



# MMLTCS

## Marbled Murrelet Long Term Conservation Strategy

Presented by:

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Marbled Murrelet Project Lead  
Washington Department of Natural Resources

*June 14, 2016*

1973

Endangered Species Act

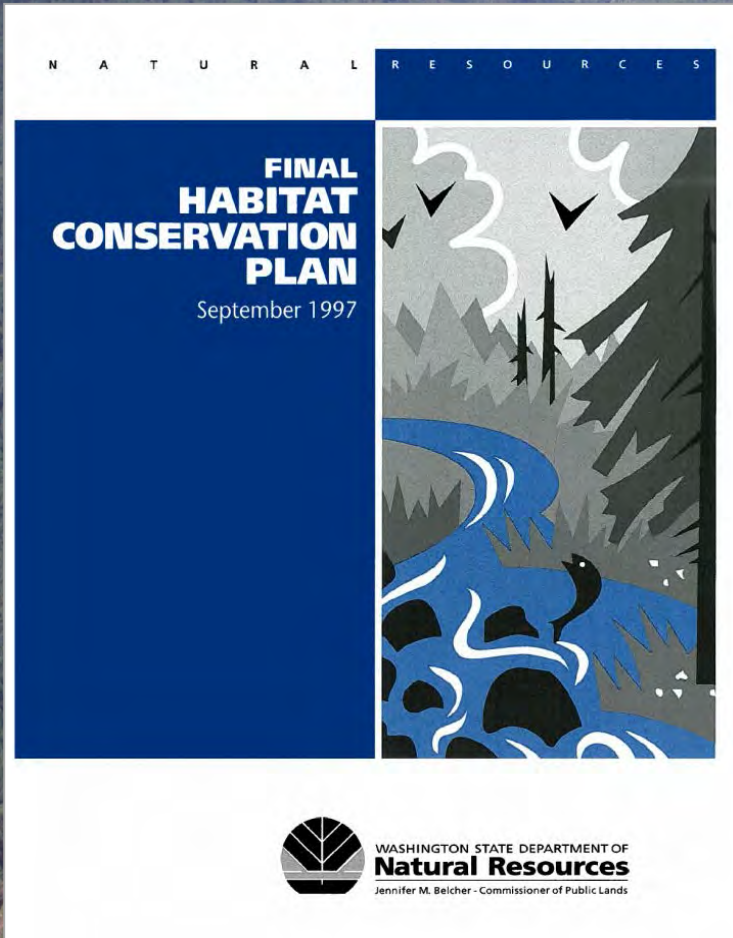
1990

Northern Spotted Owl

1997

Habitat Conservation Plan (HCP)





A voluntary tool for non-federal landowners to receive an incidental take permit.

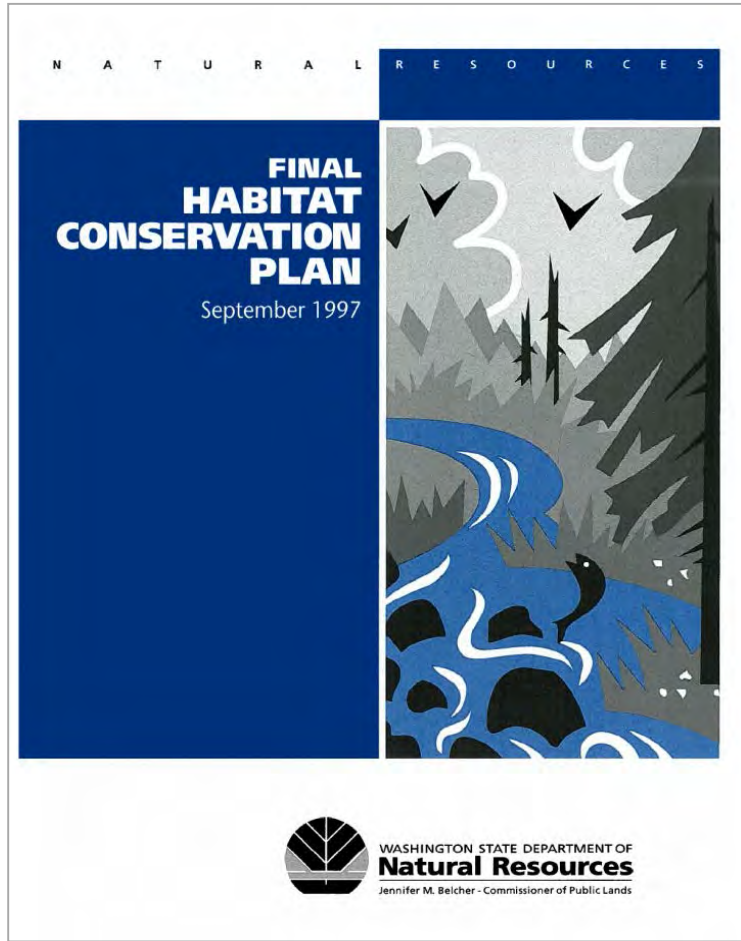
## Incidental Take Permit

“... allows incidental take of a threatened or endangered species; permit also requires permittee to... minimize and mitigate the incidental take, and may contribute to the recovery of the species.”

## Take

To harass, harm.... listed threatened or endangered species. Take may include disturbance of the listed species, nest, or habitat, when disturbance disrupt(s) normal behavioral patterns...

# HCP



Northern Spotted Owls

Riparian

Marbled Murrelets

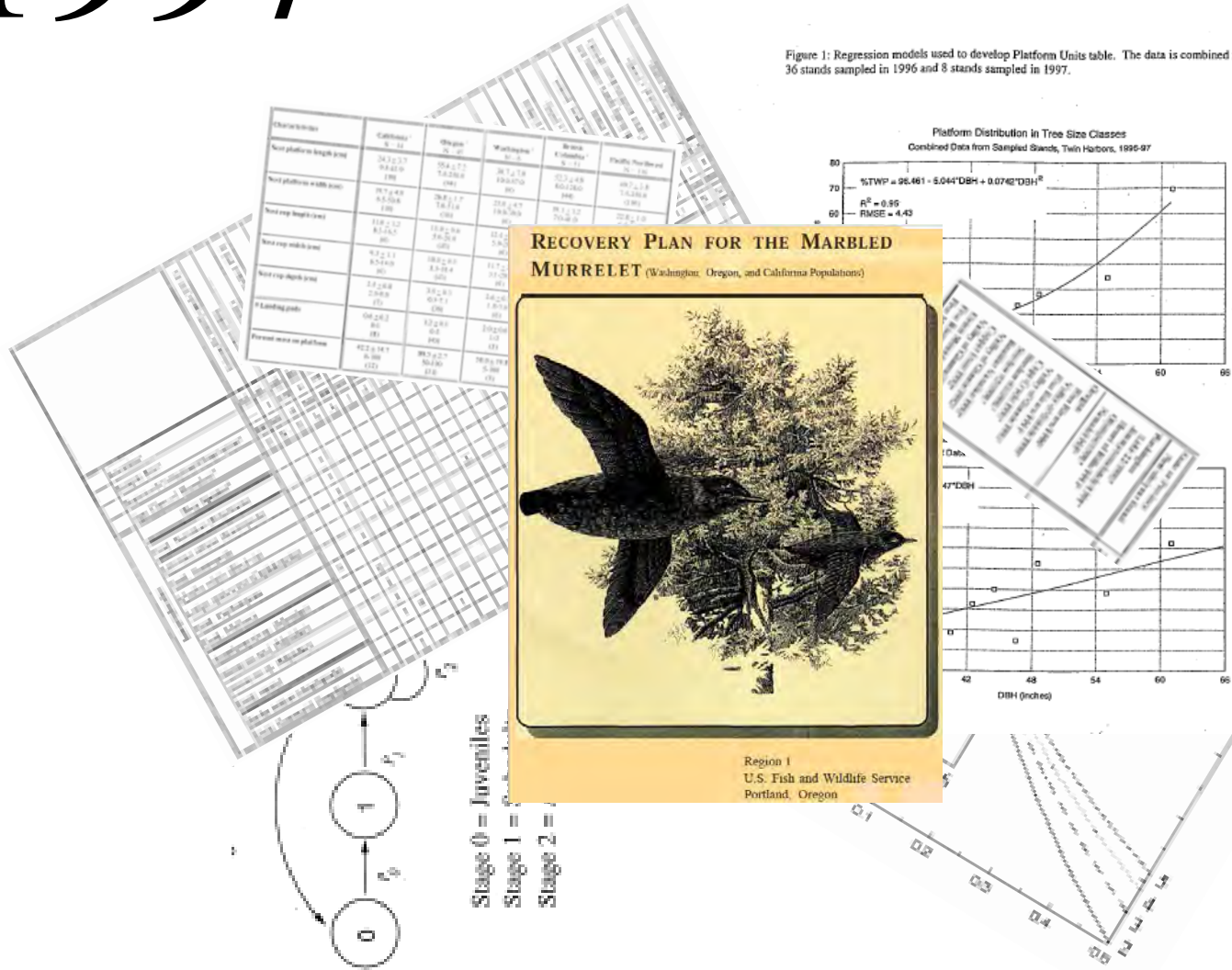
Multi-species strategy for unlisted species

Olympic Experimental State Forest



# 1997

Figure 1: Regression models used to develop Platform Units table. The data is combined from 36 stands sampled in 1996 and 8 stands sampled in 1997.



# 2016



## Status and Trends of Populations and Nesting Habitat for the Marbled Murrelet



General Technical Report PNW-GTR-600 June 2006

**STATE OF WASHINGTON**  
**2011 Washington At-Sea Marbled Murrelet Population Monitoring: Research Progress Report**  
 May 2012  
 Monique M. Lance, Scott F. Pearson, Martin G. Raphael, and Thomas D. Blanton, Jr.

Washington Department of Fish and Wildlife  
 Wildlife Science Division  
 PNW Forest Service  
 Pacific Northwest Research Station

**USGS**  
 Status Review of the Marbled Murrelet (*Brachyramphus marmoratus*) in Alaska and British Columbia

Open File Report 2006-1387  
 U.S. Department of the Interior  
 U.S. Geological Survey

**NORTHWEST FOREST PLAN**  
 For the First 15 Years (1994-2008)

## Status and Trend of Nesting Habitat for the Marbled Murrelet

Martin G. Raphael, Gary A. Falck, Katie M. Dugger, Beth M. Galleher, Deanna Lynch, Sherril L. Miller, S. Kim Nelson, and Richard D. Young

General Technical Report PNW-GTR-648 August 2011

USDA United States Department of Agriculture  
 UAS Forest Service  
 PNW Pacific Northwest Research Station

Marbled murrelets have the unique behavior of being dependent on both marine and terrestrial habitats. They spend most of their lives at sea but return to land to nest. This makes them particularly vulnerable to changes in both marine and terrestrial environments.

Figure 2. Range of the marbled murrelet (1997-2007) and breeding season occurrence in Alaska and British Columbia.

Prepared for:  
 Washington State Department of Natural Resources  
 Olympia, Washington

September 2008

**Recommendations and Supporting Analysis of Conservation Opportunities for the Marbled Murrelet Long-Term Conservation Strategy**

Prepared for:  
 Washington State Department of Natural Resources  
 Olympia, Washington

September 2008

**A Restoration Framework for Federal Forests in the Pacific Northwest**

Jerry E. Franklin and K. Harmon Johnson

POPULATION DECLINE OF THE MARBLED MURRELET IN THE PACIFIC NORTHWEST  
 MARTIN G. RAFAEL, GARY A. FALCK, CRAIG SPRONG, JIM BULLINGS, BETH M. GALLEHER, DEANNA LYNCH, DIANNA LYNCH, SCOTT F. PEARSON, C. JOHN RAY, and ROBERTA D. YOUNG

Abstract: We document a decline of nearly 90% in the Marbled Murrelet (*Brachyramphus marmoratus*) population in western California from 2004 to 2011. The Northern Forest Plan requires that federal forest lands in the Pacific Northwest of the United States that support the murrelet be managed to support the species. We evaluate the plan's effectiveness in reducing the decline of murrelet populations and nesting habitat. We use a combination of population and nesting habitat data to evaluate the plan's effectiveness. We find that the plan has been effective in reducing the decline of murrelet populations and nesting habitat. We recommend that the plan be revised to better protect murrelet populations and nesting habitat.

draft

# NEPA/SEPA Joint EIS

(environmental impact statement)



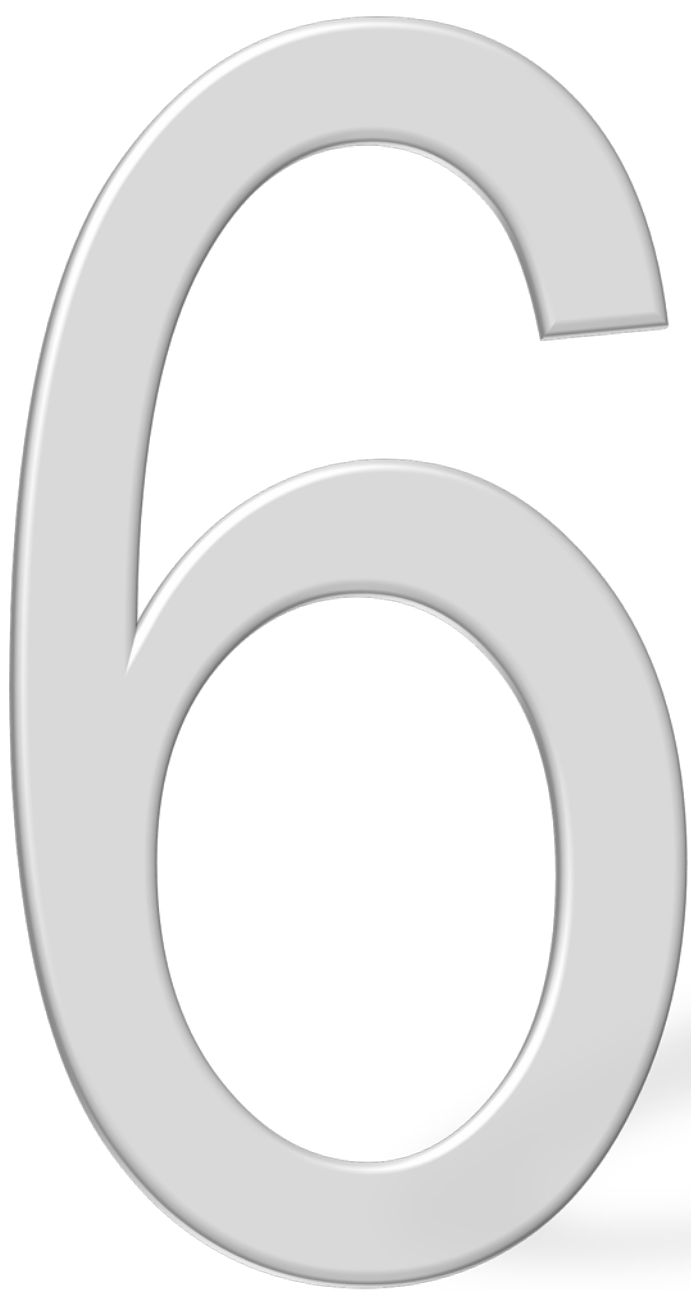


# Board of Natural Resources

## RCW 43.30.215

“The board shall...establish policies... based on sound principles designed to achieve the maximum effective development and use of such lands and resources...”





# alternatives

## **Major differences:**

Overall acres of conservation

Location and configuration of conservation areas

**Conservation Measures**



# Conservation Measures

New measures proposed to protect murrelets from  
harm and harassment



# Nesting and Reproduction

Require secure nest sites

Single large egg

Adults share incubation in 24-hour shifts

Nestlings are fed only fish

Adults spend up to 3.5 hours per day commuting between the sea and nests

High energy expenditure



# Appearance and Behavior

Small

Dark plumage

Silent and motionless at nest

Generally fly before sunrise and at twilight

Easily stressed, spooked, and flushed



# Harm and Harassment

## Susceptible to Auditory and Visual Disturbance

- Delays or prevents nest establishment
- Flushes birds from active nest sites
- Causes adults to abort feeding attempts
- Increases risk of predation

Resulting in reduced hatching success, individual fitness, or survival of chicks, juveniles, and adults.



# Conservation Measures

Applied to a variety of land uses:

- Timber management and timber harvest
- Road-building and maintenance
- Wildfire control
- Research
- Recreation
- Utility transportation corridors
- Tribal and Cultural Uses
- Forest health treatments and salvage



# Conservation Measures

## Recreation:

*Alternatives*

**C, D**

No new or expanded development inside certain sensitive areas

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**B, E, F**

Require consultation with USFWS for any new or expanded development inside certain sensitive areas

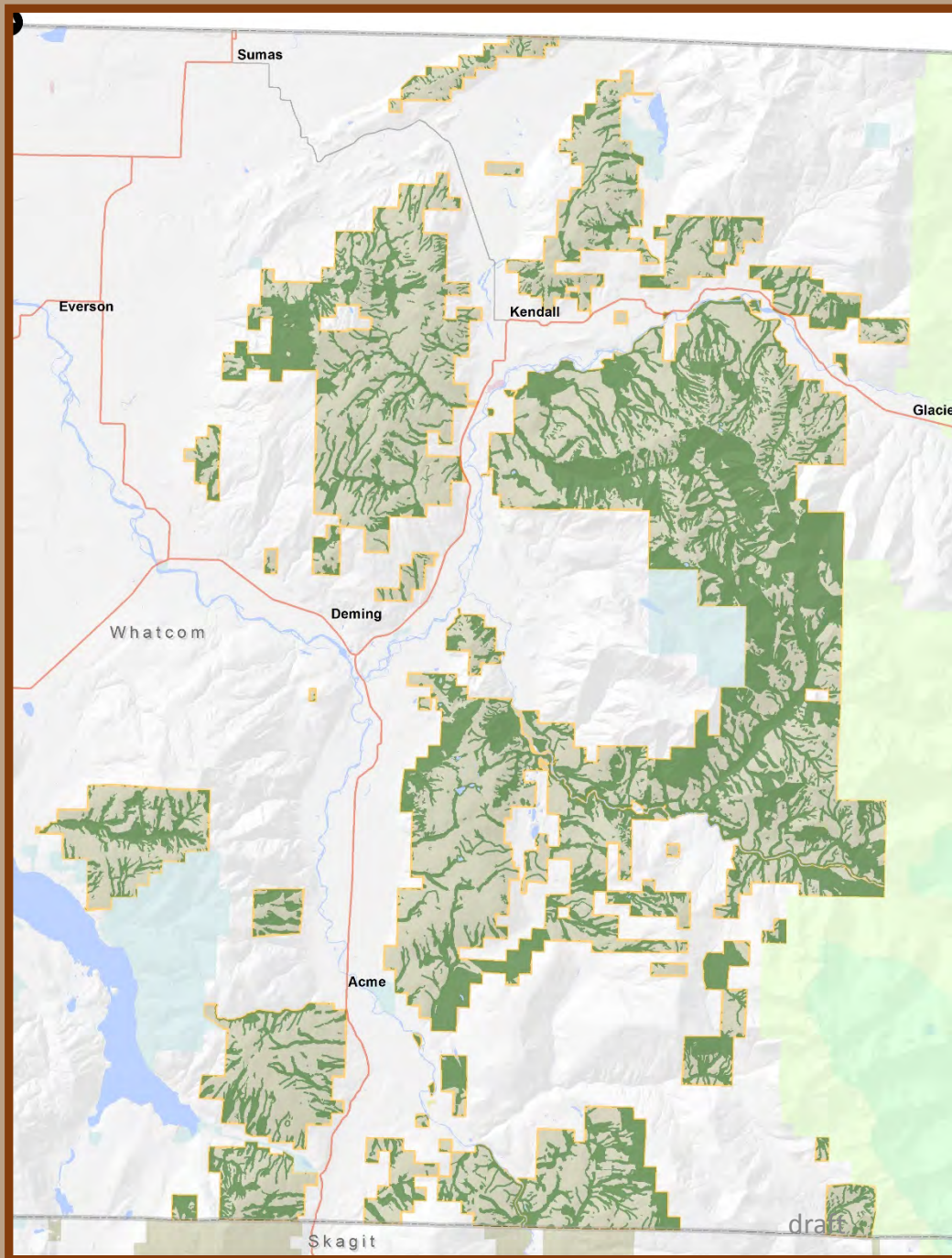




# Where are the alternatives?

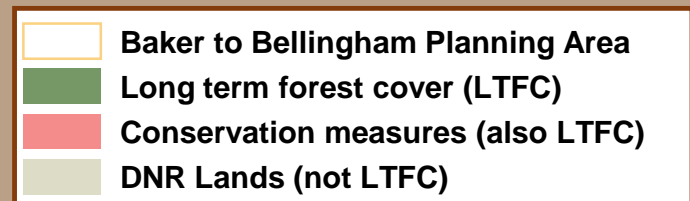






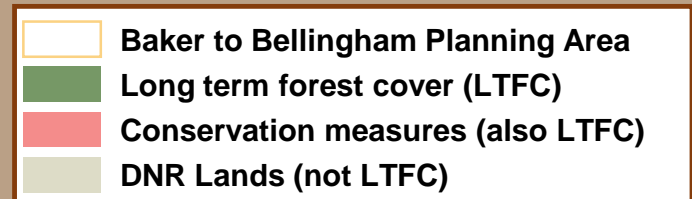
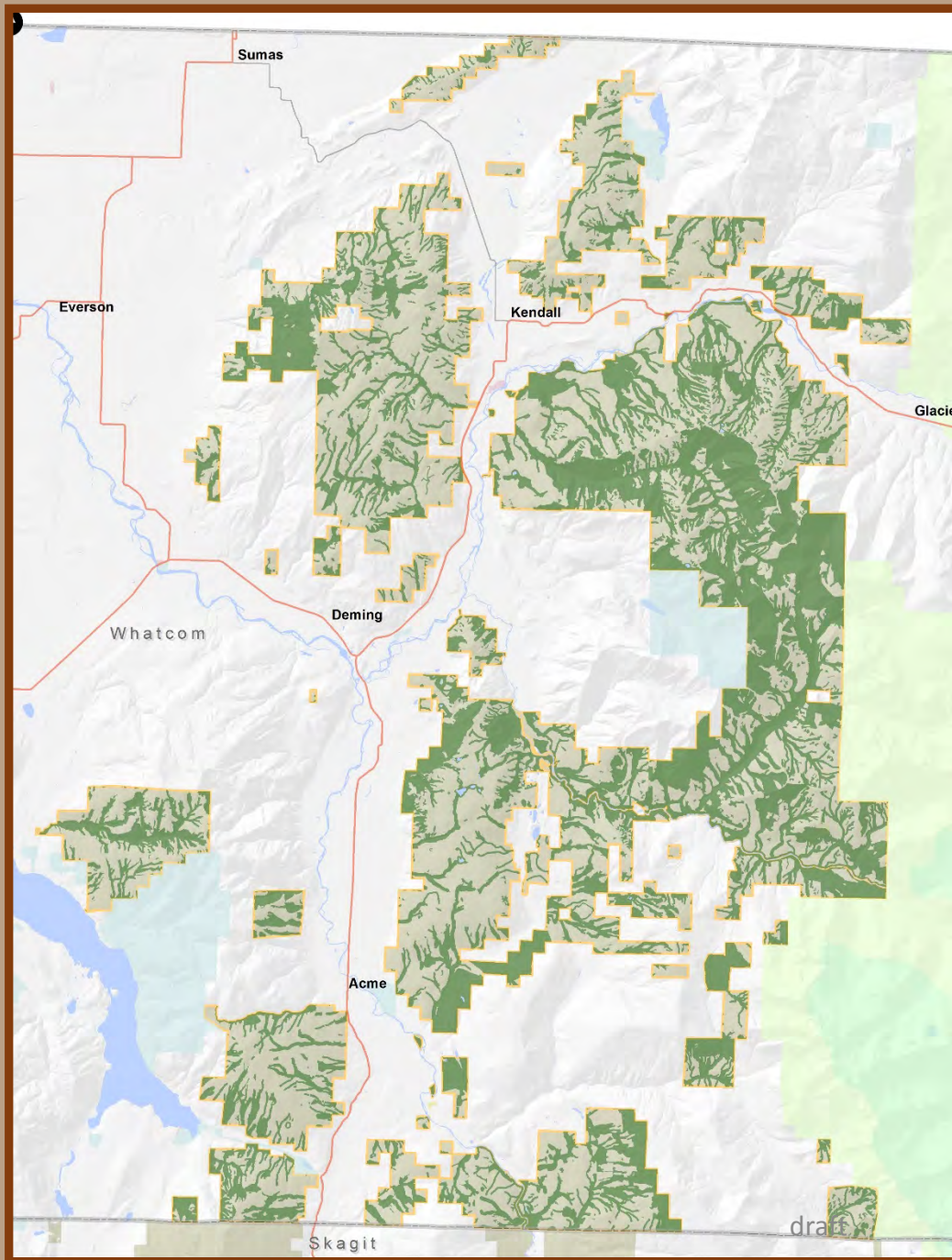
**Base LTFC**

**Long-term  
Forest Cover**



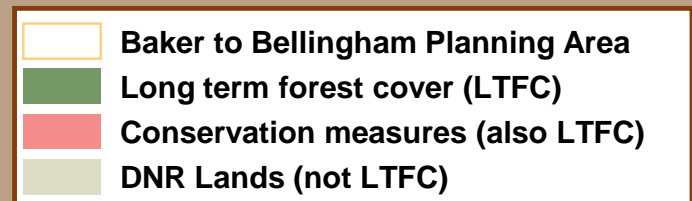
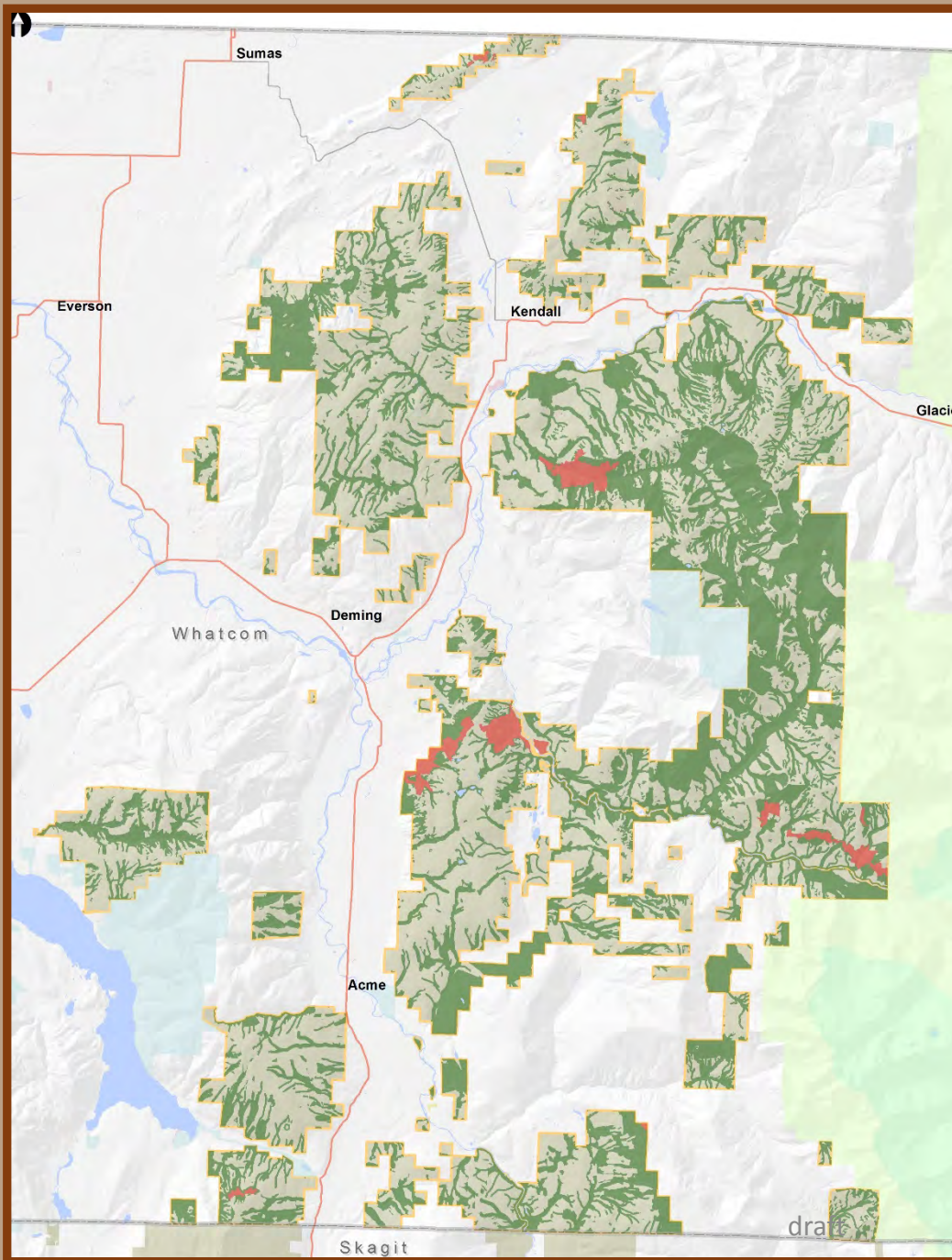
# Alternative A

**No new  
Conservation  
Measures**

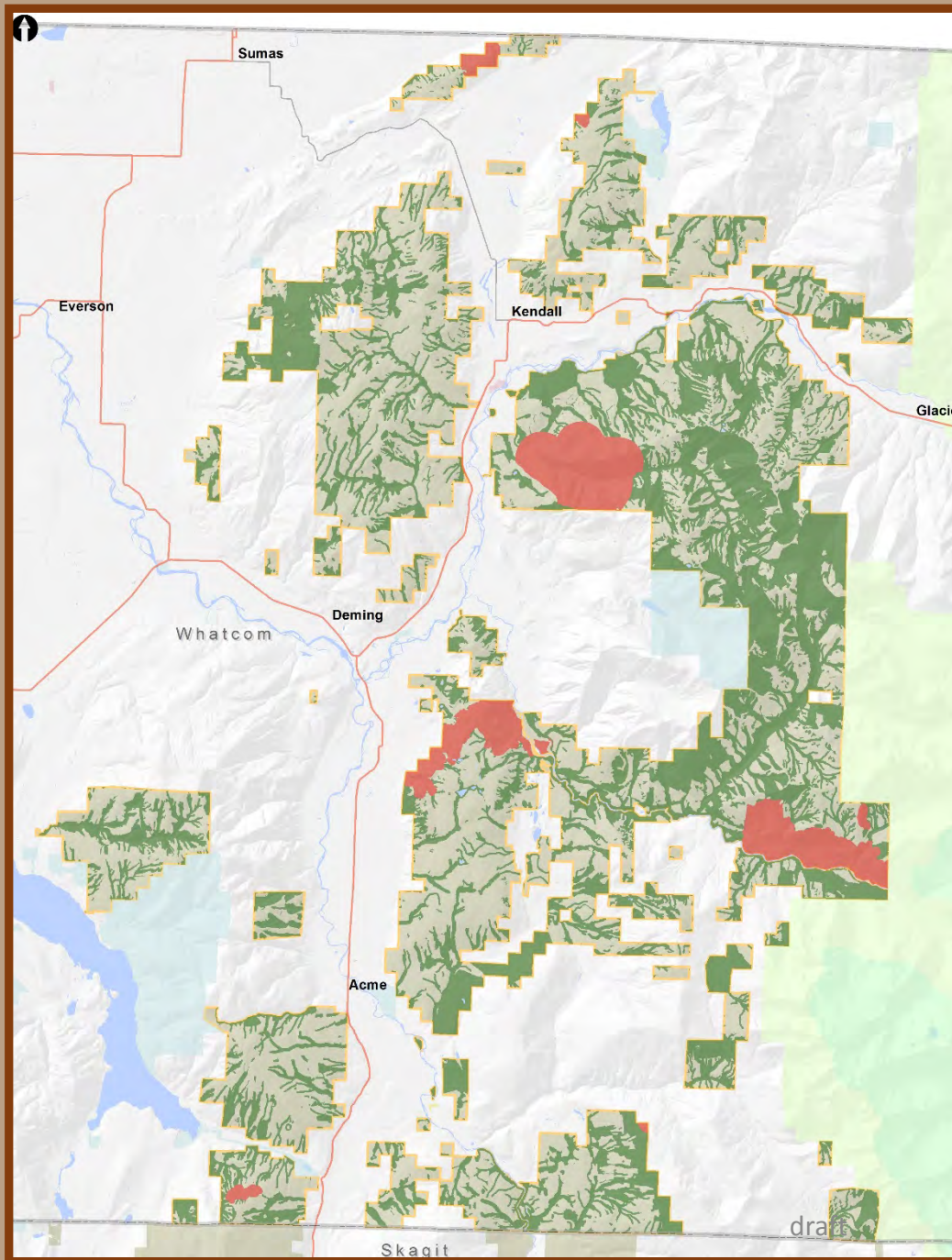


# Alternative B

- **Occupied Sites**



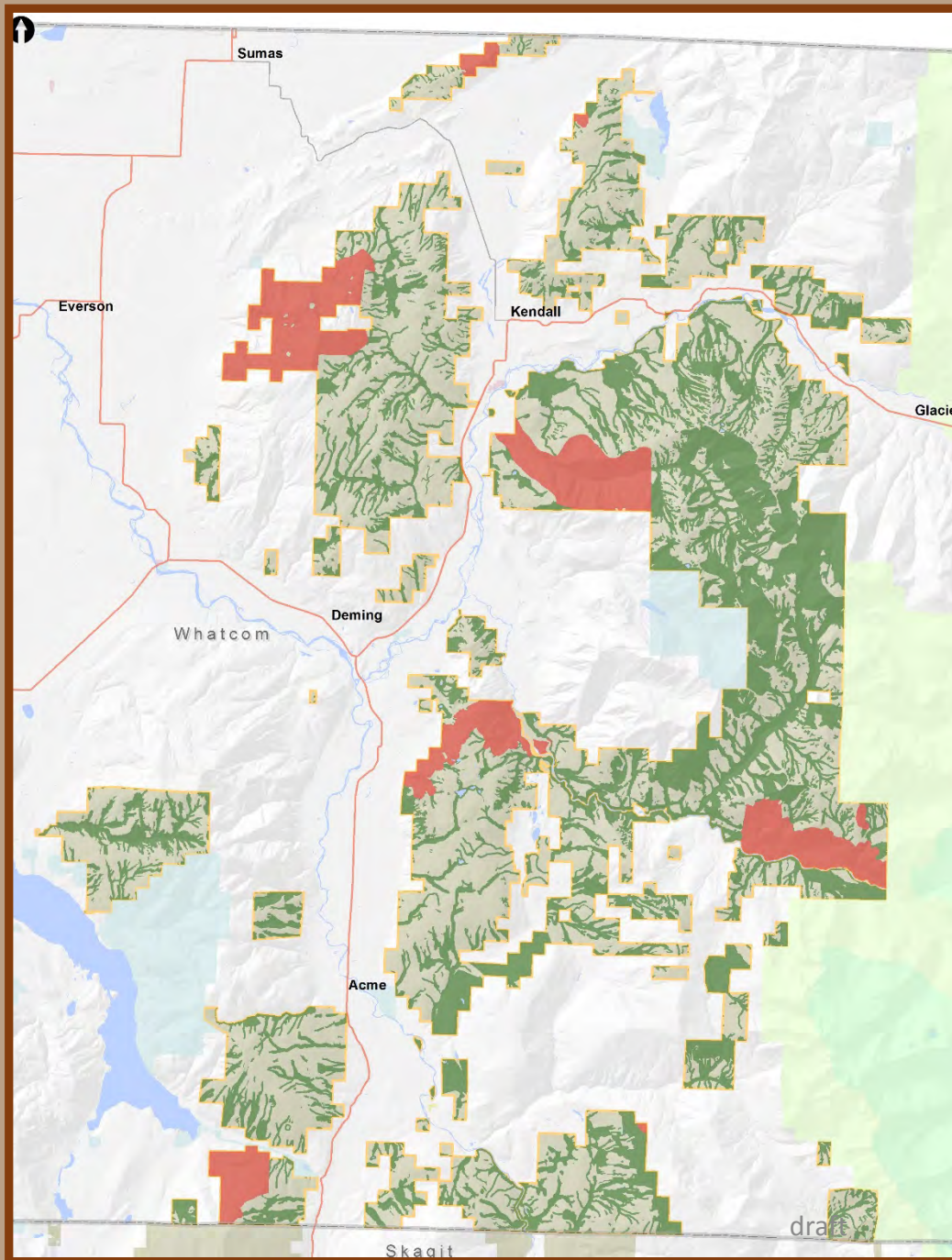
# Alternative C



- **Occupied Sites**
- **Buffers**
- **Emphasis Areas**
- **Special Habitat Areas**



# Alternative D

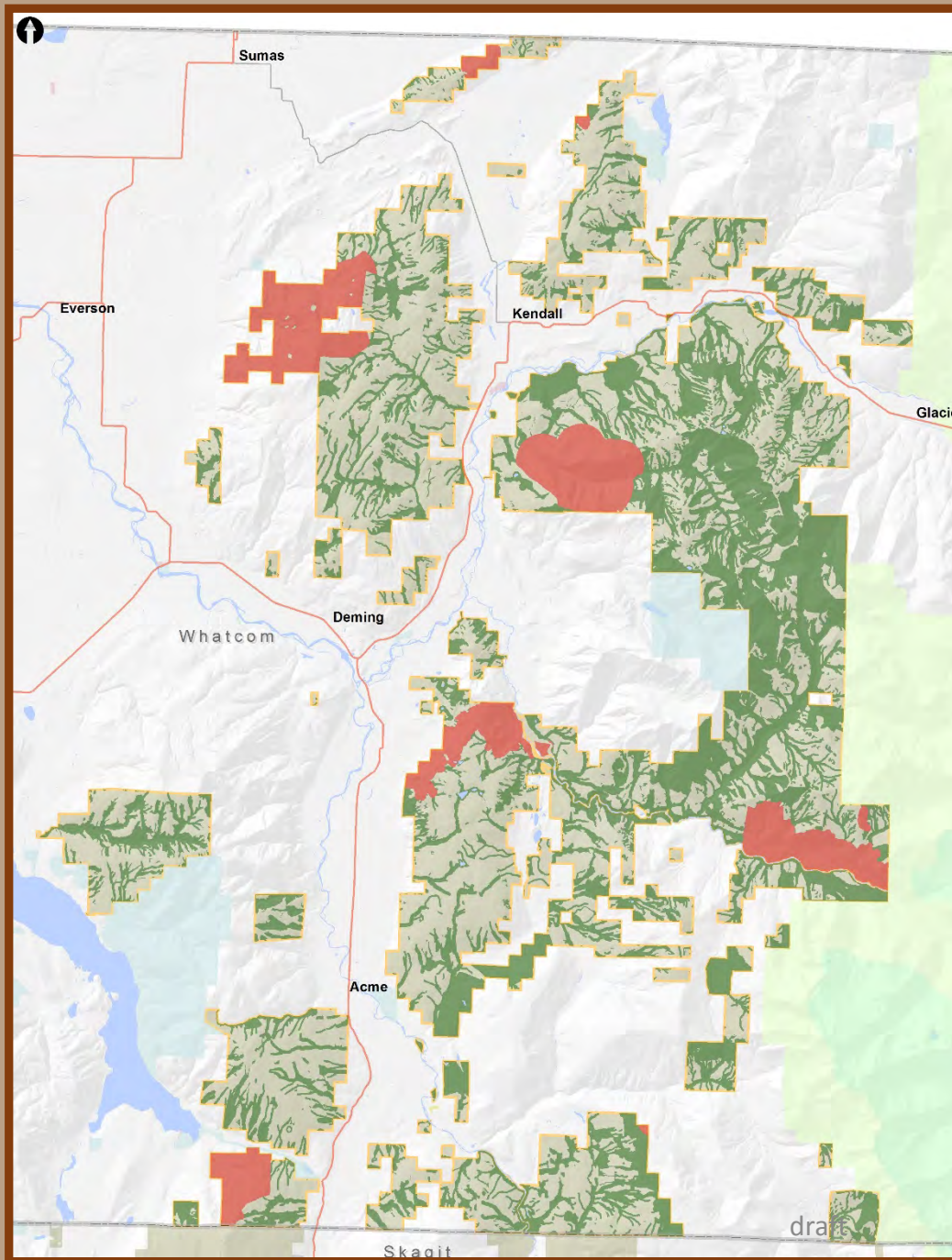


- **Occupied Sites**
- **Buffers**
- **Special Habitat Areas**



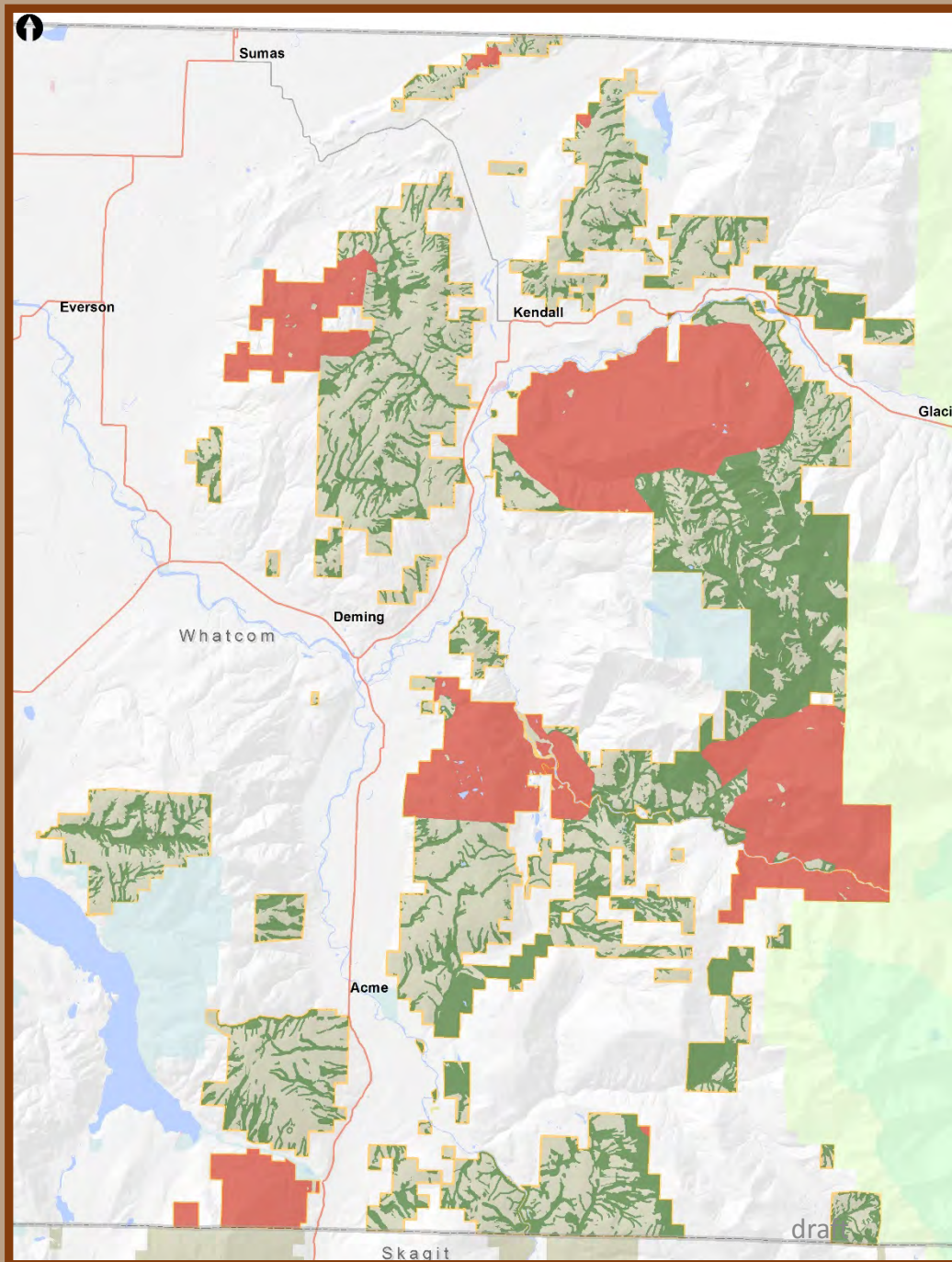
# Alternative E

## Combination of C & D

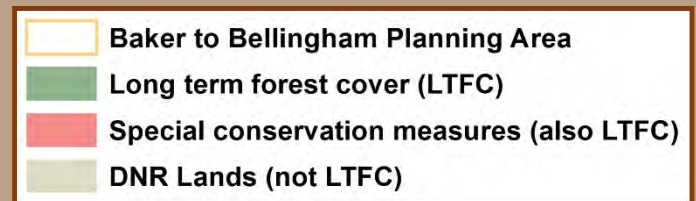




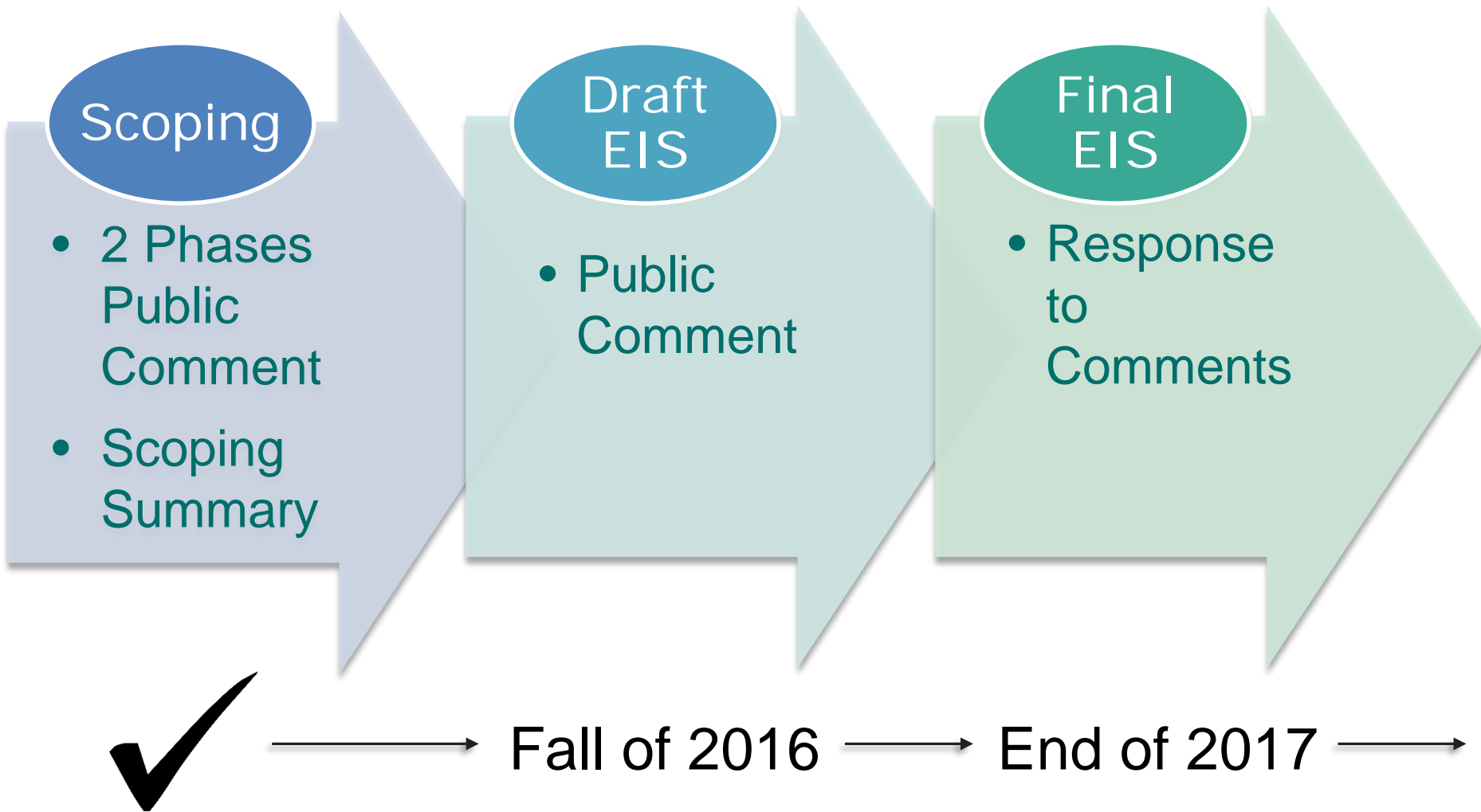
# Alternative F



- **Occupied Sites**
- **Buffers**
- **Marbled Murrelet Management Areas**

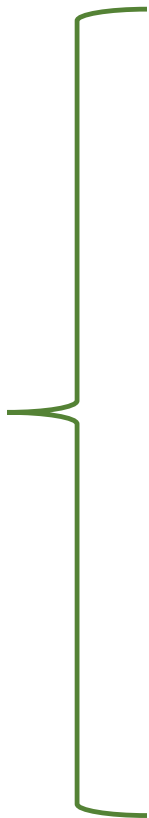


# Project Timeline





12+  
months



## Board of Natural Resources

- Approves conservation strategy



## US Fish and Wildlife Service

- Completes Biological Opinion, Findings, Record of Decision



## Board of Natural Resources

- Adopts conservation strategy



# MMLTCS & Baker to Bellingham

↳ MMLTCS has a longer timeline.



# How to Comment?

## Public Comment Periods Board of Natural Resources



