



Northwest Forest Plan
Interagency Regional
Monitoring Program

Status and Trends of Northern Spotted Owl Habitat Monitoring (20yr)

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A 20 year old female northern spotted owl in the Oregon Coast Range – photo by Jason Mowdy



Overall Monitoring Objective

Evaluate the effectiveness of Northwest Forest Plan in arresting downward trends in northern spotted owl habitats on federal lands that were observed prior to its implementation.

Note: NWFP expected continued declines for first few decades then eventual stabilization and recovery. *We are 2 decades into the Plan.*

Specific Objectives are to Evaluate

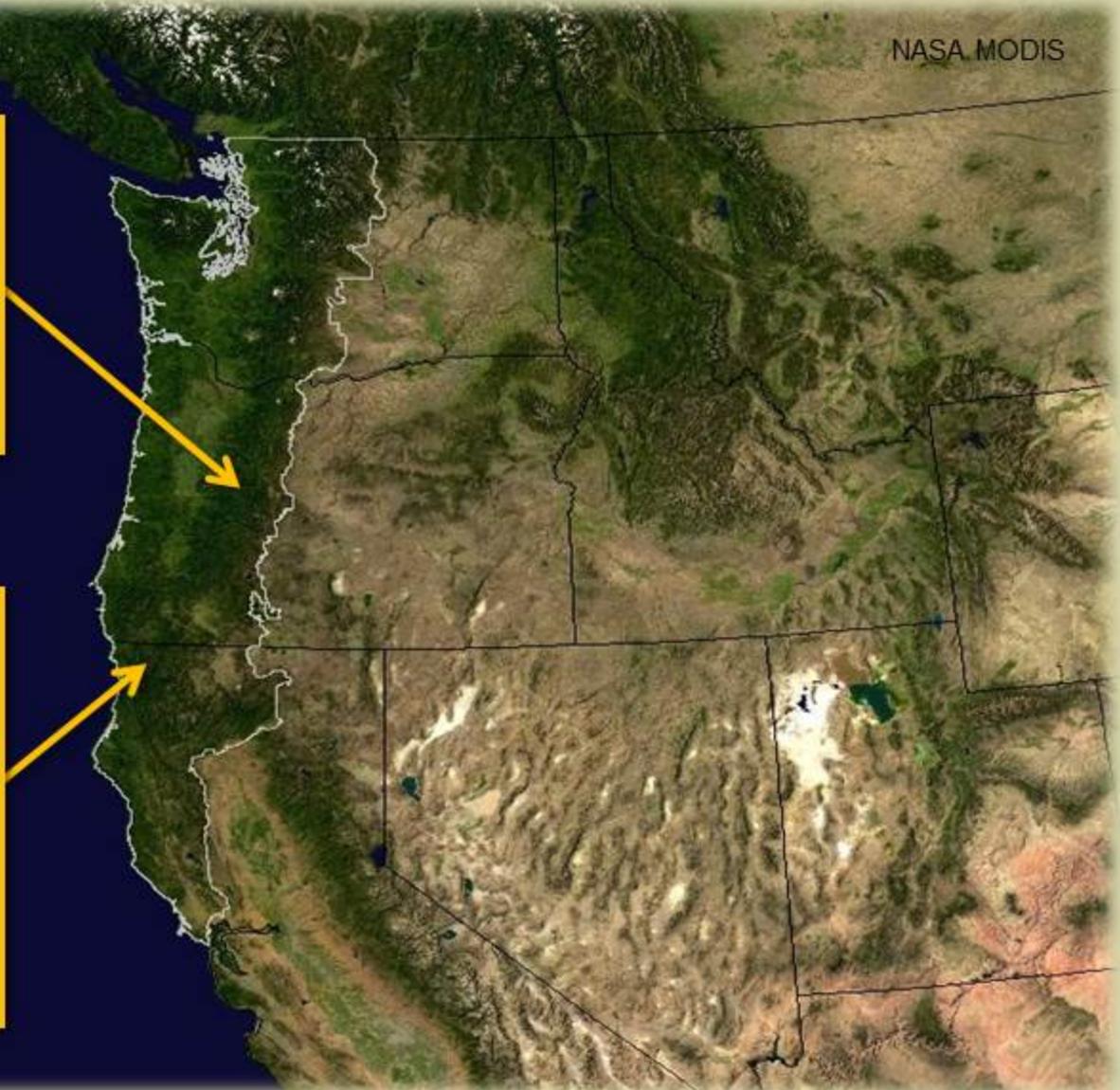
- 1. Amounts of nesting/roosting and dispersal habitat;**
- 2. Trends in amount and distribution of nesting/roosting habitat, particularly in large, reserved blocks;**
- 3. Trends in amount and distribution of dispersal habitat outside of the large, reserved blocks; and**
- 4. Primary factors leading to loss and fragmentation of nesting/roosting and dispersal habitat.**

Habitat Monitoring

Mapping Habitat (bookends)



Mapping Forest Disturbances



What's New?

Structural Components of Nesting/Roosting Habitat (1993 and 2012)

density of
large conifer



conifer
cover



stand
age



conifer
diameter



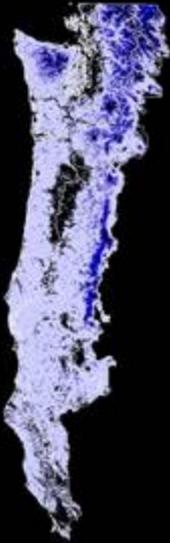
diameter
diversity



What's New?

Species Composition of Nesting/Roosting Habitat (1993 and 2012)

subalpine
forests



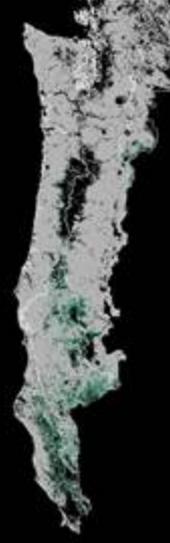
pine
forests



evergreen
hardwoods



oak
woodlands

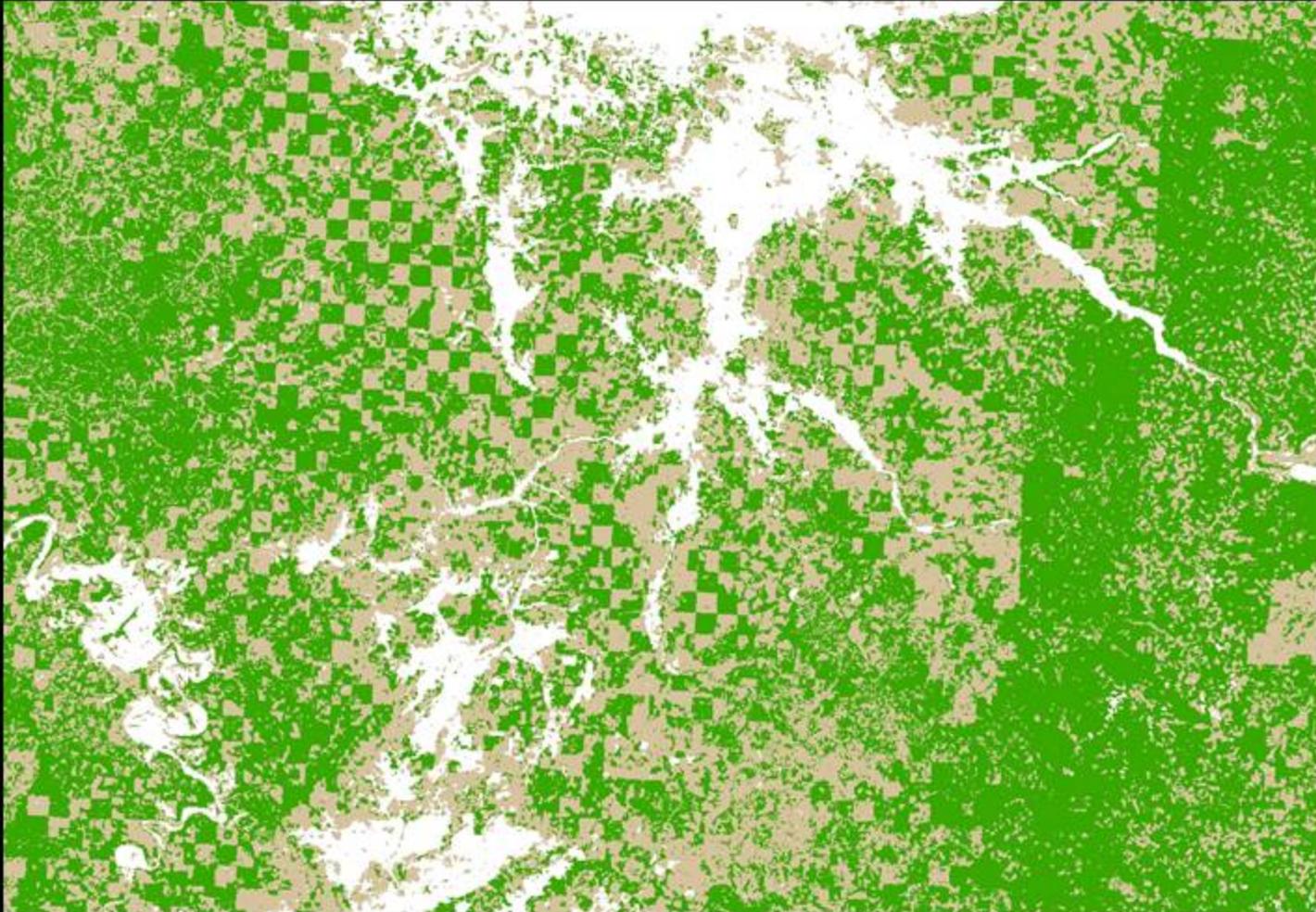


redwood
forests



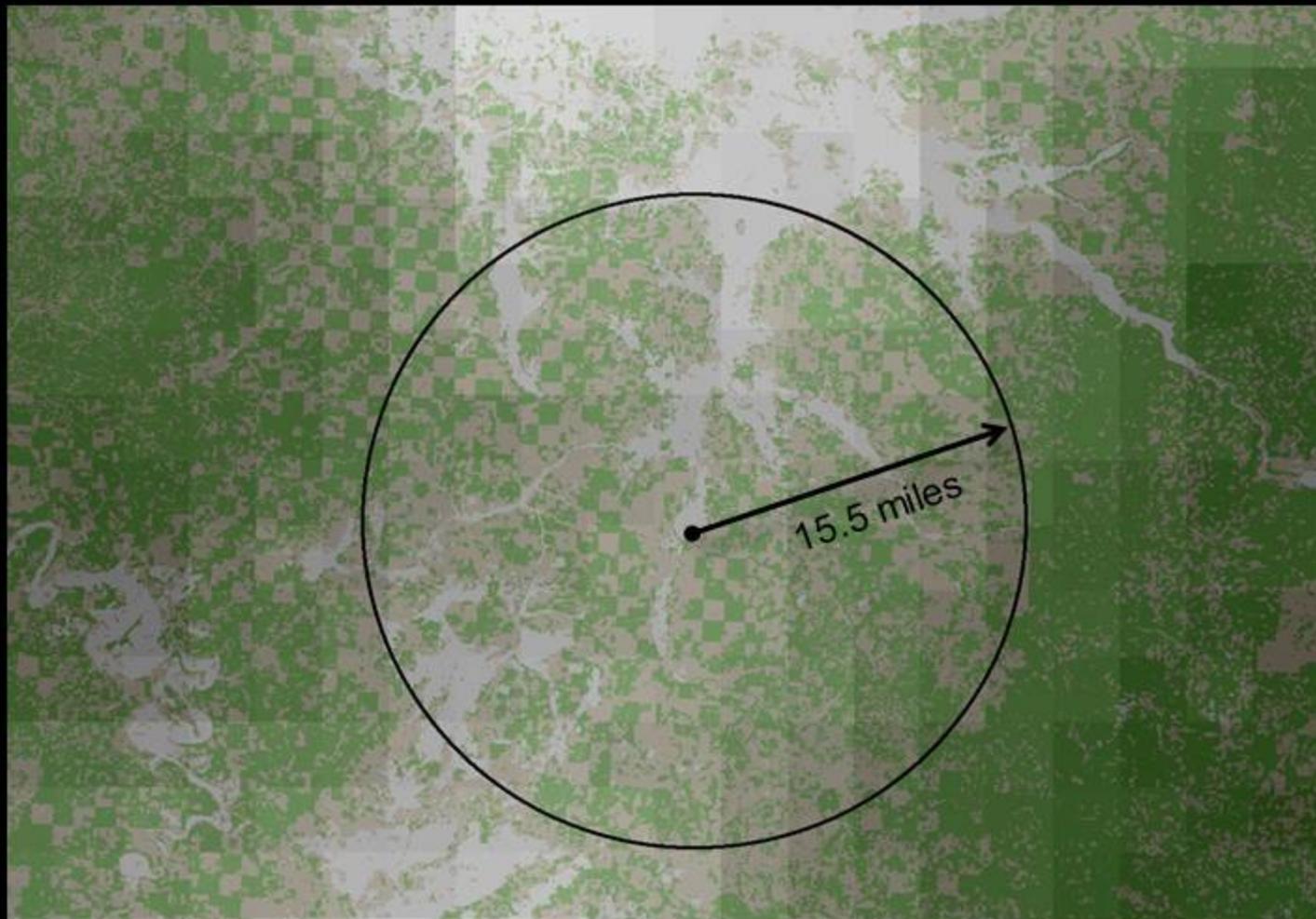
What's New?

Components of Dispersal Habitat



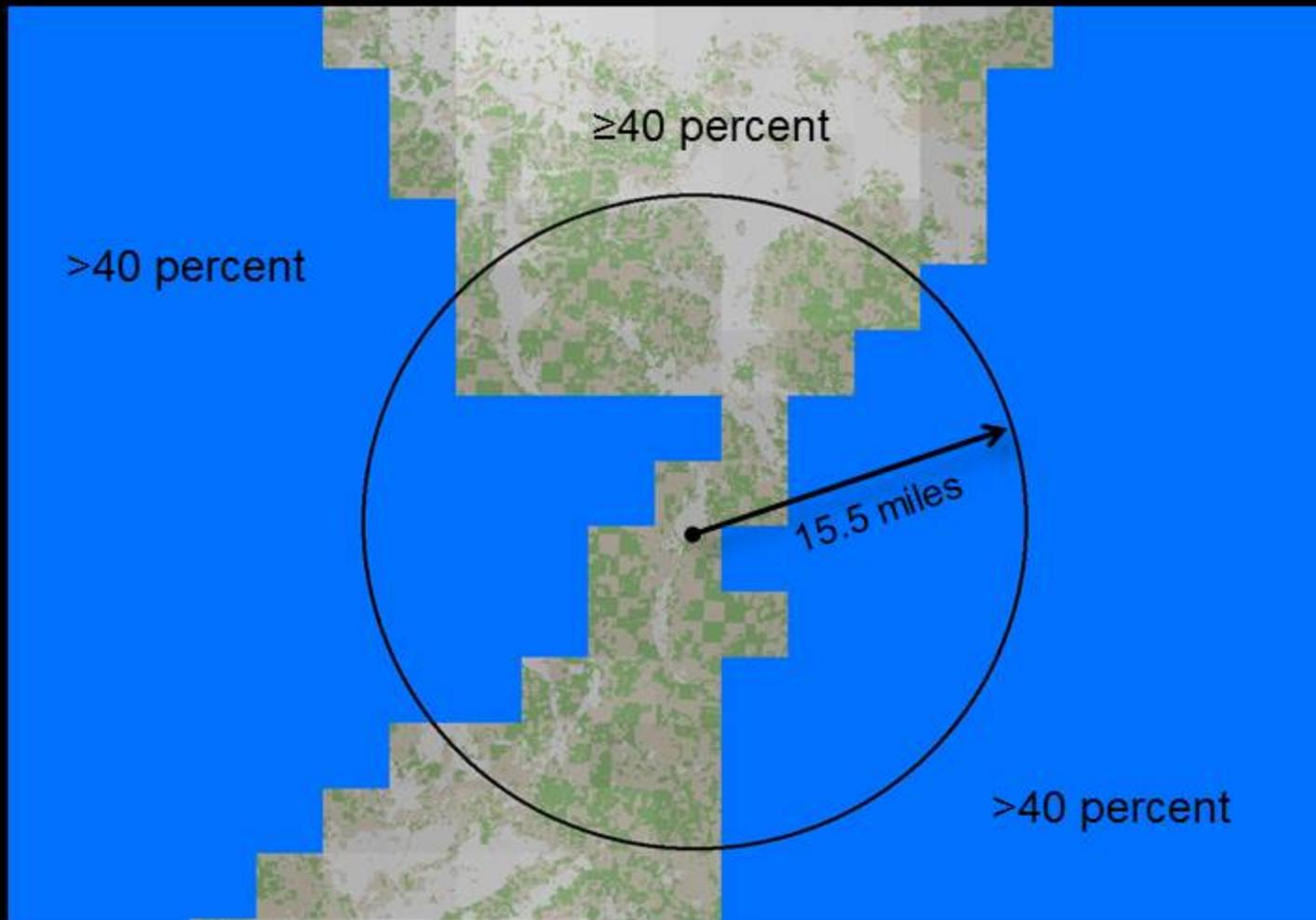
What's New?

Components of Dispersal Habitat



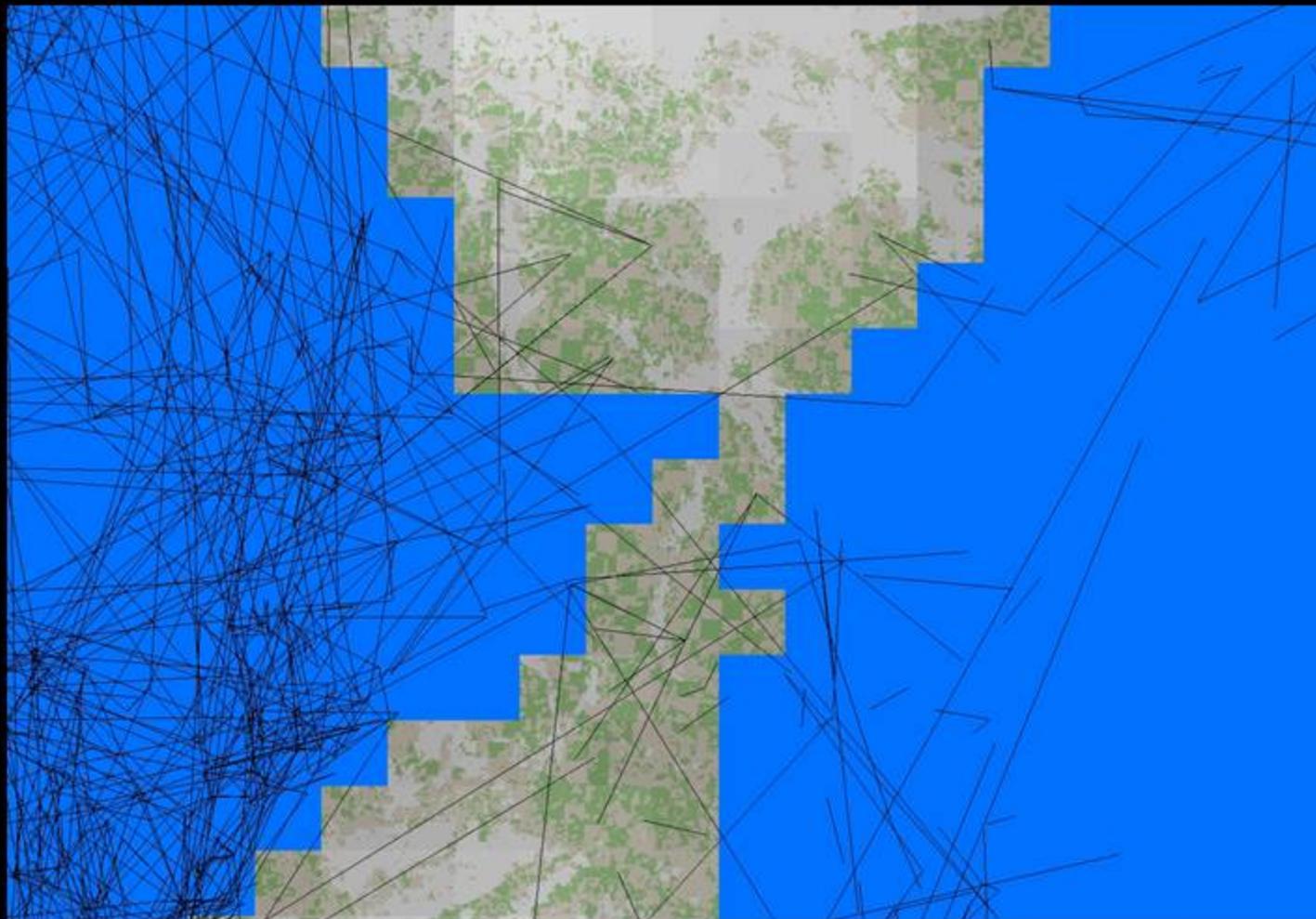
What's New?

Components of Dispersal Habitat



What's New?

Dispersal Capable Landscape



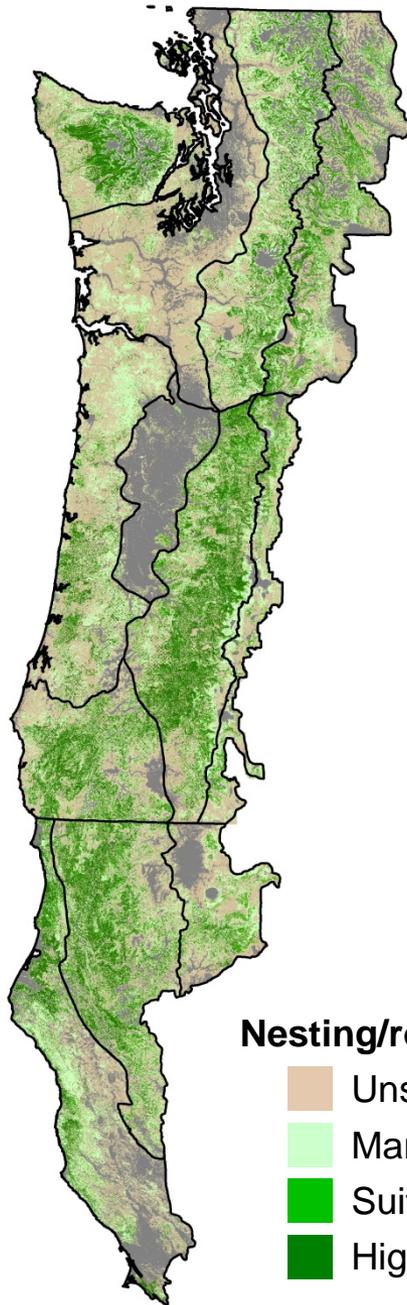
Key Findings - Nesting/Roosting Habitat

- **Habitat losses on federal lands from:**
 - **Wildfire = 474,300 ac (-5.2%)**
 - **Timber harvest = 116,100 ac (-1.3%)**
 - **Insects and other = 59,800 ac (-0.5% loss, but -4.1% in East Cascades)**
- **A total gross loss of 650,200 ac (-7.2%)**
- **A net decrease from 9.09 to 8.95 million ac (-1.5%), which includes losses + gains**

1993

Then

Now



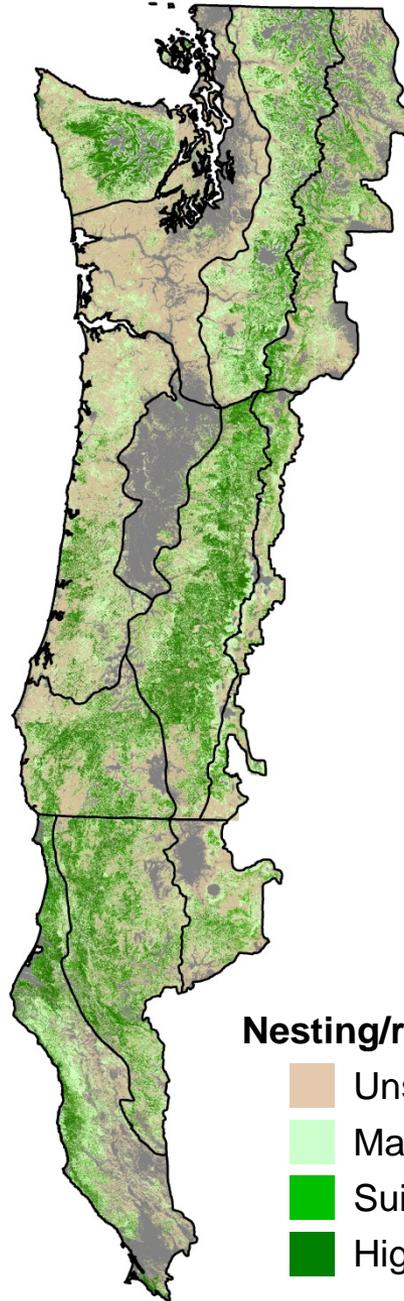
Nesting/roosting habitat

- Unsuitable
- Marginal
- Suitable
- Highly Suitable

2012

Then

Now



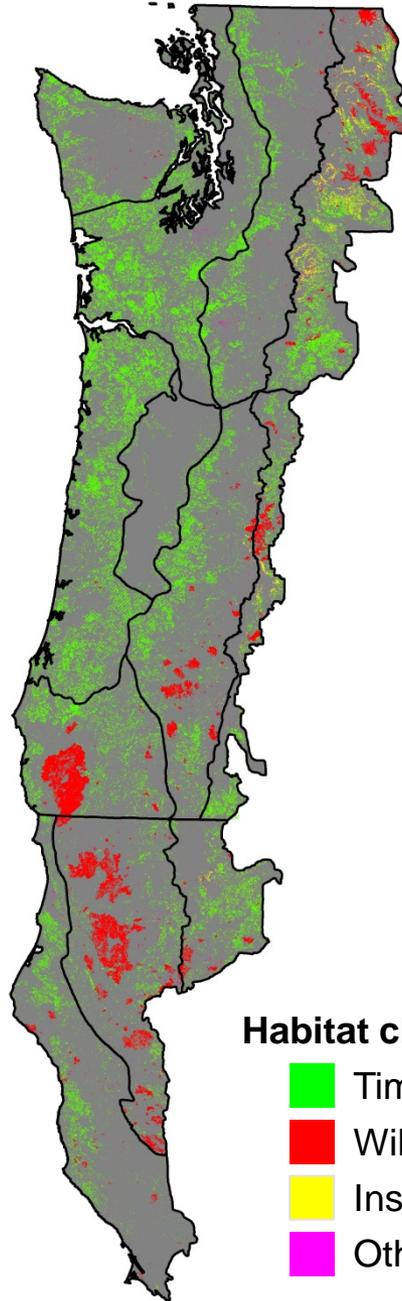
Nesting/roosting habitat

- Unsuitable
- Marginal
- Suitable
- Highly Suitable

1993–2012

Then

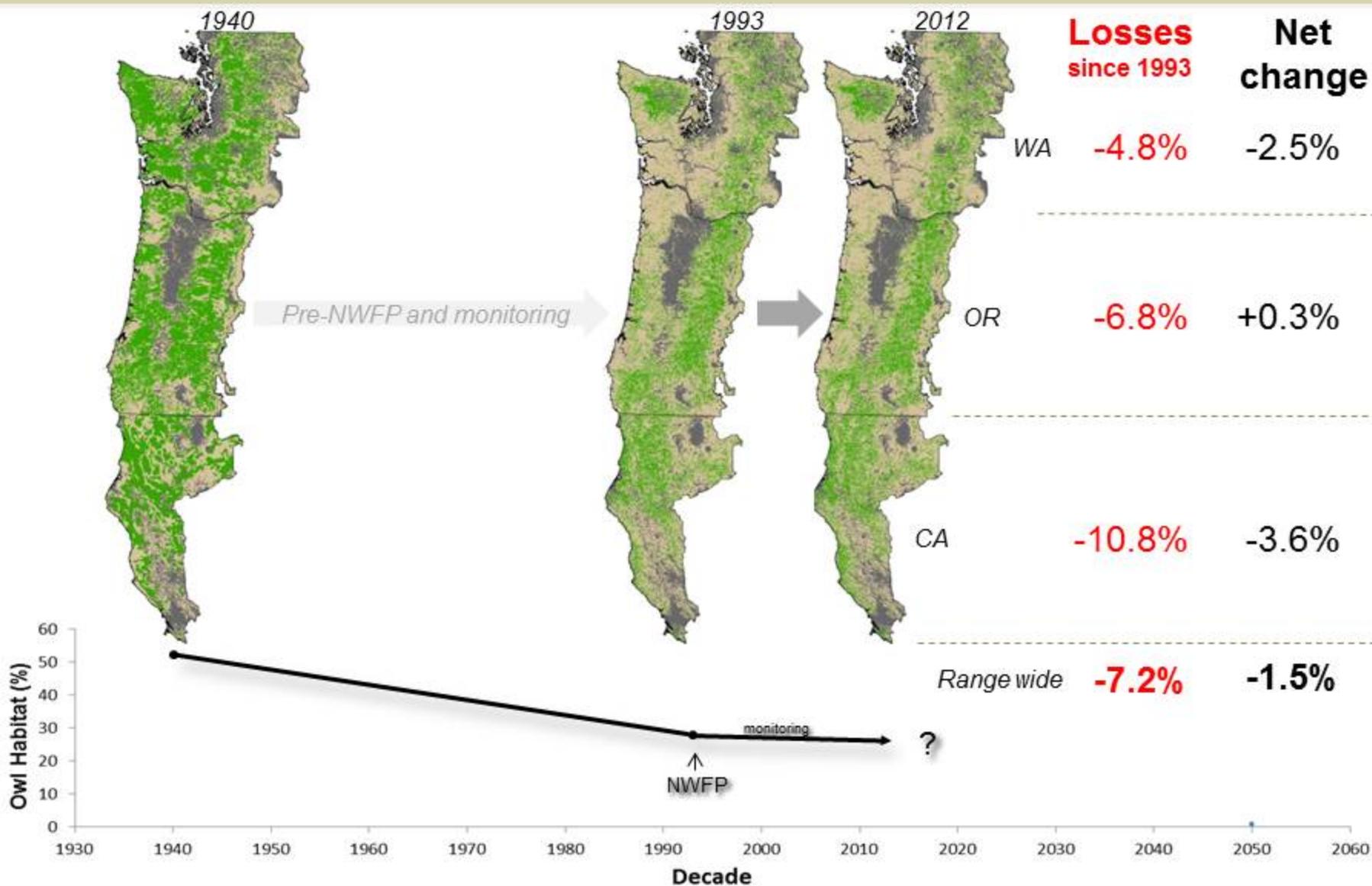
Now



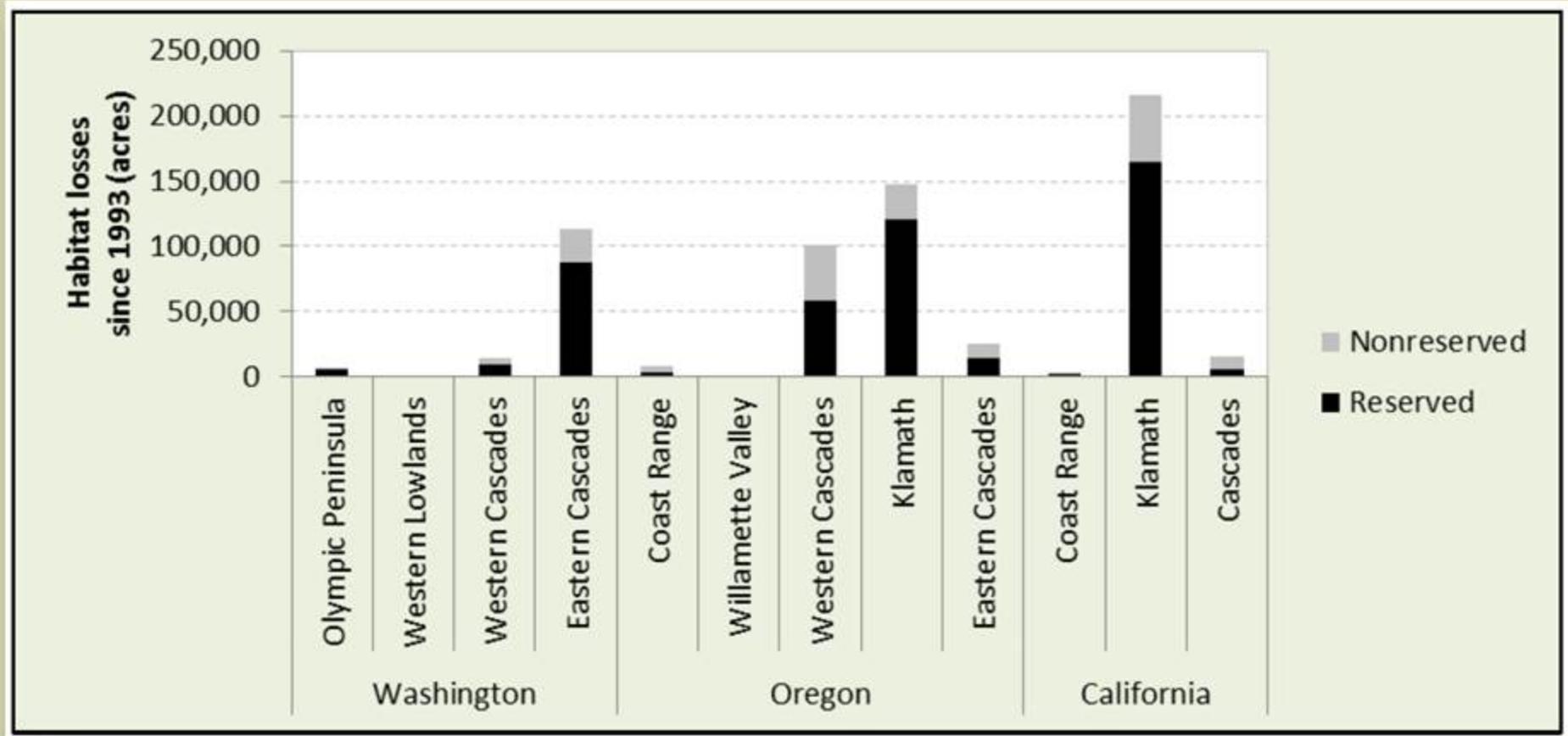
Habitat change agent

-  Timber harvest
-  Wildfire
-  Insect & disease
-  Other

Key Findings - Nesting/Roosting Habitat

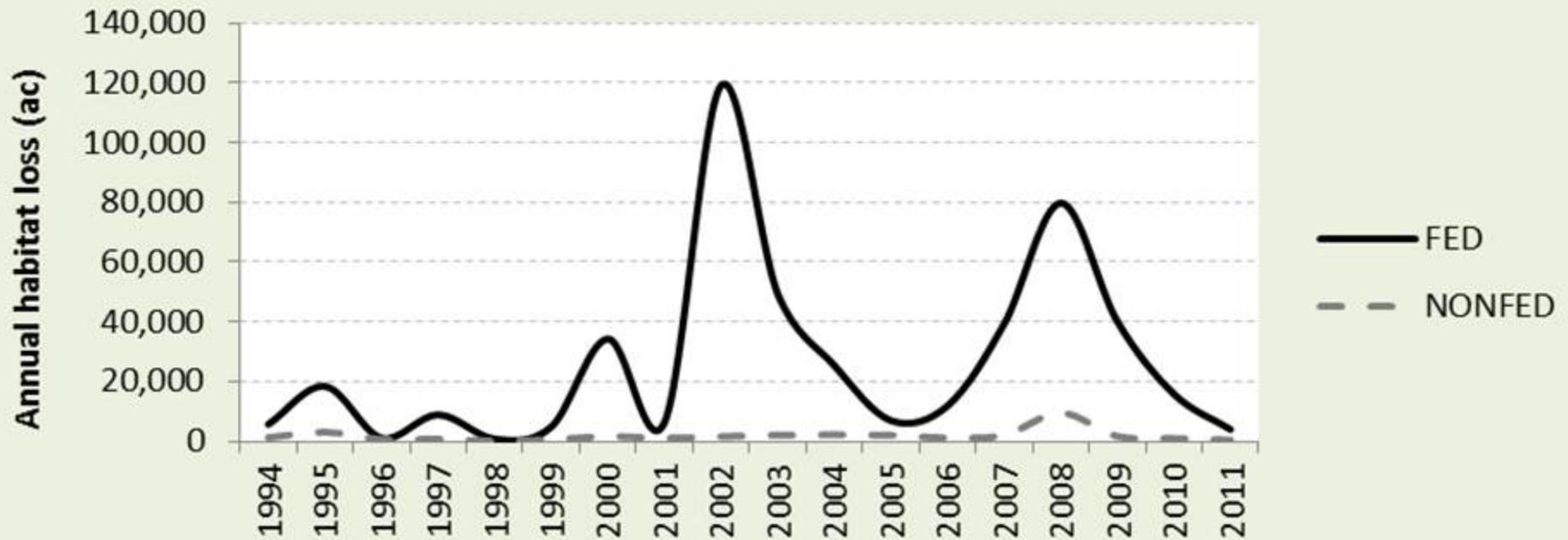


Key Findings - Nesting/Roosting Habitat



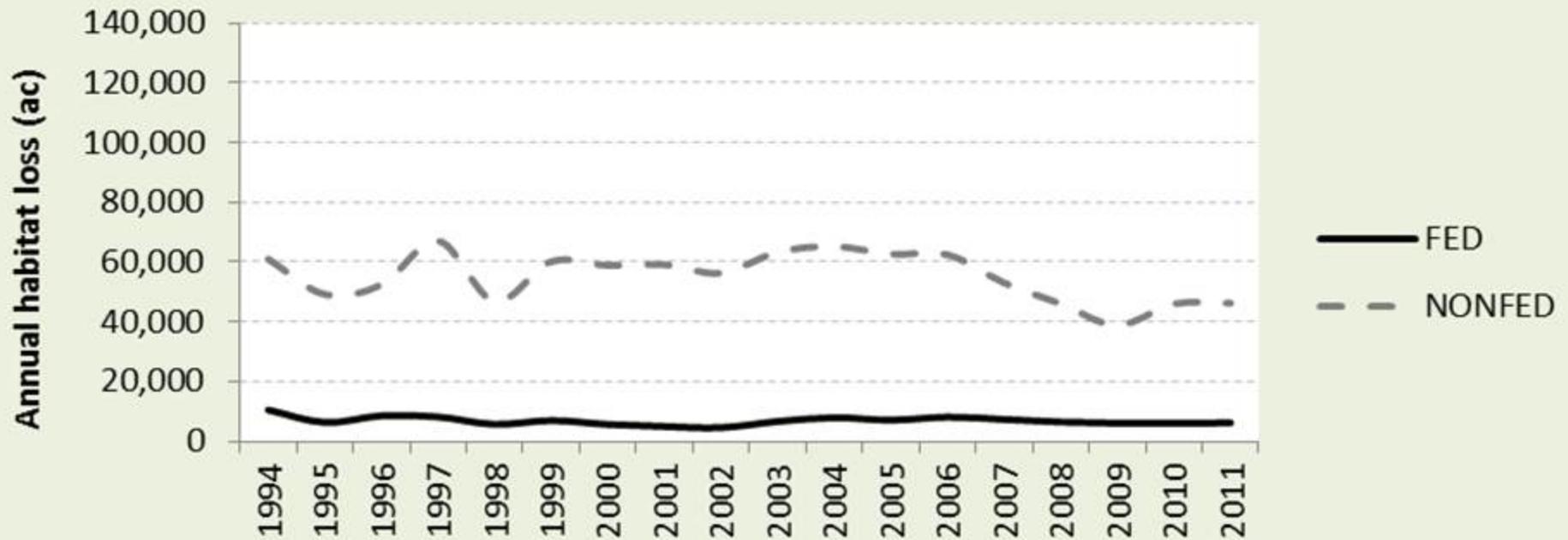
Key Findings - Nesting/Roosting Habitat

Trends in Losses from Wildfires



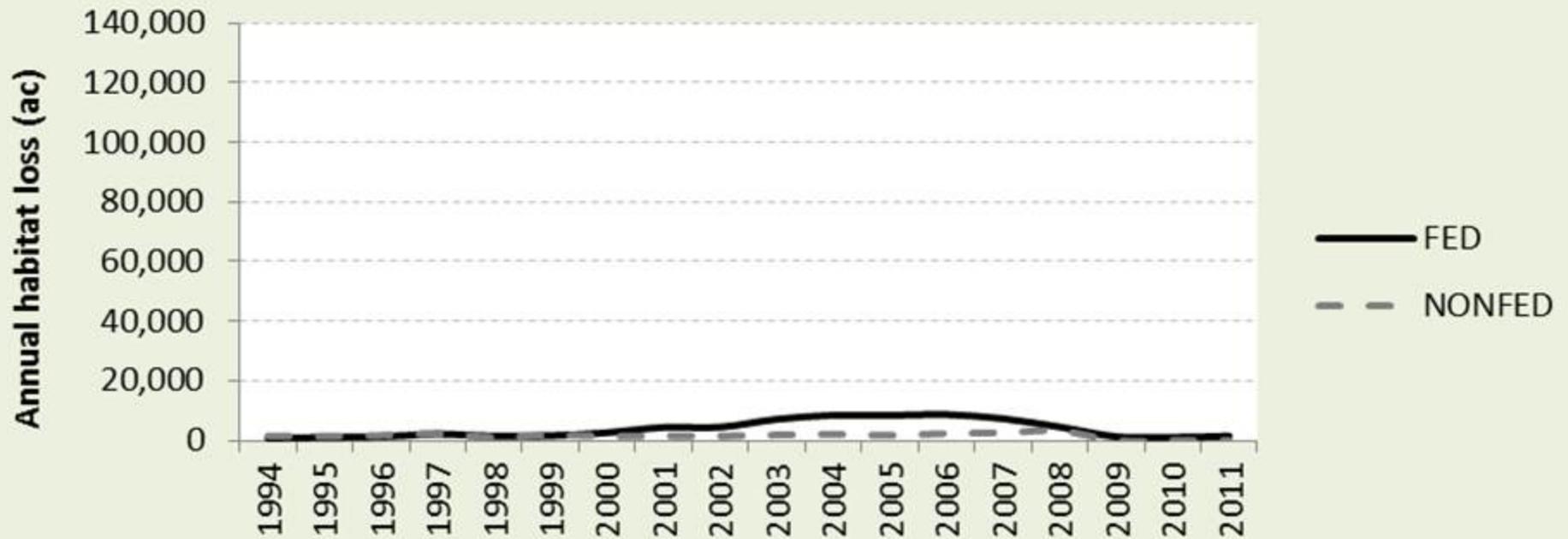
Key Findings - Nesting/Roosting Habitat

Trends in Losses from Timber Harvesting



Key Findings - Nesting/Roosting Habitat

Trends in Losses from Insects and Other



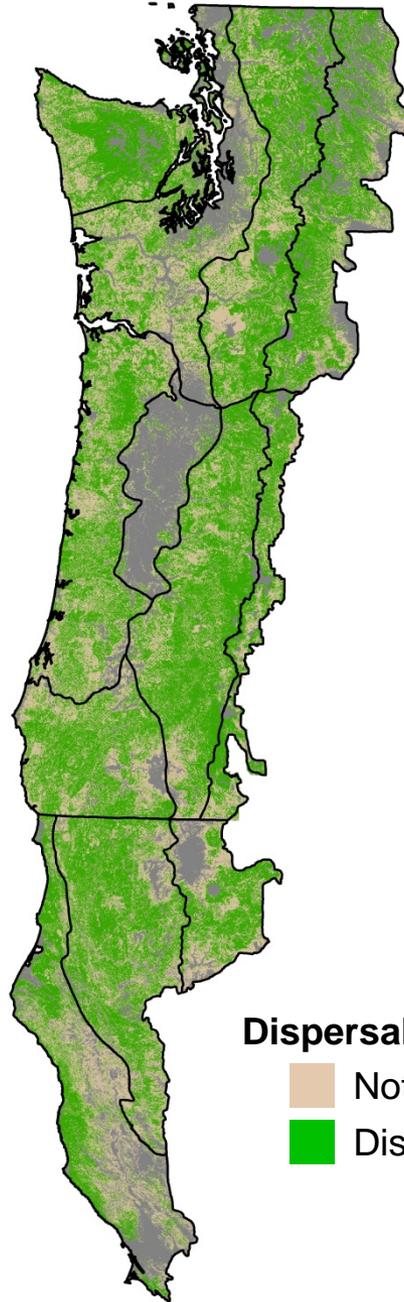
Key Findings - Dispersal Habitat

- **Dispersal habitat on federal lands increased from 15.38 to 15.73 million ac (+2.2%)**
- **Due to loss of dispersal habitat on adjacent and surrounding nonfederal lands, the dispersal-capable landscape decreased by about 5%**

1993

Then

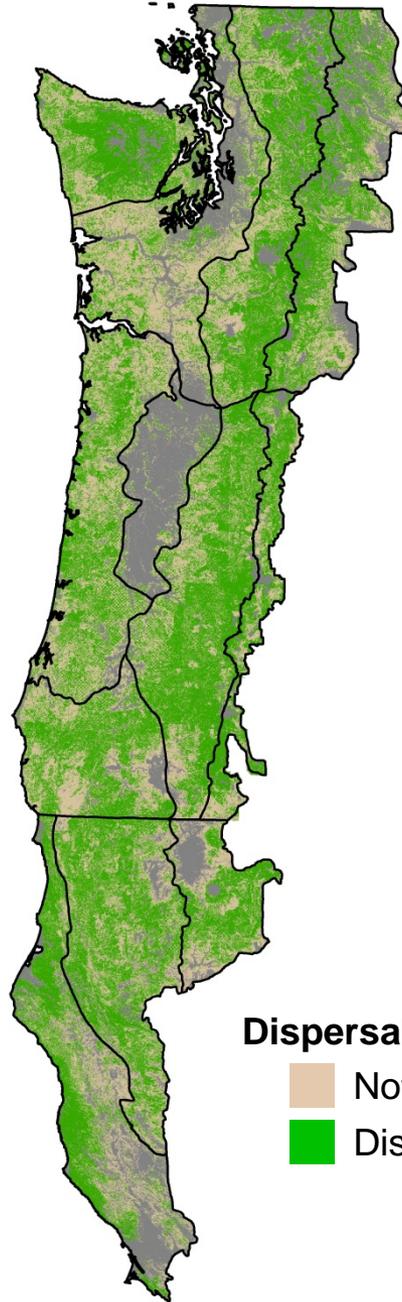
Now



2012

Then

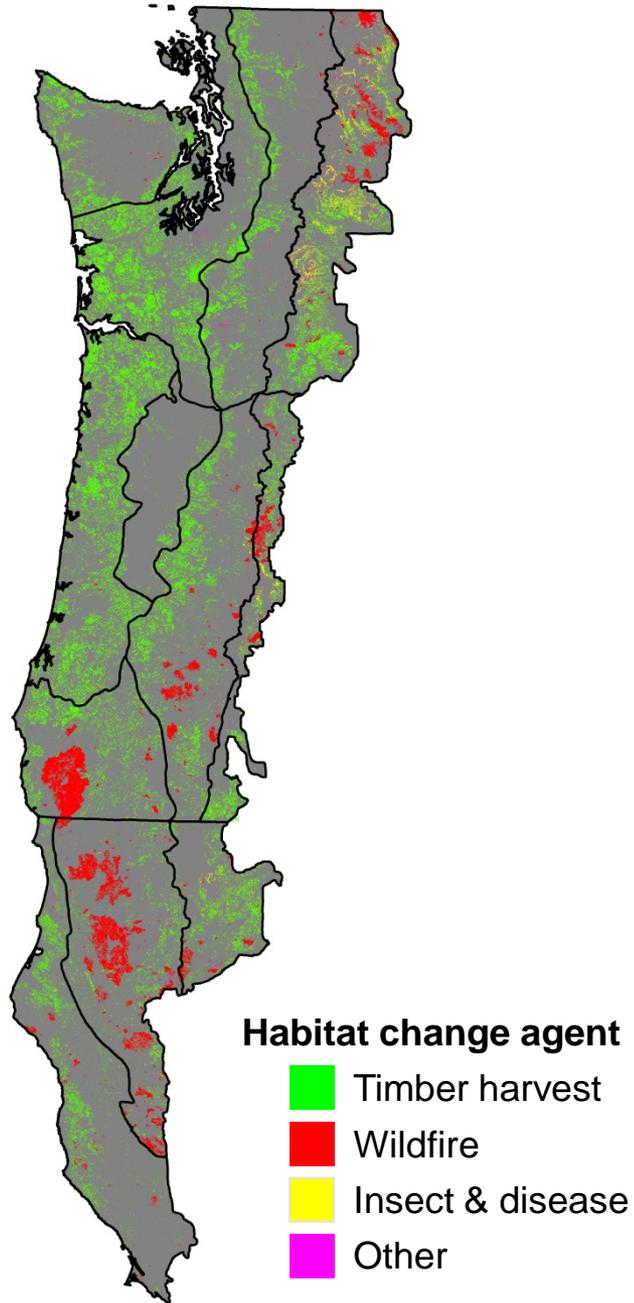
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1993–2012

Then

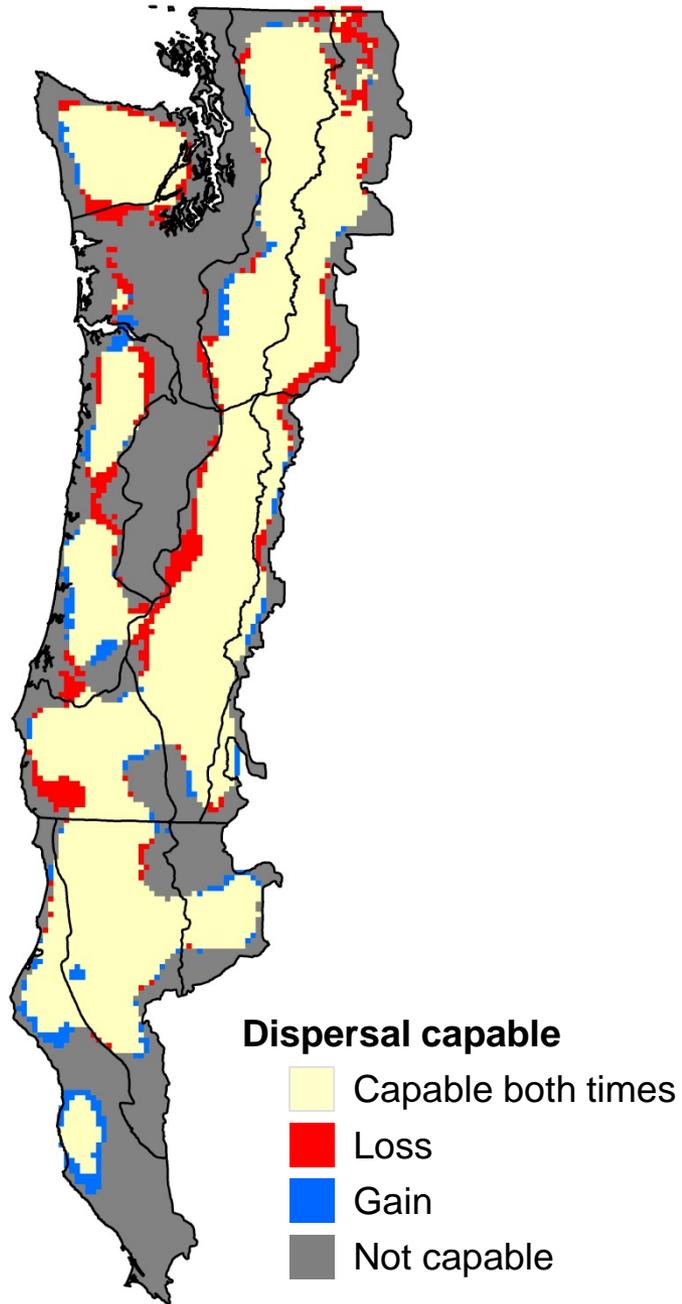
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1993–2012

Then

Now



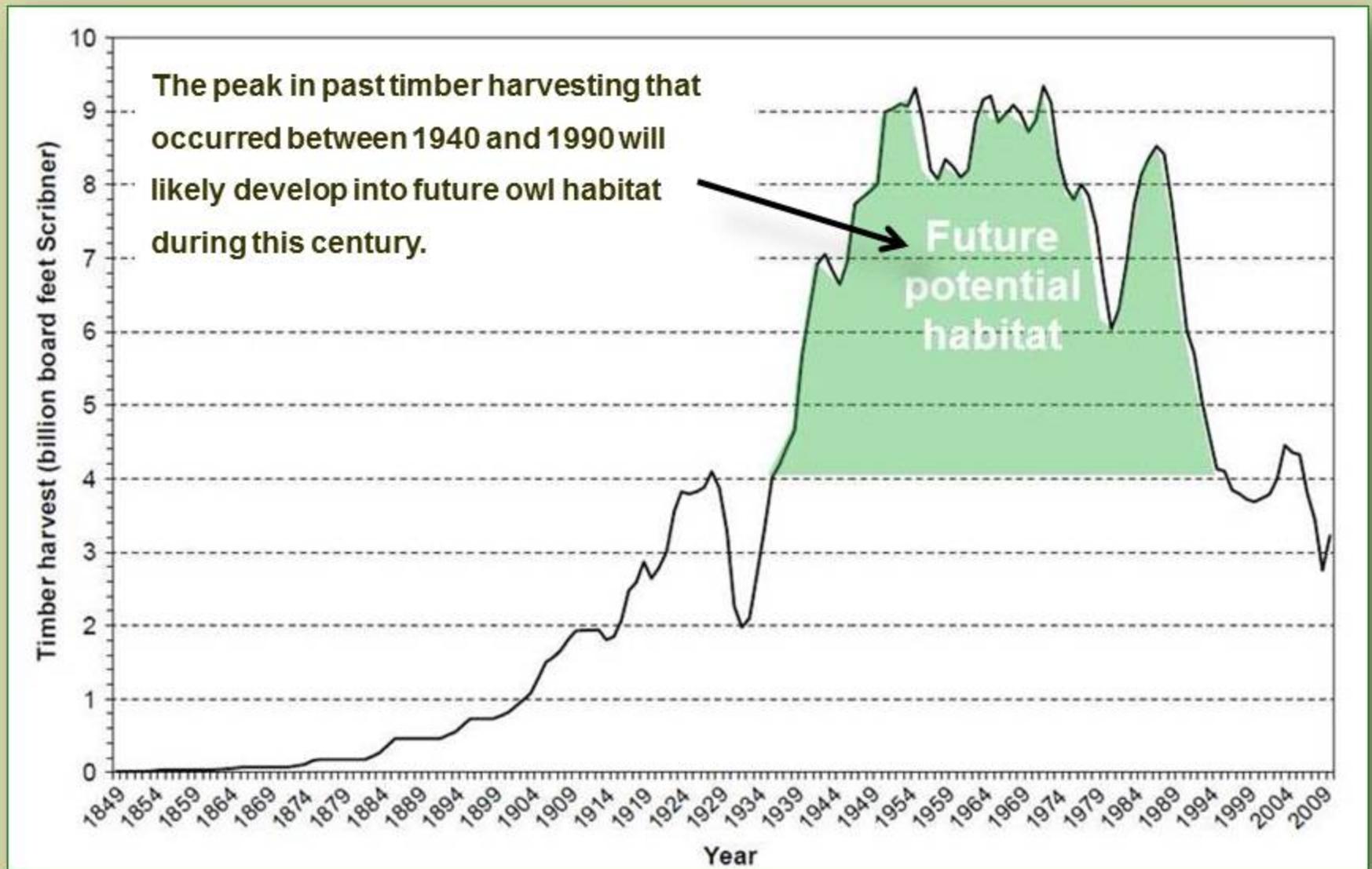
Management Considerations

- **Large wildfires continue to be the leading cause for loss of habitats on federal lands.**
- **Most fire-related losses occurred within the network of large reserves that were designed for the protection and restoration of habitat for long-term northern spotted owl conservation.**
- **However, the large reserve network was designed to handle some losses from wildfire.**

Management Considerations

- **Most remaining nesting/roosting habitat now occurs on federally managed lands.**
- **The NWFP expected habitat to improve in the federally reserved network within 50 to 100 years. After 20 years, it is still in decline; but**
- **Past timber harvesting history on federal lands suggests increases over the next few decades.**

Management Considerations



Oregon timber harvest between 1849–2010 from Gale et al. (2012).

Acknowledgements

- **Bruce Hollen (BLM)**
- **Jeremy Hobson (USFS)**
- **Julia Gower (USFS)**
- **David Keenum (USFS)**
- **Landscape Ecology, Modeling, Mapping, and Analysis (LEMMA)**
- **Laboratory for Applications of Remote Sensing in Ecology (LARSE)**



photo by Jason Mowdy