



# Board of Natural Resources 2017 Tour

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Pacific Cascade Region  
August 17, 2017

Marbled Murrelet, Riparian, Arrearage

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# Board of Natural Resources August Retreat – Day One

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**August 17, 2017**

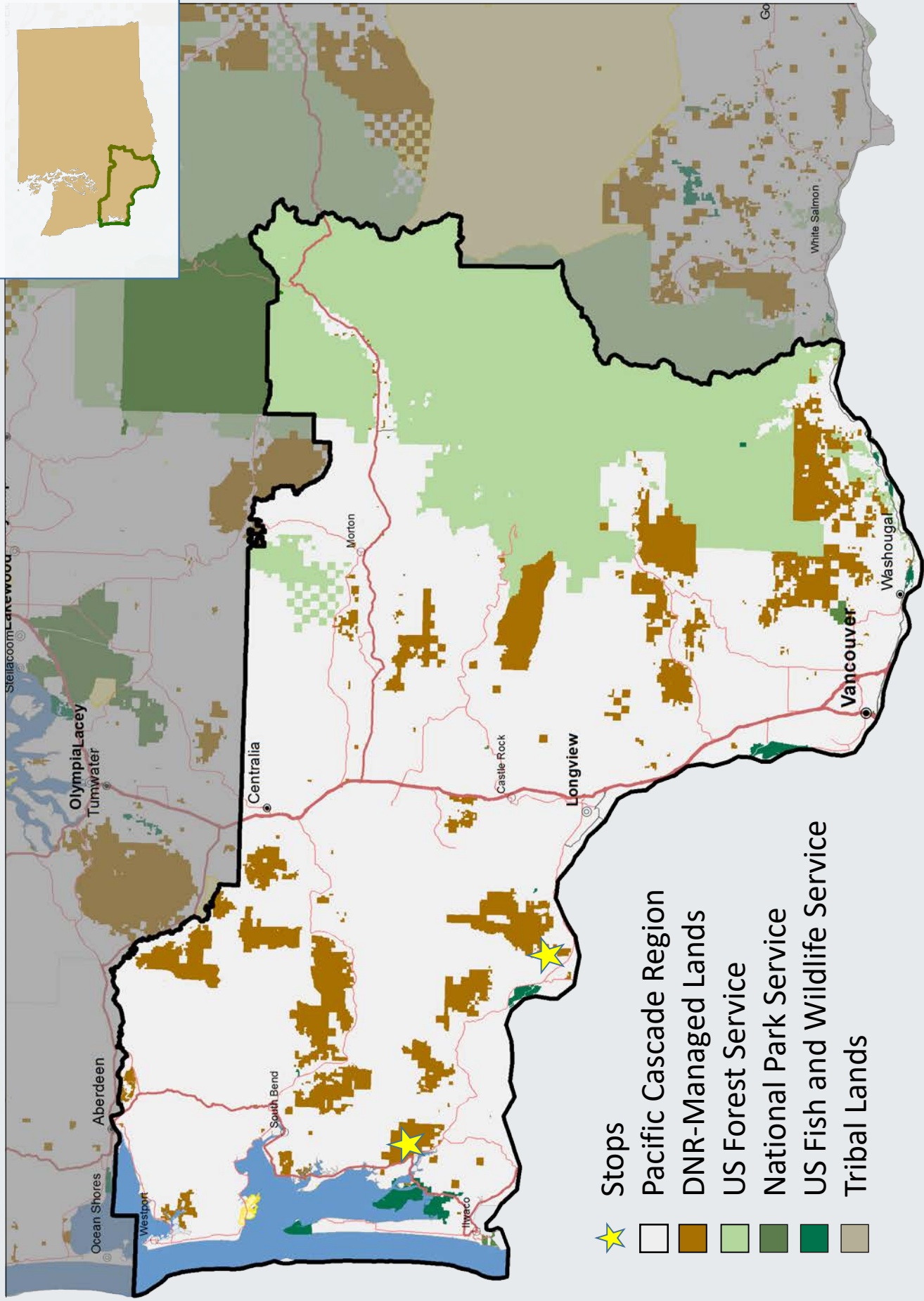
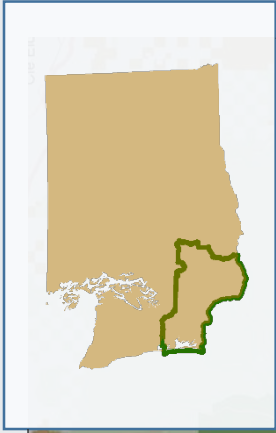
Field Tour

JA Wendt Elementary School

265 South 3<sup>rd</sup> Street, Cathlamet, WA 98612

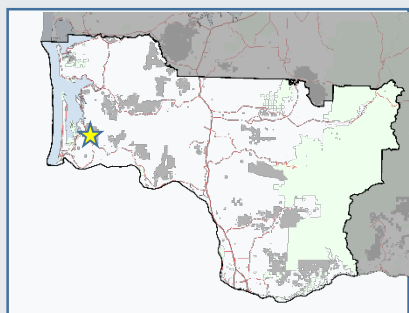
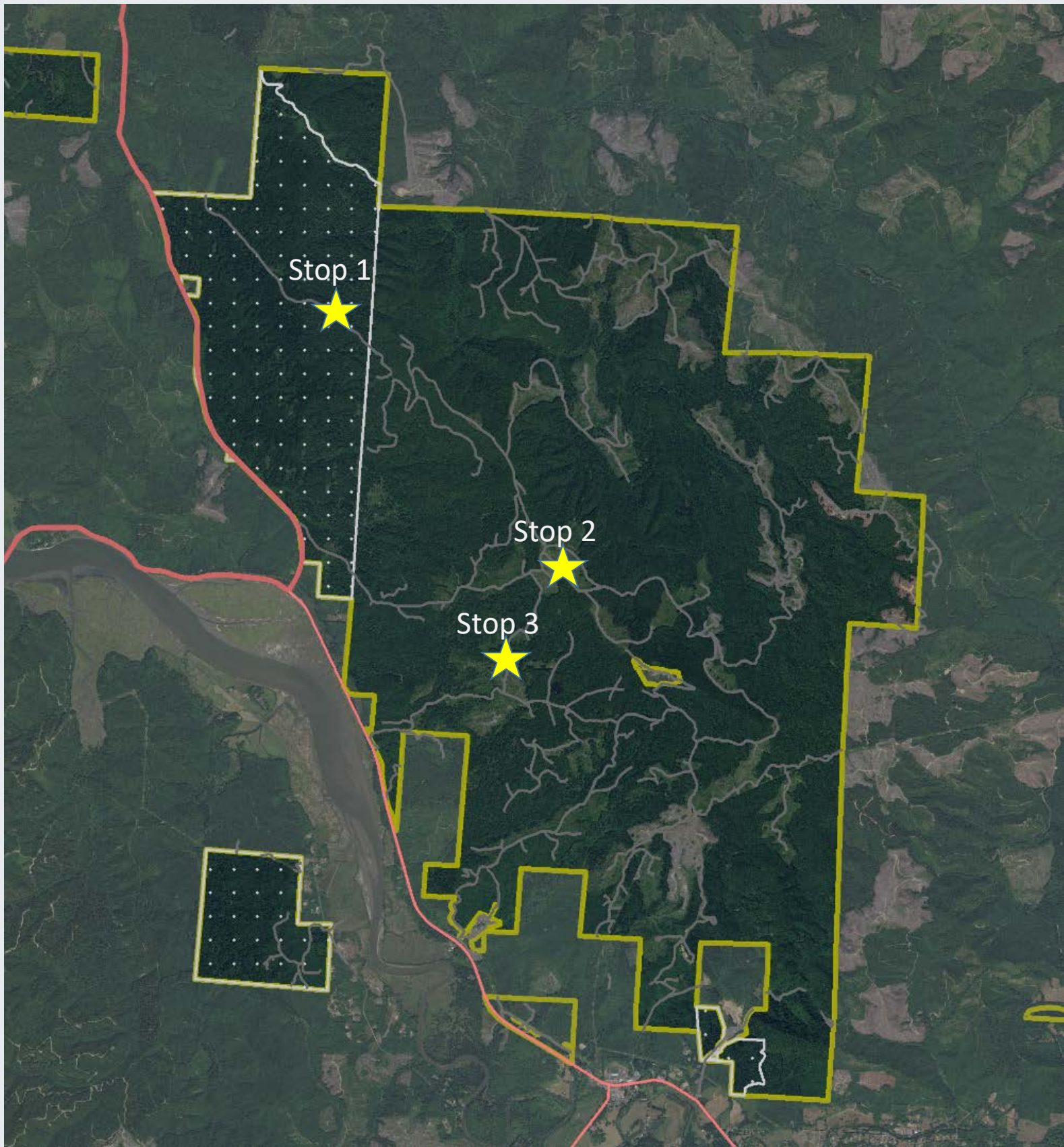
## **A G E N D A**

- 8:10 Welcome and Introductions, Safety Briefing, Prepare for Departure
- 8:40 Depart for South Nemah NRCA
- 10:00 Stop #1 South Nemah NRCA
- 10:50 Depart for Radar Ridge (*weather permitting*)
- 11:10 Radar Ridge Lookout Point
- 12:00 Depart for Western Lake Campground
- 12:20 Western Lake Campground – Lunch/Restroom Break
- 1:00 Western Lake Campground
- 1:40 Depart for Elochoman Block
- 2:45 Elochoman Block
- 3:45 Depart for Riparian Forest Area, Elochoman Block
- 4:05 Riparian Forest Restoration Strategy wrap-up
- 4:45 Depart for Cathlamet



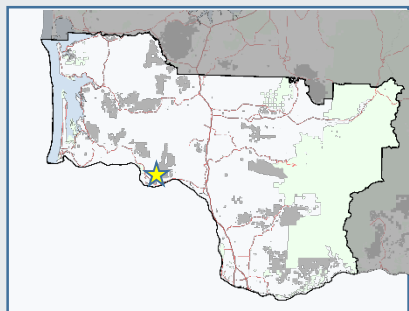
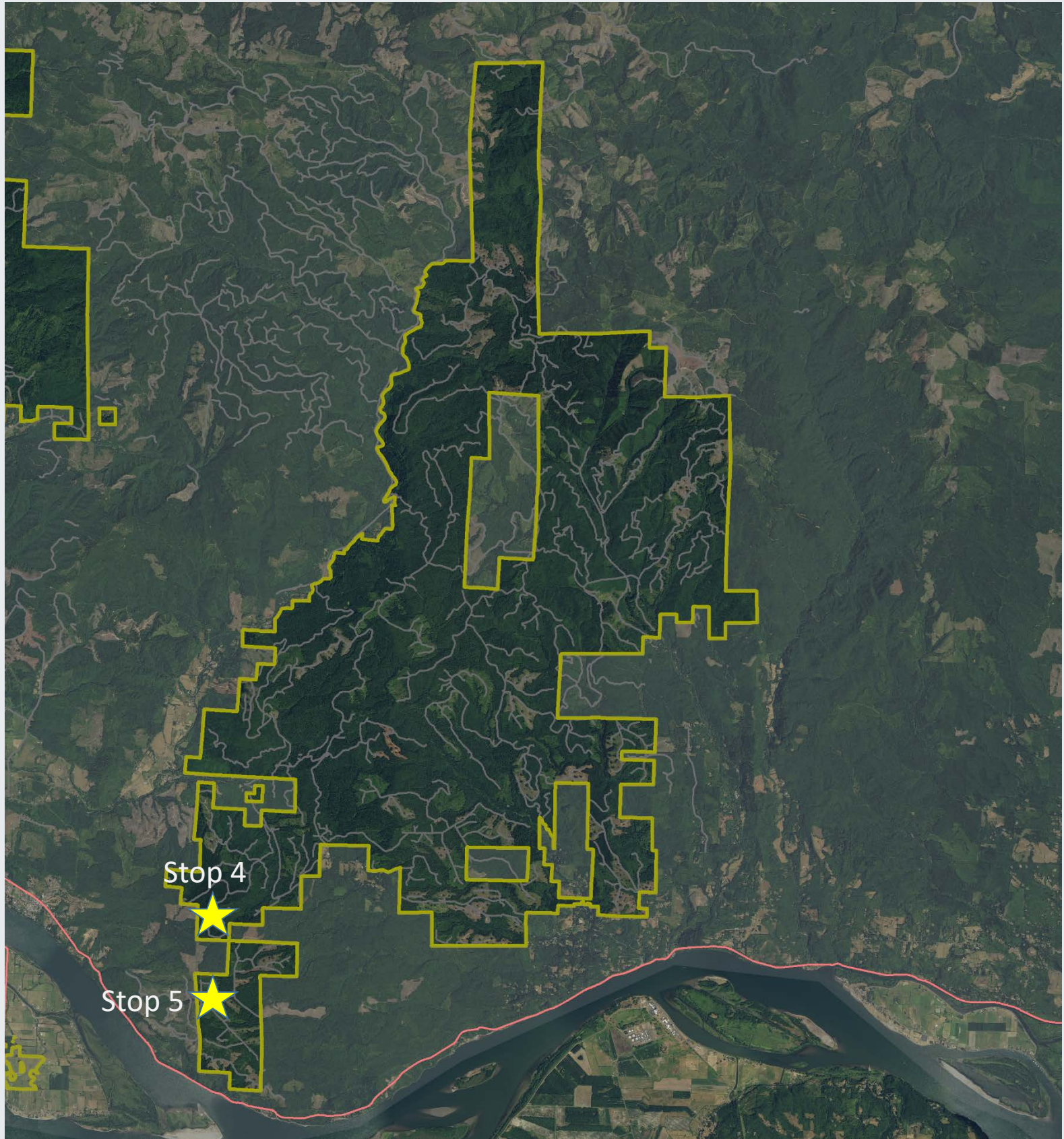
- ★ Stops
- Pacific Cascade Region
- DNR-Managed Lands
- US Forest Service
- National Park Service
- US Fish and Wildlife Service
- Tribal Lands

# Pacific Cascade Region



## Nemah Landscape

- ★ Stops
- DNR-Managed Lands
- ▨ Natural Resource Conservation Area (NRCA)



## Elochoman Landscape

- ★ Stops
- DNR-Managed Lands

# Stop 1 – South Nemah NRCA

## High Quality Murrelet Habitat

**Speakers:** Carlo Abbruzzese and Peter Harrison

**Key Points:**

1. South Nemah NRCA

- Totals 2,440 acres.
- Contains patches of 300-year old western red cedar and Sitka spruce.
- Contains High Quality P-Stage Habitat.
- Designated as an **occupied site** due to two nest sites located within the NRCA in the mid-1990s.

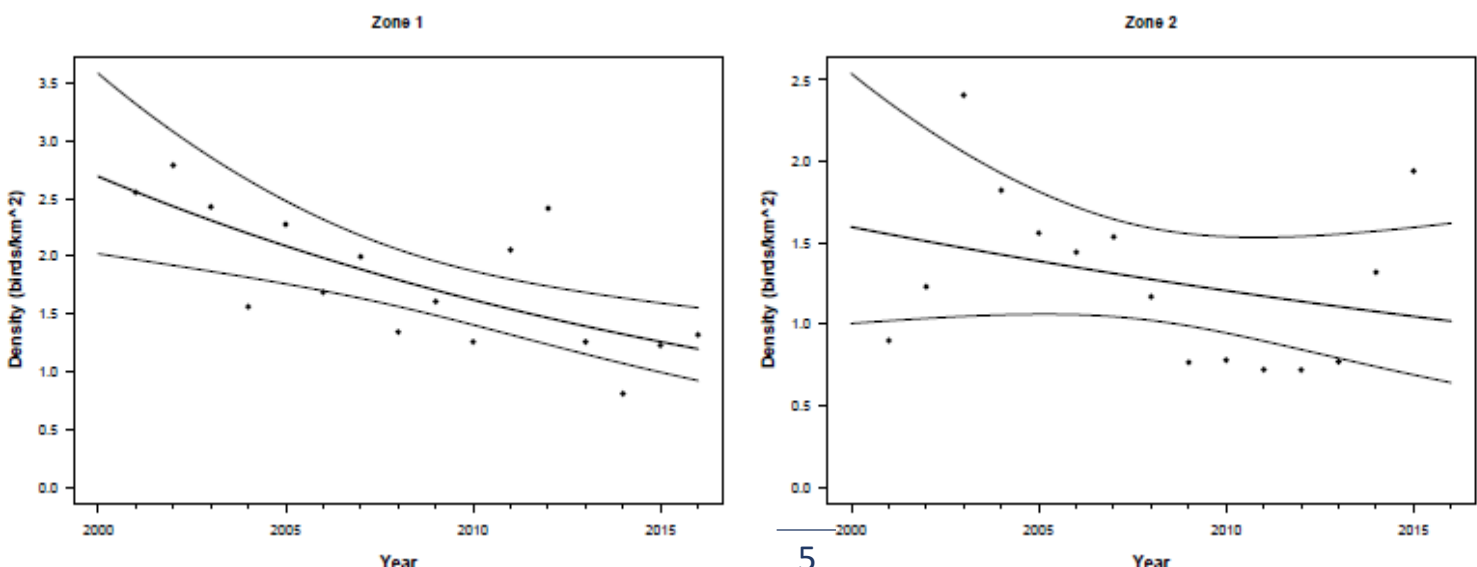
2. Murrelet Habitat Characteristics

- DNR’s State Uplands HCP (1997) defines **platforms** or **nesting platforms** as a large limb or other structure 7 inches or greater in diameter and 50 feet or greater in height.
- **Moss coverage** on the limbs of dominant trees can be an important indicator of murrelet habitat.
- **Mistletoe**, which infects the branches of living trees, causing swelling deformation and brooming, can act to thicken smaller branches and provide potential nesting opportunities for murrelets.
- **Platforms located farther from** human activity (for example campgrounds or active logging operations), may reduce the risk of predation from known murrelet nest predators, such as common ravens and Stellar’s jays.

3. Marbled Murrelet Federal Listing

- In September 1992 the Washington, Oregon and California populations were listed as threatened under the federal Endangered Species Act (ESA).

**Population Trends**





# P-stage

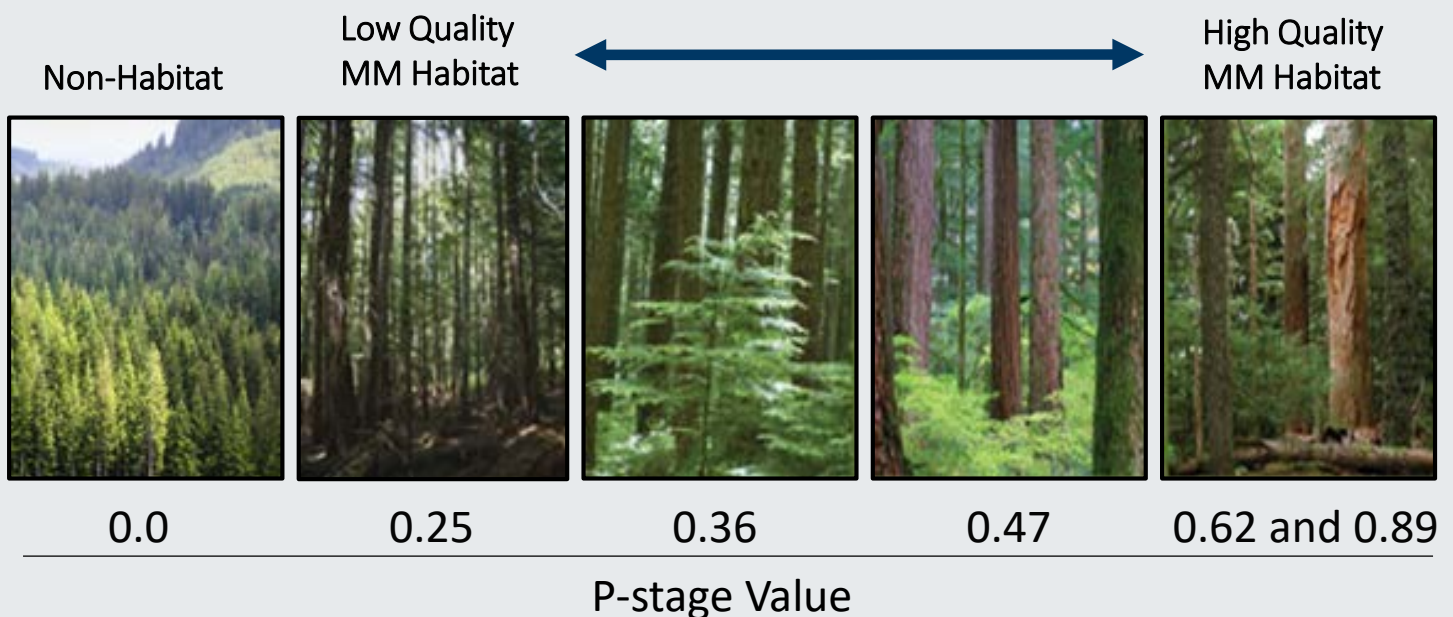
## STOP 1

“P-stage” refers to a habitat model that classifies DNR-managed forestlands based on their **relative value** as nesting habitat, using DNR’s forest inventory data. Forestland is classified based on the probability it will be used for nesting by marbled murrelets.

**Because not every acre of habitat is of equal value to the murrelet, raw acres can not be compared directly. To be comparable in terms of habitat value, our acres of impact and mitigation have an adjustment factor applied. That process is done with P-stage.**

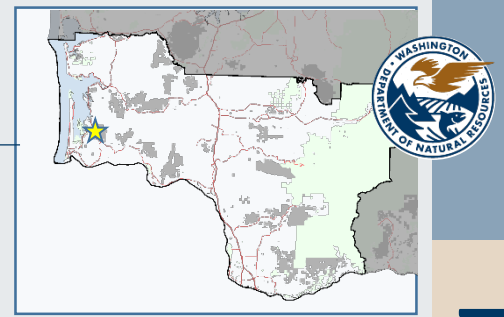
A higher P-stage value means there is a higher probability for nesting. **P-stage values are modified by** a variety of habitat quality factors, including **edge condition** (is the habitat next to a recent timber harvest or a road that could bring predators to the nest sites?), **location** (is it close to marine waters or adjacent to other known habitat?), and **timing** (is this habitat now or is it expected to develop in the future?).

By using the P-stage habitat classification model, DNR and US Fish and Wildlife Service (USFWS) were able to identify key habitat throughout DNR-managed lands in the analysis area.





# P-stage Development



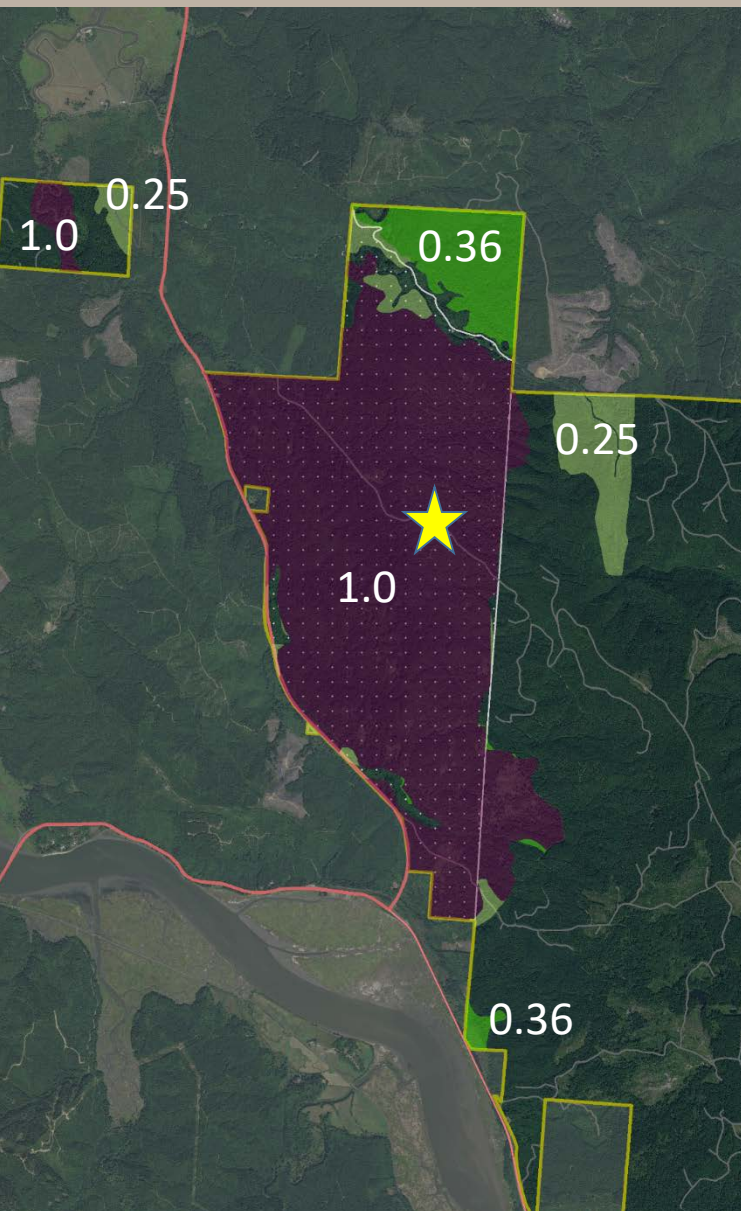
## P-Stage Value

- 0.25
- 0.36
- 0.47
- 0.62
- 0.89
- 1 (occupied site)

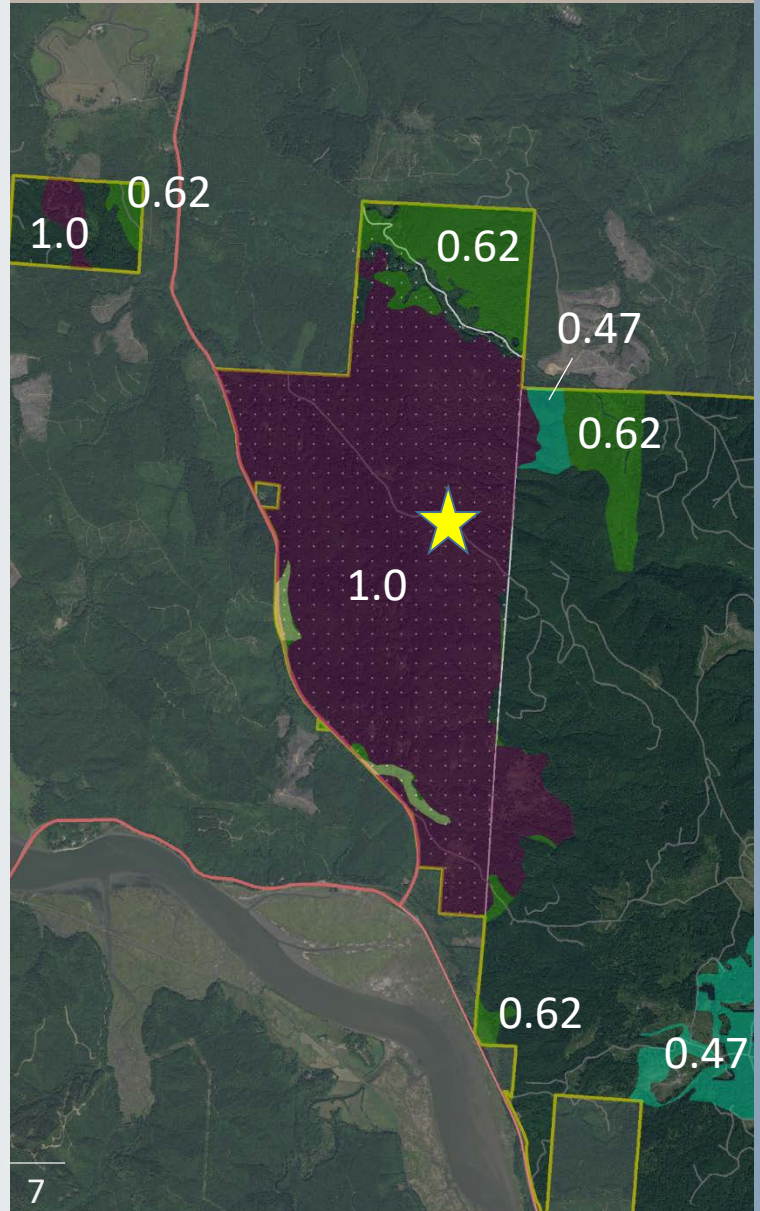
- ★ Stop
- DNR-Managed Lands

STOP 1

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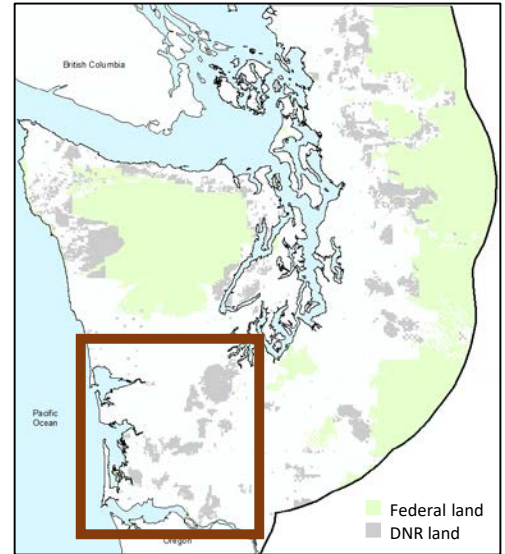
# Stop 2 – Radar Ridge- Lookout Point

## Working Forests and Conservation in SWWA

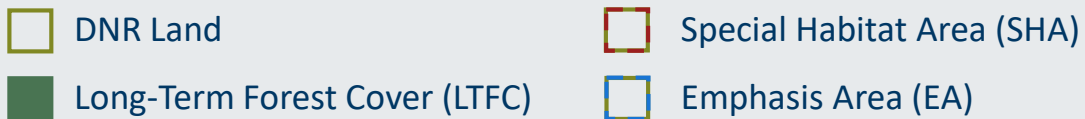
**Speaker:** Steve Ogden and Kristen Ohlson-Kiehn

**Key Points:**

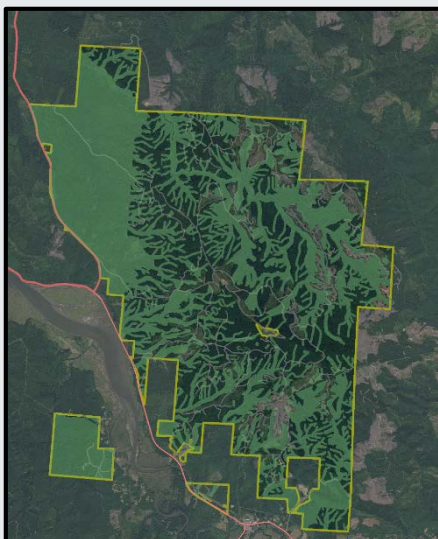
- Forest Type
  - Primarily Douglas fir plantation, 40-45 years old.
- Windthrow and challenges in developing future habitat
  - The Great Coastal Gale of 2007 blew down thousands of acres of timber and caused at least \$1 billion in damages to Washington State.
- Forest ownership in southwest Washington
  - A lack of federal land in southwest Washington increases the relative importance of forest conservation on state lands



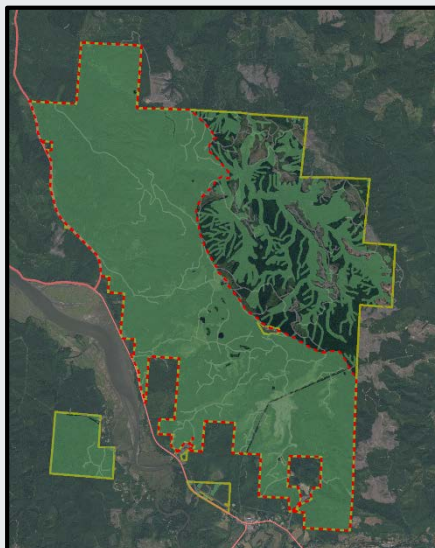
STOP 2



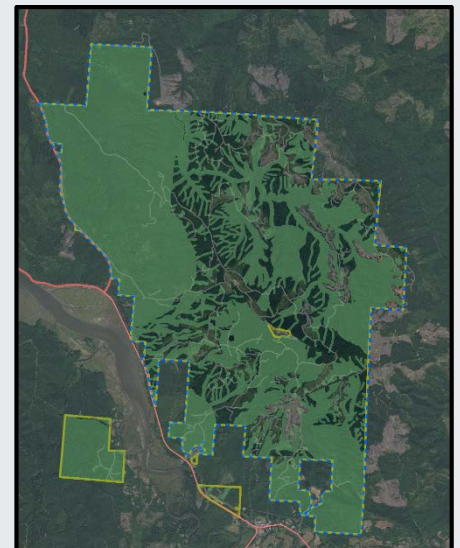
Occupied Sites and LTFC



Occupied Sites, SHAs and LTFC



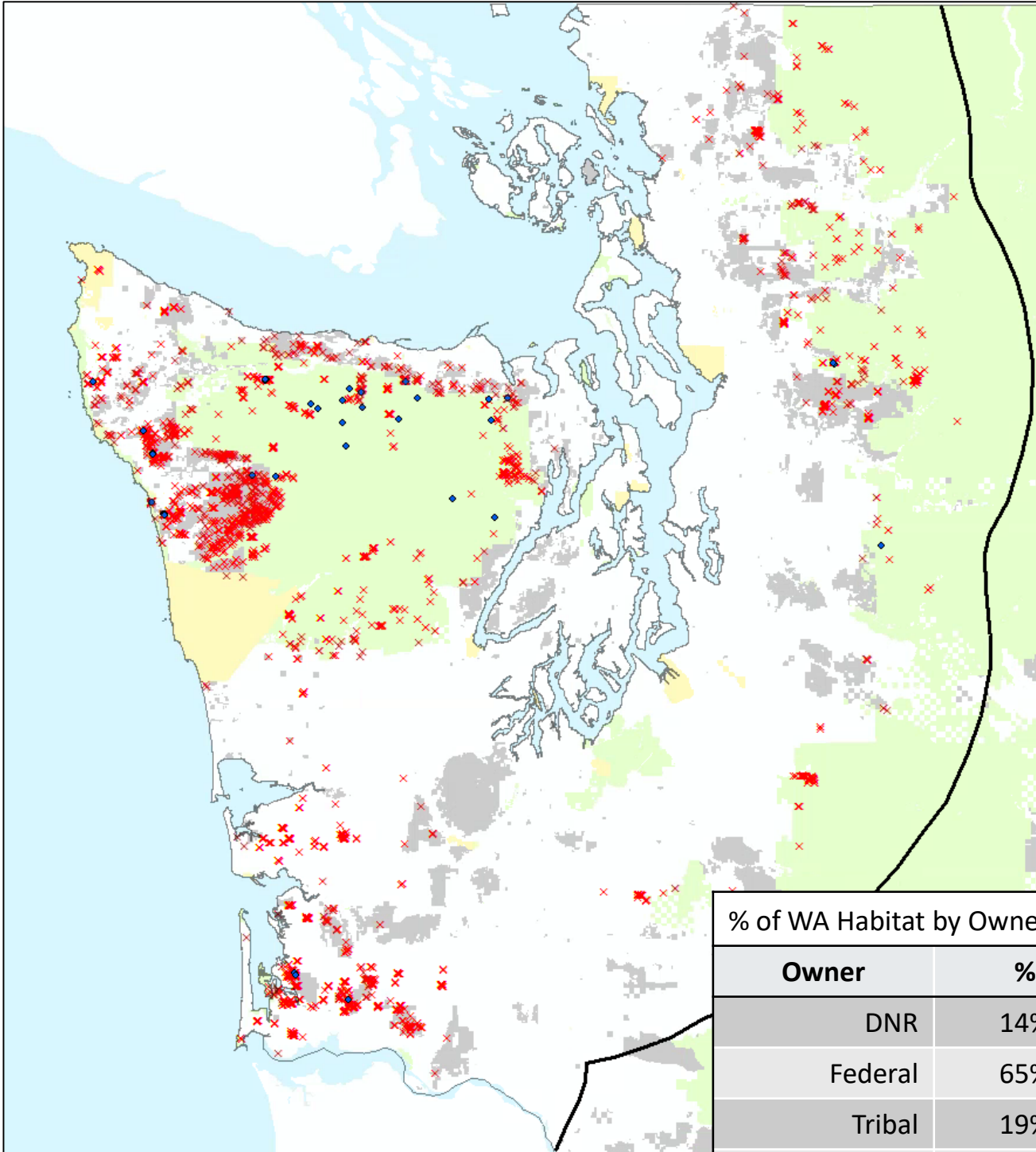
Occupied Sites, EAs and LTFC



# Land Ownership and Detections



- DNR lands
- Federal lands
- Tribal Lands
- ✕ Occupied site detection
- ◆ Nest Sites



Owner	%
DNR	14%
Federal	65%
Tribal	19%
Other	2%

STOP 2



# Stop 3 – Western Lake Campground

## Recreation and Conservation

**Speaker:** Kristen Ohlson-Kiehn and Mary McDonald

**Key Points:**

1. Disturbance

- Loud noises and unfamiliar sights can also be disruptive to murrelets during their nesting season (April 1<sup>st</sup> – September 23<sup>rd</sup>).
- Human activity, such as at campgrounds, may attract predators into murrelet habitat.
- These activities occurring within 100m of habitat may cause disturbance.

2. Recreation measures

- The DEIS proposes two conservation options that differ in their allowance of recreation activities within long-term forest cover. These apply to recreation facilities, trails, and leases.\*

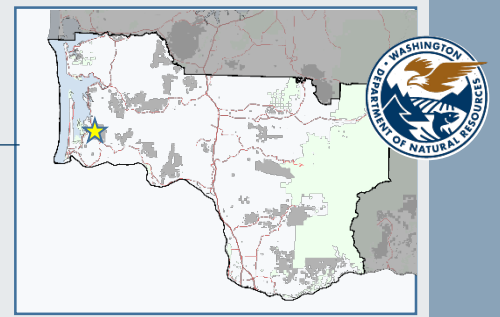
Option 1. If DNR decides to pursue new or expanded facilities, trails, or leases in areas where possible impacts are identified, DNR must consult USFWS. Routine maintenance is allowed to deal with health, safety, or environmental issues.

Option 2. No new or expanded recreation facilities, trails, or recreational leases in special habitat areas or occupied sites and their buffer is allowed. Conversion of existing non-motorized trails to motorized use within those areas is also prohibited. Maintenance within existing footprints is allowed.

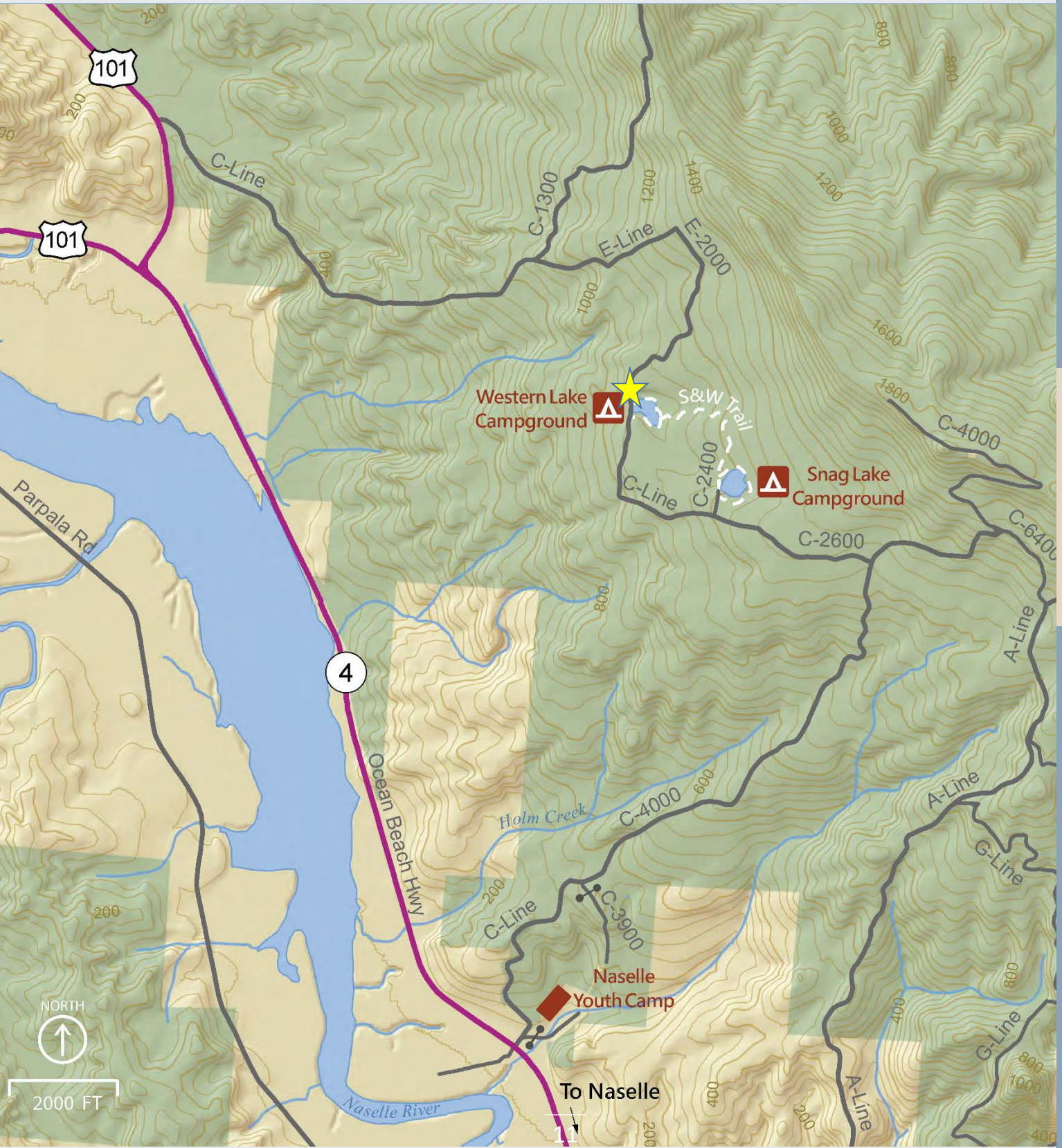
\*See the MMLTCS DEIS for the full terms of the conservation measure options.



# Recreation Measures



- ★ Stop
- ▲ Campground
- - Trail
- DNR Trust Lands



STOP 3



# Stop 4 – Pacific & Wahkiakum County

## Economic Impacts, Arrearage, and Lower Quality Habitat

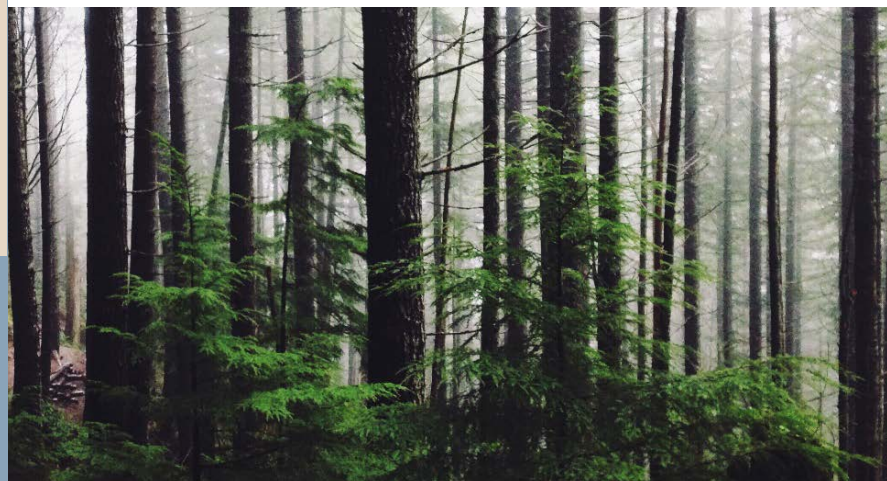
**Speaker:** Wahkiakum County Commissioner Dan Cothren and Pacific County Commissioner Lisa Ayers, Peter Harrison, and Mike Buffo

**Key Points:**

1. DNR-managed forestland produces an average of 17% of total harvest volume for counties in the analysis area, while private forestland produces approximately 81% and federal lands and other public lands produces approximately 2%.
2. Of all the counties within the analysis area, Pacific and Wahkiakum counties may be the most significantly impacted by reductions in available timber under the DEIS murrelet alternatives.
3. In the short term, loss of P-stage under any alternative will be mostly low-quality habitat.

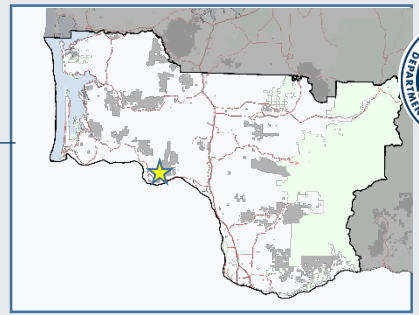
Average annual distribution of funds to beneficiaries of State Forest Trust Lands for fiscal years 2011-2015, in 2015 dollars.

Beneficiary county*	Distributions from timber sales and timber sale related activities
Clallam	\$5,872,468
Cowlitz	\$2,112,276
Grays Harbor	\$1,543,343
Jefferson	\$1,693,830
King	\$1,872,807
Kitsap	\$380,168
Lewis	\$7,042,221
Mason	\$3,312,323
Pacific	\$1,893,294
Pierce	\$391,641
Skagit	\$9,498,820
Snohomish	\$10,309,824
Thurston	\$3,340,066
Wahkiakum	\$1,610,234
Whatcom	\$3,322,456
Total	\$54,195,769



\*No State Forest Lands are present in Island or San Juan counties.

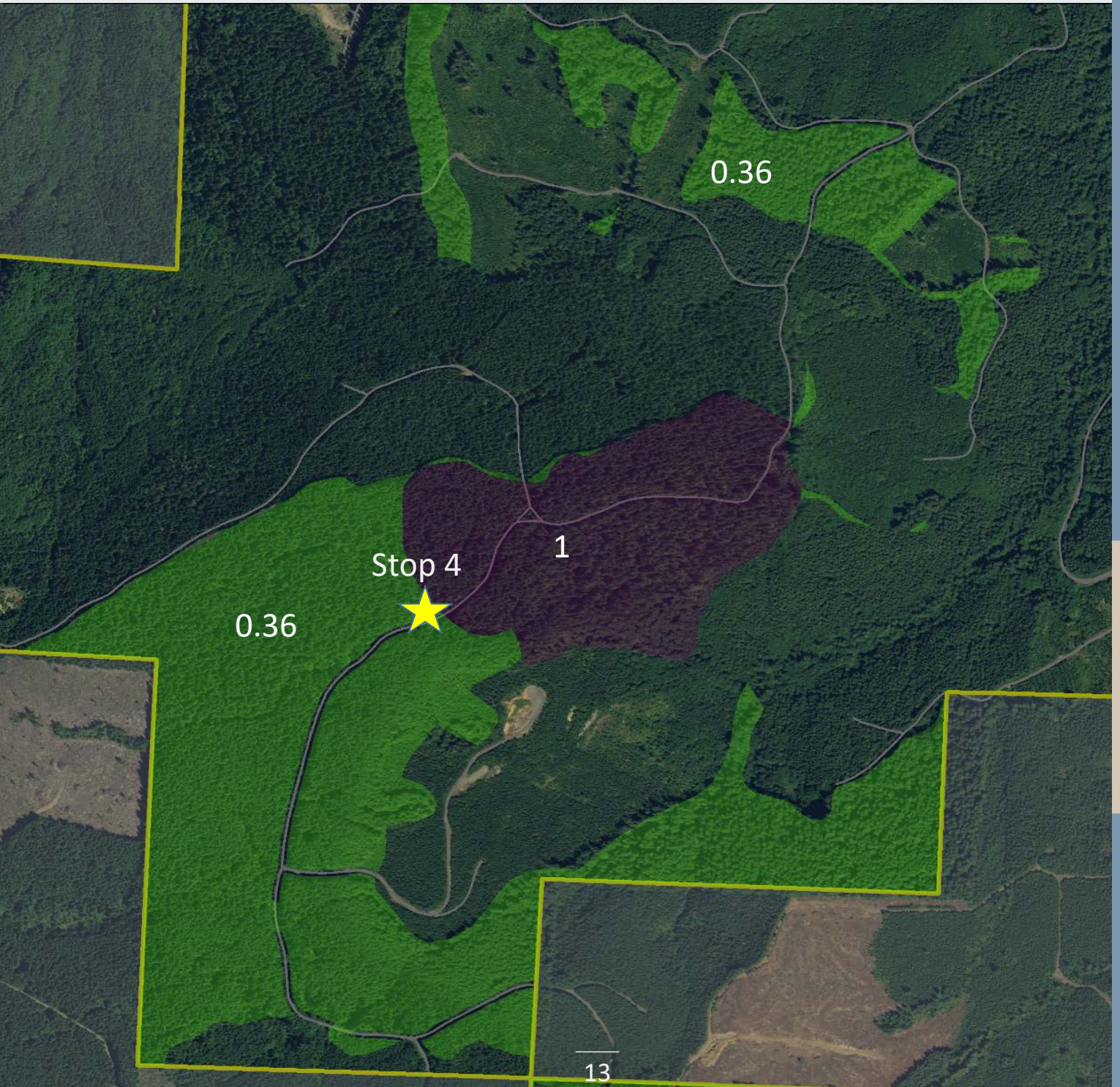
# Occupied Site



## P-Stage Value

- 0.25
- 0.36
- 0.47
- 0.62
- 0.89
- 1 (occupied site)

- ★ Stop
- DNR-Managed Lands



STOP 4



# Stop 5 – Riparian and Arrearage Options

**Speaker:** Padraic Callahan and Mike Buffo

**Key Points:**

1. Riparian Objectives:

- Maintain or restore salmonid freshwater habitat on DNR-managed lands.
- Contribute to the conservation of other aquatic and riparian obligate species.

2. Riparian Implementation:

- Five categories represent the most important components for developing the Fully Functional forest development stage, and therefore the long-term restoration goal:
  - Large conifer trees
  - Complex stand structure
  - Site-adapted tree species composition
  - Down wood (DWD and LWD)
  - Snags

3. Riparian and Arrearage

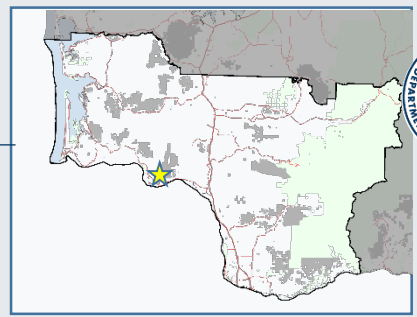
- Underperformance in achieving 2007 sustainable harvest level riparian targets contributed to ending the decade in arrears.

DNR management is directed towards meeting attainable intermediate objectives to put the forest on a trajectory to reach a structurally complex riparian forest type. Those intermediate goals are listed in the table below.

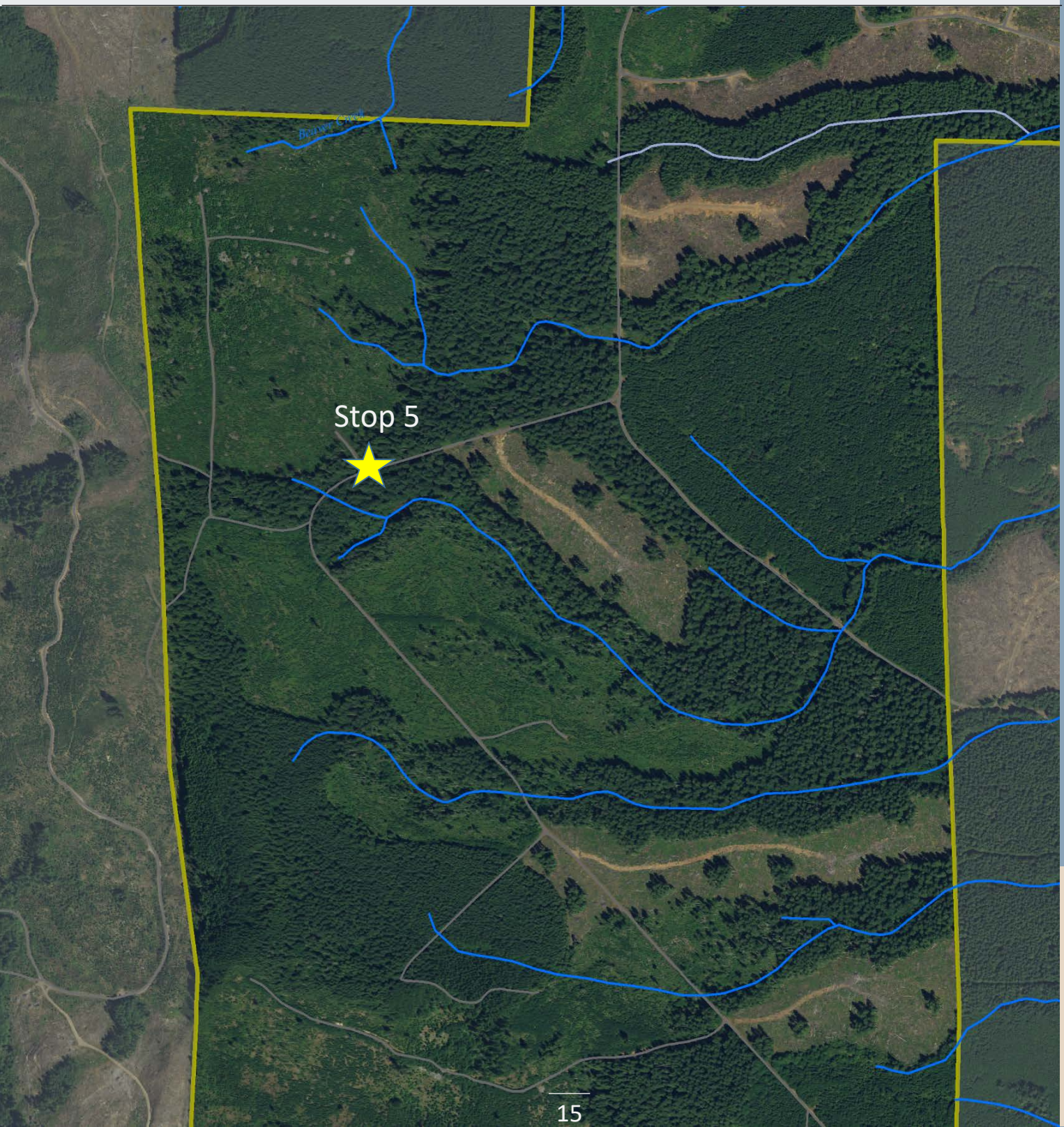
Riparian Desired Future Conditions	
Basal area	≥ 300 sq ft per acre
Quadratic mean diameter (trees >7 inches DBH)	≥21 inches
Snags	Retain existing snags ≥ 20” DBH through no-cut zones. Maintain at least 3 snags per acre.
Large down wood	Maintain ≥2,400 cubic feet/ac. Actively create down wood (contribute 5 trees from the largest thinned DBH class) during each conifer management entry.
Vertical stand structure	Maintain at least two canopy layers (bimodal or developing reverse J-shaped diameter distribution)
Species diversity	Maintain at least two main canopy tree species suited to the site.



# Riparian Site



- ★ Stop
- DNR-Managed Lands
- Stream Layer (estimated locations)



STOP 5



Thank you for joining us!

For more information regarding the

**Marbled Murrelet Long-Term Conservation Strategy**  
*and the*  
**Sustainable Harvest Calculation**

please visit:

[dnr.wa.gov/mmltcs](https://dnr.wa.gov/mmltcs)

-and-

[dnr.wa.gov/shc](https://dnr.wa.gov/shc)