal habitat
  - Western Washington
  - Eastern Washington
- Dispersal habitat



# FPB NSO Rules Timeline:

## 1996

- **Cont., 1996 permanent rules:**
  - Substantive SEPA authority for NSO
  - SEPA exemption for “small parcel” landowners
  - voluntary landscape planning via LOPs and CHEAs
  - disturbance avoidance
  - DNR annual reports to the FPB on status of NSO (in consultation with WDFW)



# FPB NSO Rules Timeline: 2005

## 2005 - FPB NSO Workshop

- Impetus of NSO workshop was the Board's adoption of the Wildlife Work Plan in 2003. The Board committed to review the adequacy of current wildlife rules, starting with the NSO.
- WDFW asked to help the Board complete its analysis.
- First draft of the briefing report (Feb. 2004) initiated the discussion about owls in the state and experiences with the rules.





# FPB NSO Rules Timeline: 2005

## 2005 - FPB NSO Workshop, contd.

- August 9, 2005 presentations by WFPA, Audubon, WDFW, DNR, BLM, OR Cooperative Fish & Wildlife Research Unit, Sustainable Ecosystems Institute, USFWS
- Included NSO rule context, habitat changes on federal and non-federal lands, demographics, barred owl interactions, and caucus perspectives



# FPB NSO Rules Timeline: 2005

- **2005 - FPB NSO Workshop, contd.**
  - November 9, 2005 recommendations on rule changes for lands harvested under HCP or other plans and decertification, five-year reports to FPB (verses annual), DNR operational review, DNR stakeholder group regarding possible improvements to LOPs and CHEAs, funding for landscape level wildlife habitat assessment, etc.



# FPB NSO Rules Timeline: 2006

- **NSO rules amended**
  - habitat harvested under an HCP, LOP, etc. in a SOSEA no longer counts towards total required habitat
  - Emergency rule moratorium on decertifying NSO sites



# FPB NSO Rules Timeline: 2006

- *Seattle Audubon Society v. Sutherland* lawsuit filed.
  - Plaintiffs alleged violations of Section 9 of the Endangered Species Act and sought declaratory and injunctive relief to prevent logging within owl circles.



# FPB NSO Rules Timeline: 2008

- Moratorium on decertification extended to December 31
- *Audubon v. Sutherland* (2006) settlement
  - settlement agreement required Board to establish a collaborative policy working group
  - The Forest Practices Board unanimously adopted a motion on July 7<sup>th</sup>, 2008 to establish the Northern Spotted Owl Policy Working Group (NSOPWG)
- Emergency rule in December removes decertification moratorium and establishes NSO Conservation Advisory Group



# FPB NSO Rules History

## 2009

- The NSO Policy Working Group, consisting of industry, conservation, state, federal, and local government representatives, held over 22 meetings to develop recommendations for the Board.



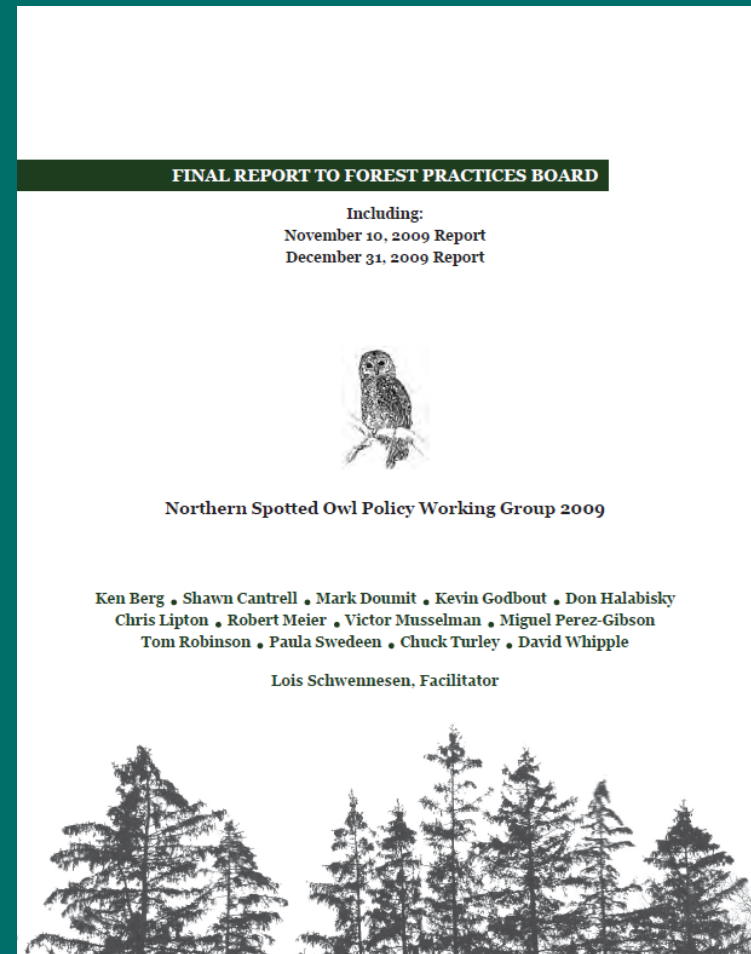
# FPB NSO Rules Timeline: 2009

- **New and amended rules**
  - Permanent rule establishes three member NSO Conservation Advisory Group for decertifying NSO site centers



# FPB NSO Rules Timeline: 2010

- On February 10, 2010 the Northern Spotted Owl Policy Working Group presented their final report to the Forest Practices Board
- The report included seven consensus recommendations and three non-consensus recommendations





# NSOIT Overview

Andrew Hayes, DNR



# FPB NSO Rules Timeline: 2010

## NSOIT Established

- The Board unanimously adopted a motion that directed the NSOIT to:
  - Develop a work plan and prioritization for implementation of the consensus recommendations of the Northern Spotted Owl Policy Working Group;
  - Coordinate with the federal agencies with regard to the Barred Owl control experiments; and
  - Convene a technical team to assess the spatial and temporal allocation of conservation efforts on nonfederal lands using the best available science.



# NSOIT Membership

**State:** Andrew Hayes, DNR (Acting Chair)

**State:** David Whipple, WDFW

**Industry:** Kevin Godbout, Weyerhaeuser

**Conservation:** Shawn Cantrell, Seattle Audubon

**Land Trust:** Bettina von Hagen, Ecotrust

**Providing Support to:**

**Industry:** Cindy Mitchell, WFPA

**Conservation:** Paula Swedeen, Pacific Forest Trust

**Staff:**

Lauren Burnes, DNR



# Work Plan

1. Endorse a Voluntary Incentives Program for Landowners to Achieve Conservation Goals (**In progress**);
2. Support an Action Program: Outreach to Owners of Specific Lands Inside and Outside of SOSEAs;
3. Promote Barred Owl Control Experiments and Research (**In progress**);
4. Continue the Current Decertification Process for Owl Sites During a Transition Period (**Completed**);



# Work Plan

5. Initiate Two Pilot Projects for Thinning and Habitat **(In progress)**;
6. Support Identification and Design of a Flagship Incentive Project;
7. Approve Measures of Success; and
8. Convene a Technical Team to Assess Spatial and Temporal Allocation of Conservation Efforts on Nonfederal Lands Using Best Available Science **(In progress)**.



# Technical Team Membership

## Biologists

Karl Halupka, US Fish & Wildlife Service

Elaine Rybak, US Forest Service

Joe Buchanan, WA Dept. of Fish & Wildlife

Gina King, Yakama Nation Wildlife

Tony Melchiors, Weyerhaeuser

Kara Whittaker, Washington Forest Law Center

## Economists

James Pittman, Sarah Kruse, Ernie Niemi, and Dave Ervin



# NSOIT Technical Team

- The NSOIT convened a technical team to identify which non-federal lands in Washington could be most advantageous for voluntary, incentive-based measures to conserve northern spotted owl habitat.
- **Next Steps:**
  - Develop federal and nonfederal conservation scenarios for future modeling runs;
  - Continue technical discussions with USFWS modeling team.



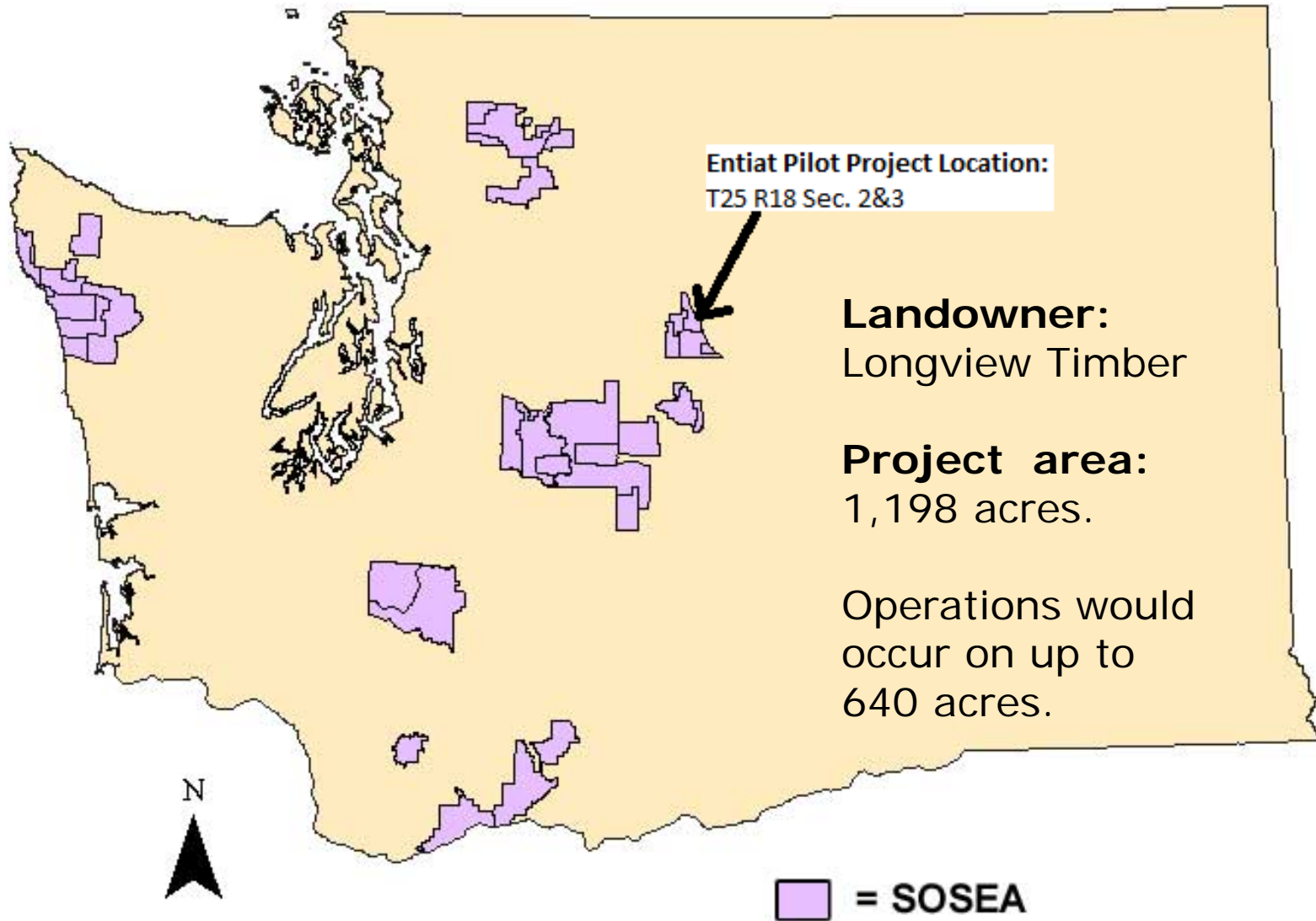
# Eastside Pilot Project

- **Background:**
  - Explore whether thinning of highly stocked stands to improve NSO habitat and forest health is both operationally and economically feasible;
  - Goal is to improve habitat while creating incentives for landowners to participate in habitat restoration;





# Spotted Owl Special Emphasis Areas



# Moving Forward

Next steps

**Darin Cramer, DNR**



# Moving Forward

- **November 13, 2012:**
  - Forest Practices Board meeting
- **November 15, 2012:**
  - Final Federal Critical Habitat Rule released by USFWS
- **Within 30 days of final CH release (Dec. 15):**
  - DNR, in consultation with DFW, will need to deliver a recommendation to the Board pursuant to WAC 222-16-080(4)



# For More Information

## Northern Spotted Owl Recovery Information Site

<http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/main.asp>

### ECOS Species Profile

<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sprcode=B08B>

### 2011 Revised Recovery Plan

[http://ecos.fws.gov/docs/recovery\\_plan/RevisedNSORecPlan2011\\_1.pdf](http://ecos.fws.gov/docs/recovery_plan/RevisedNSORecPlan2011_1.pdf)

### 2012 Draft Critical Habitat

#### *2012 DCH Designation*

<http://www.gpo.gov/fdsys/pkg/FR-2012-03-08/pdf/2012-5042.pdf>

#### *2012 Economic Analysis of DCH*

<http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Documents/DraftEconAnalysis.5.29.12.3.pdf>

#### *2012 Environmental Assessment of DCH*

[http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Documents/CH\\_DRAFTEnvAssmnt.6.1.12.pdf](http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Documents/CH_DRAFTEnvAssmnt.6.1.12.pdf)

### 2012 Barred Owl EIS

#### *Executive Summary:*

[http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/BarredOwl/Documents/DraftEIS\\_ExSummary.pdf](http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/BarredOwl/Documents/DraftEIS_ExSummary.pdf)

#### *Full EIS:*

[http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/BarredOwl/Documents/DraftEIS\\_ExpRemoval2.20.12.pdf](http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/BarredOwl/Documents/DraftEIS_ExpRemoval2.20.12.pdf)

### Menu of Maps: 2012 Draft Critical Habitat & Barred Owl EIS

<http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Maps.asp>





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