

## Forest Management Plan Scenario Modeled Outputs

Board of Forestry June 5, 2025

## Meeting Purpose



Develop a common understanding of the modeling process and outcomes.



Discuss modeled outcomes with FTLAC and BOF members.



Continue to grow the relationship between FTLAC and BOF members.

## Background

- Draft Western Oregon State Forests Management Plan
  - Goals and Strategies
    - Presented in November 2021 & March 2022
  - Draft Performance Measures
    - Presented in September 2023
  - Scenario Modeling
    - Options for management outside of HCP requirements
    - December 2023 Modeling
    - New Scenarios Approved in November 2024
    - Modeled outcomes presented today

## Modeled scenarios

	Run a	Run b	Run c
Scenario 1 – 30-year Volume Targets, with reset to non-declining flow after 30 years	185 MMBF on BOFL	195 MMBF on BOFL	205 MMBF on BOFL
Scenario 2 – Long Rotations with more even distribution of age classes	Up to 120 years in managed acres	Up to 150 years in managed acres	
Scenario 3 – Maximize  Volume over the whole modeling timeframe	Unlimited variation in volume between 5-year periods	Limit of +/- 10% variation in volume between 5-year periods	
Scenario 4 – Maximize Net Present Value using a 4% discount rate	Unlimited variation in volume between 5-year periods	Limit of +/- 10% variation in volume between 5-year periods	Limit of +/- 30% variation in volume between 5-year periods

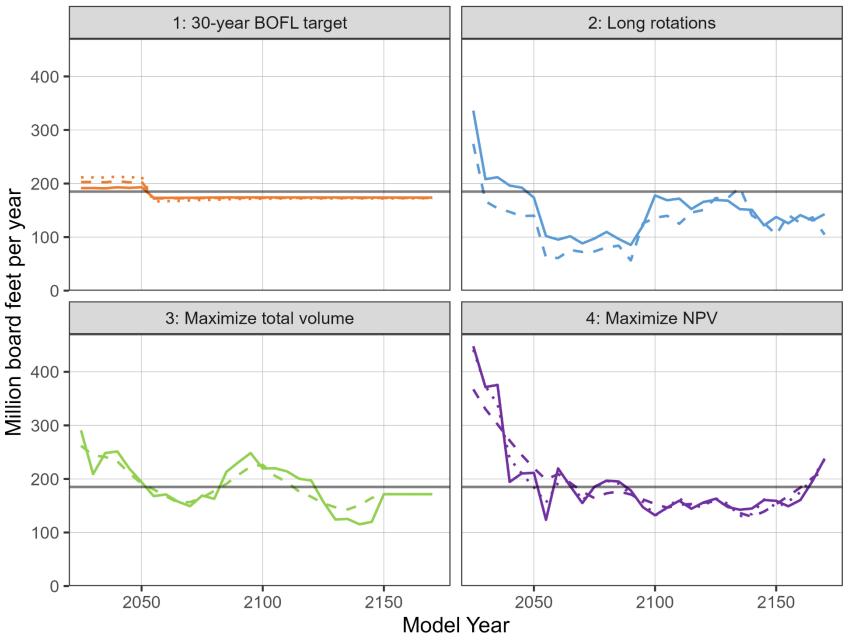
## Modeling method - Key differences from 2023

- Input data the same
  - SLI, updated with depletions through 2020
- HCA management is the same among scenarios
- More leeway in periodic variation of harvest volume
- Variability in ending inventory across scenarios
- Georegion scale
- Additional financial accounting and reporting

## Scenario Modeled Outcomes

- Harvest flow in General Stewardship areas
  - Overall volume and timing of departures
  - Distribution of revenues
- Management approach: timing and intensity of harvest, and standing inventory
- Habitat for covered species
- Forest age class structure through time
- Carbon storage

## Average annual harvest volume (BOFL + CSL)



1: 30-year BOFL target

a. 185 MMBF

– b. 195 MMBF

.... c. 205 MMBF

2: Long rotations

a. 120 years

b. 150 years

3. Maximize total volume

a. Unconstrained

- - b. 10% periodic limit

4. Maximize Net Present Value

a. Unconstrained

– b. 10% periodic limit

.... c. 30% periodic limit

Thin black line = 185 MMBF/year for comparison (Dec. 2023 report)

# Operable inventory outside of HCAs over 150 years 1: 30-year BOFL target 2: Long rotations



--- a. 185 MMBF

b. 195 MMBF

.... c. 205 MMBF

#### 2: Long rotations

--- a. 120 years

b. 150 years

#### 3. Maximize total volume

a. Unconstrained

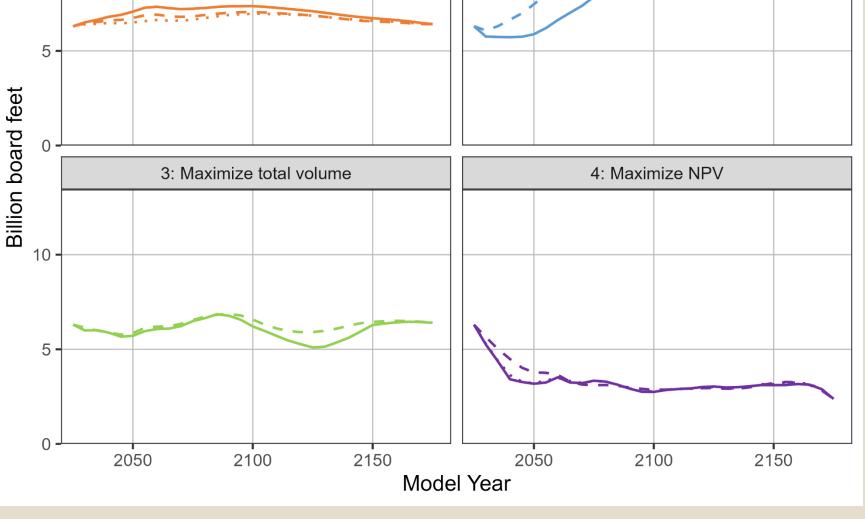
- - b. 10% periodic limit

#### 4. Maximize Net Present Value

a. Unconstrained

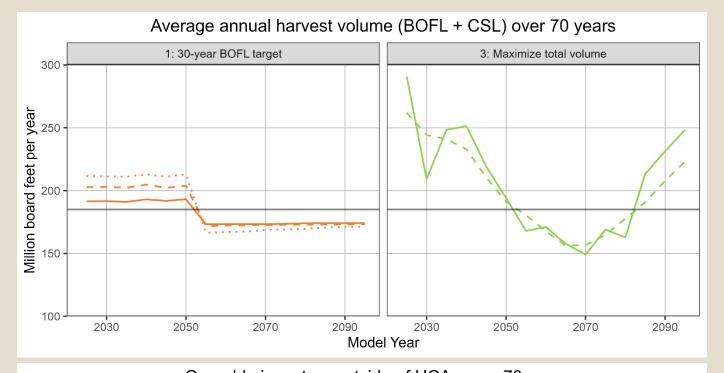
- - b. 10% periodic limit

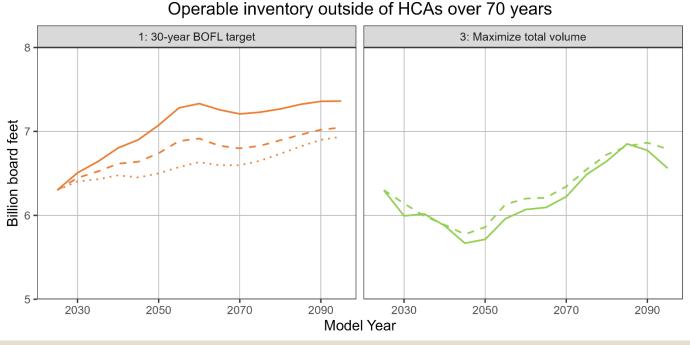
.... c. 30% periodic limit

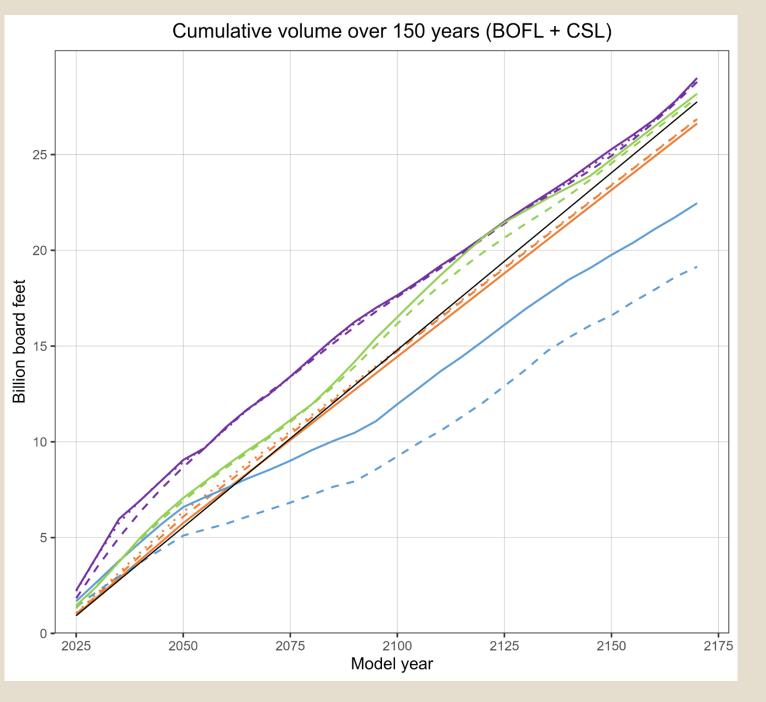


# Harvest volume and standing inventory tradeoffs in first 70 years for Scenarios 1 and 3 (note that y-axis is narrower than previous charts)









a. 185 MMBF

b. 195 MMBF

.... c. 205 MMBF

#### 2: Long rotations

a. 120 years

b. 150 years

#### 3. Maximize total volume

a. Unconstrained

- - b. 10% periodic limit

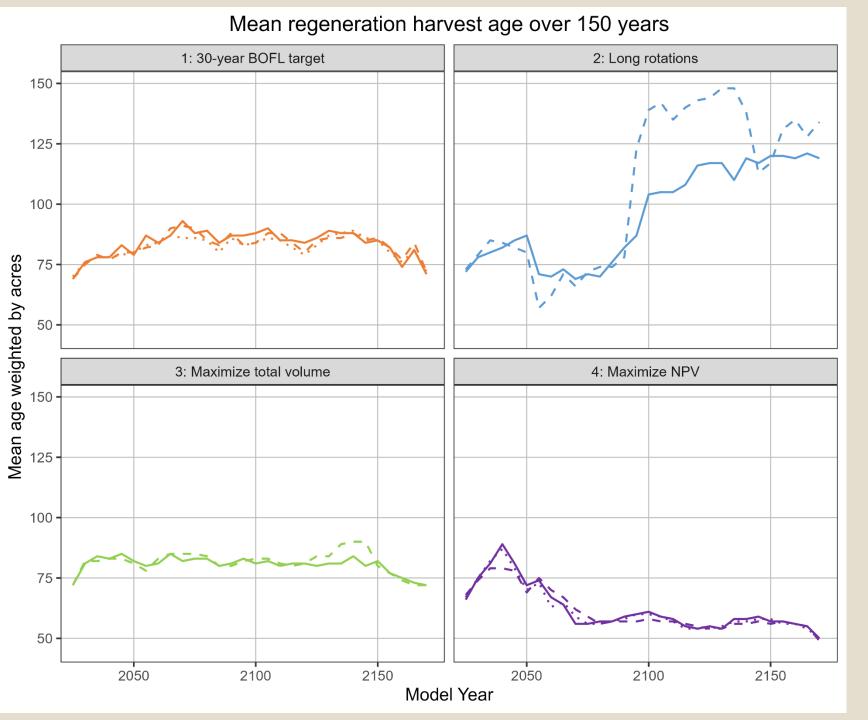
#### 4. Maximize Net Present Value

a. Unconstrained

– b. 10% periodic limit

· · · · c. 30% periodic limit

Thin black line = 185 MMBF/year for comparison (Dec. 2023 report)



--- a. 185 MMBF

b. 195 MMBF

.... c. 205 MMBF

#### 2: Long rotations

\_\_\_\_ a. 120 years

- - b. 150 years

#### 3. Maximize total volume

a. Unconstrained

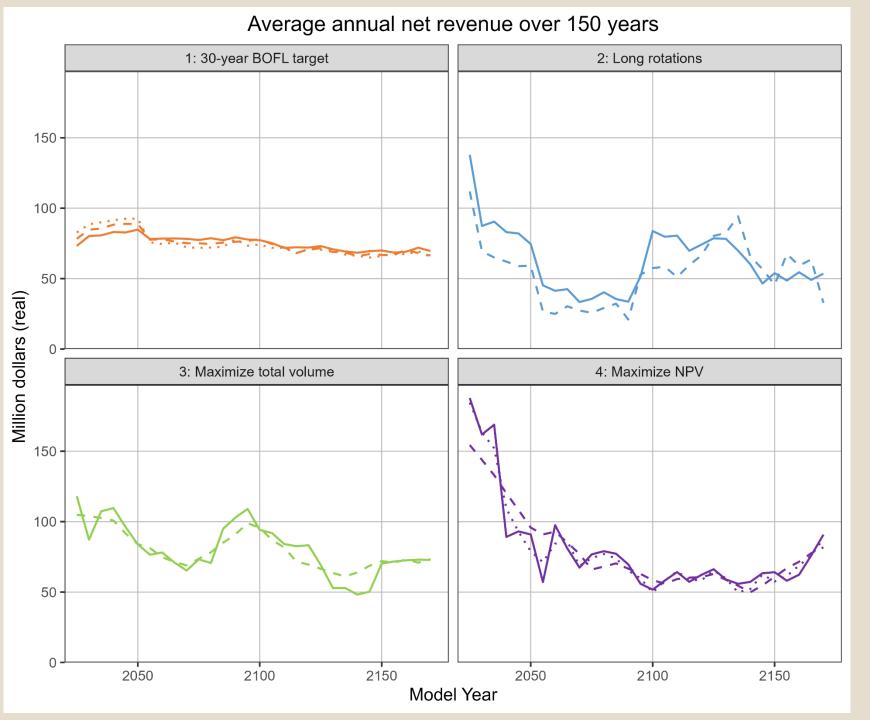
- - b. 10% periodic limit

#### 4. Maximize Net Present Value

a. Unconstrained

– b. 10% periodic limit

.... c. 30% periodic limit



--- a. 185 MMBF

- - b. 195 MMBF

.... c. 205 MMBF

#### 2: Long rotations

--- a. 120 years

- - b. 150 years

#### 3. Maximize total volume

a. Unconstrained

- - b. 10% periodic limit

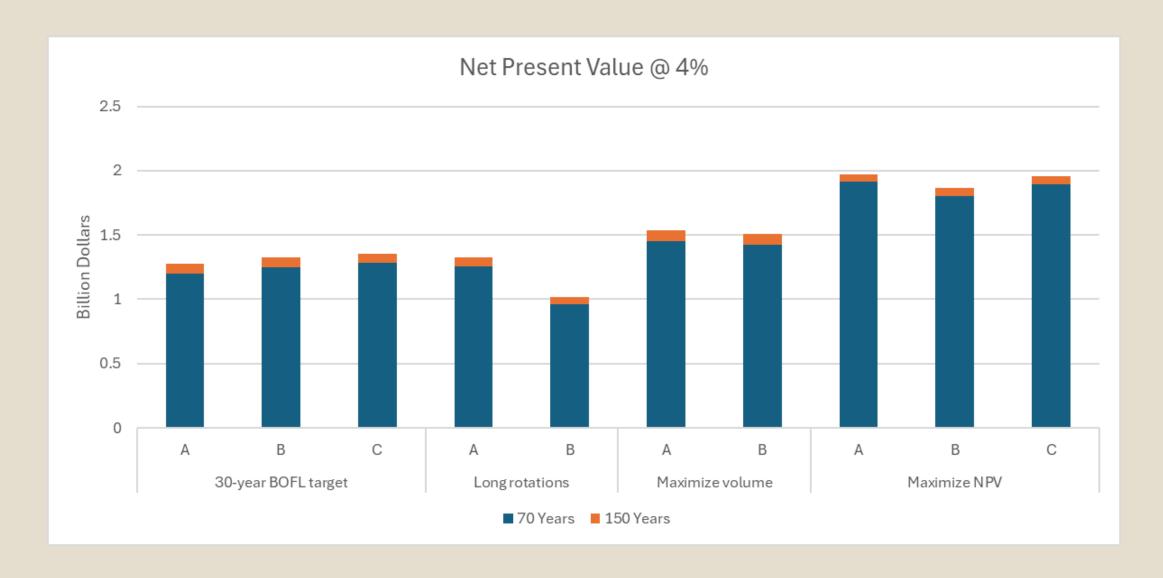
#### 4. Maximize Net Present Value

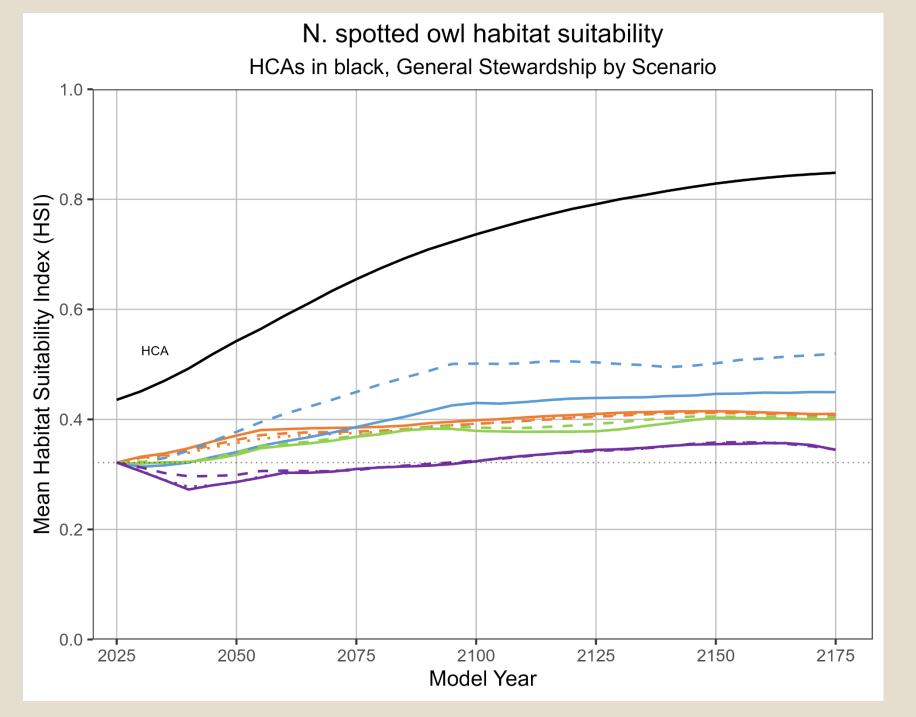
a. Unconstrained

- - b. 10% periodic limit

· · · · c. 30% periodic limit

## Net Present Value





---- a. 185 MMBF

– b. 195 MMBF

.... c. 205 MMBF

#### 2: Long rotations

--- a. 120 years

- - b. 150 years

#### 3. Maximize total volume

a. Unconstrained

- - b. 10% periodic limit

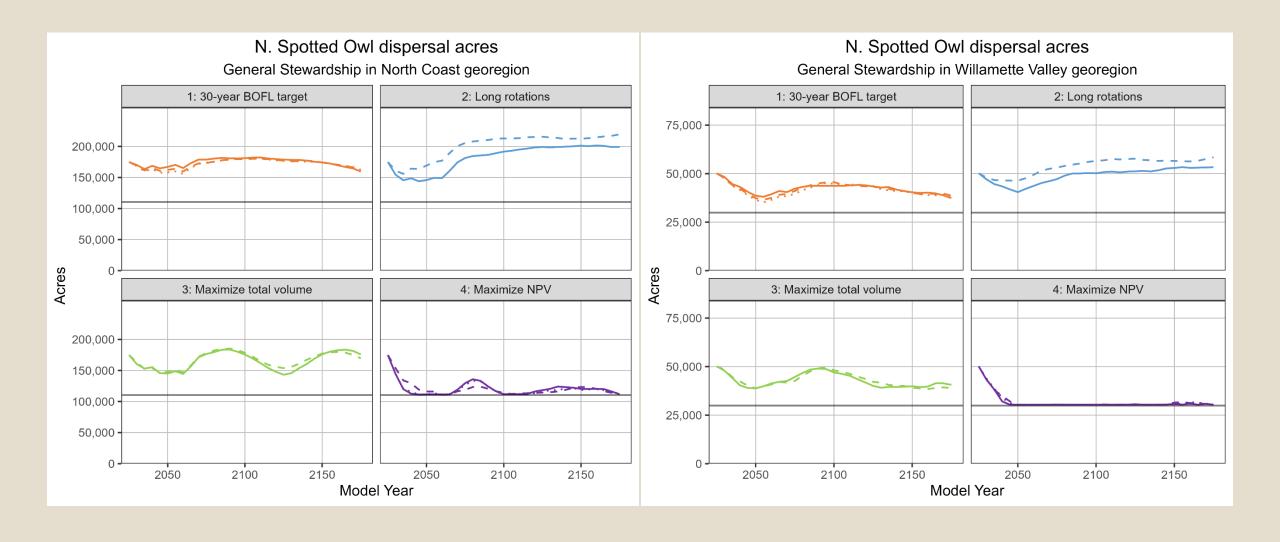
#### 4. Maximize Net Present Value

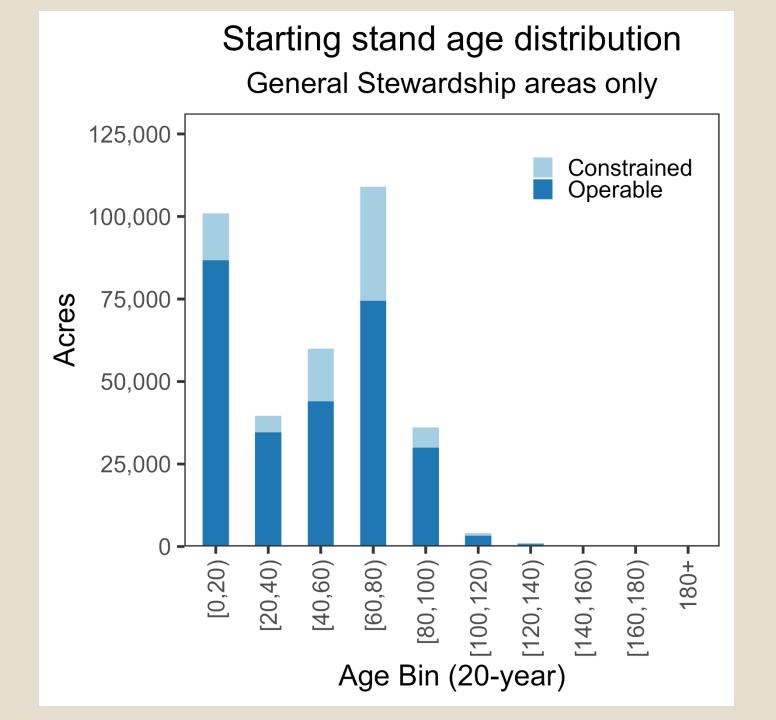
a. Unconstrained

- - b. 10% periodic limit

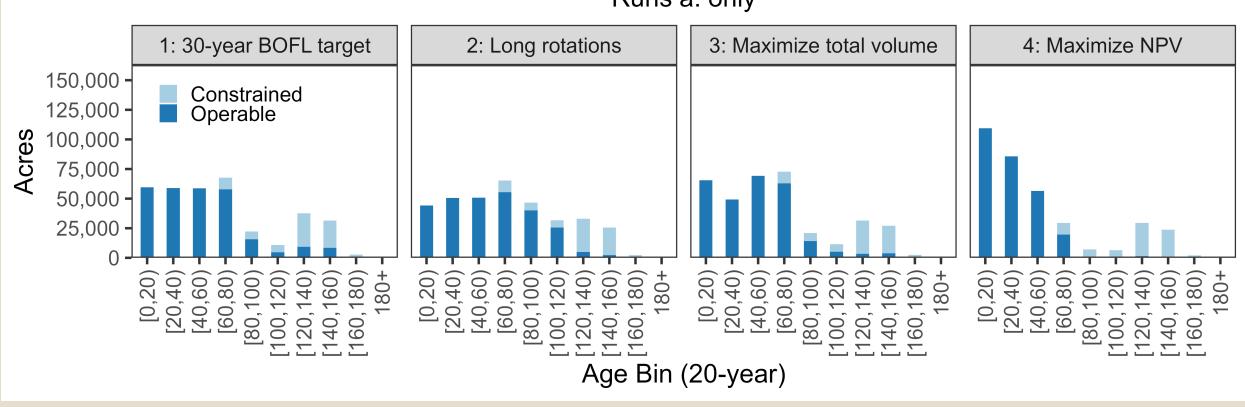
· · · c. 30% periodic limit

## Northern spotted owl dispersal requirement

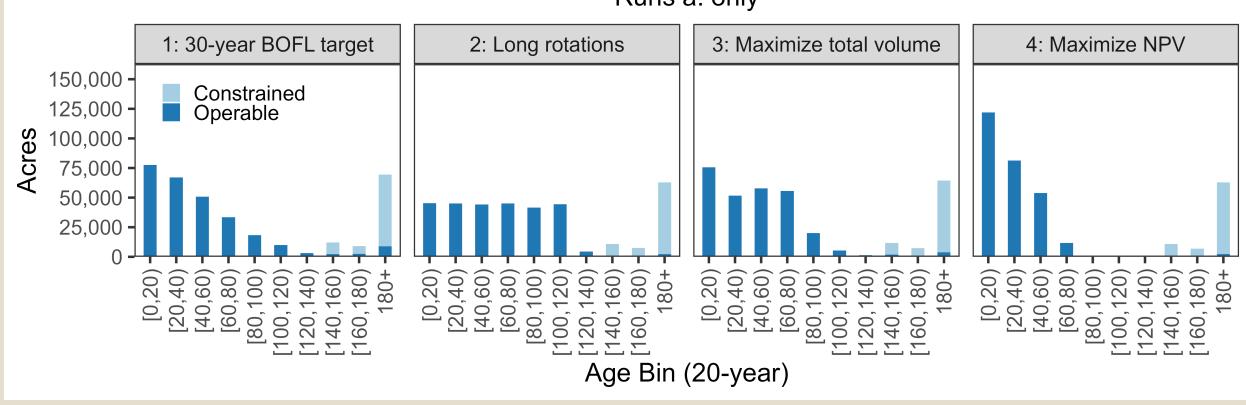




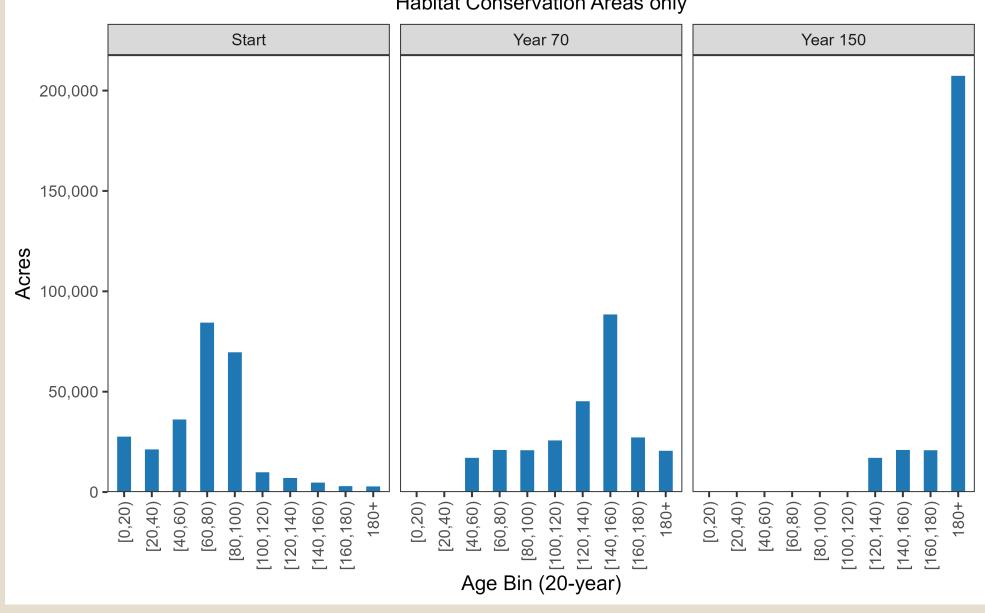
## General Stewardship stand age distribution at 70 years Runs a. only



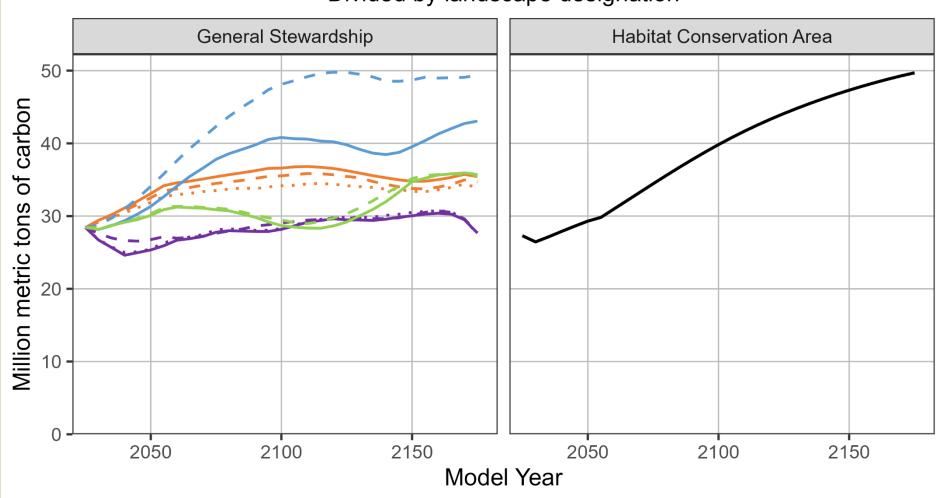
## General Stewardship stand age distribution at 150 years Runs a. only



Stand age distribution
Habitat Conservation Areas only



## Net forest carbon storage Divided by landscape designation



#### 1: 30-year BOFL target

a. 185 MMBF

- - b. 195 MMBF

.... c. 205 MMBF

#### 2: Long rotations

--- a. 120 years

- - b. 150 years

#### 3. Maximize total volume

a. Unconstrained

- - b. 10% periodic limit

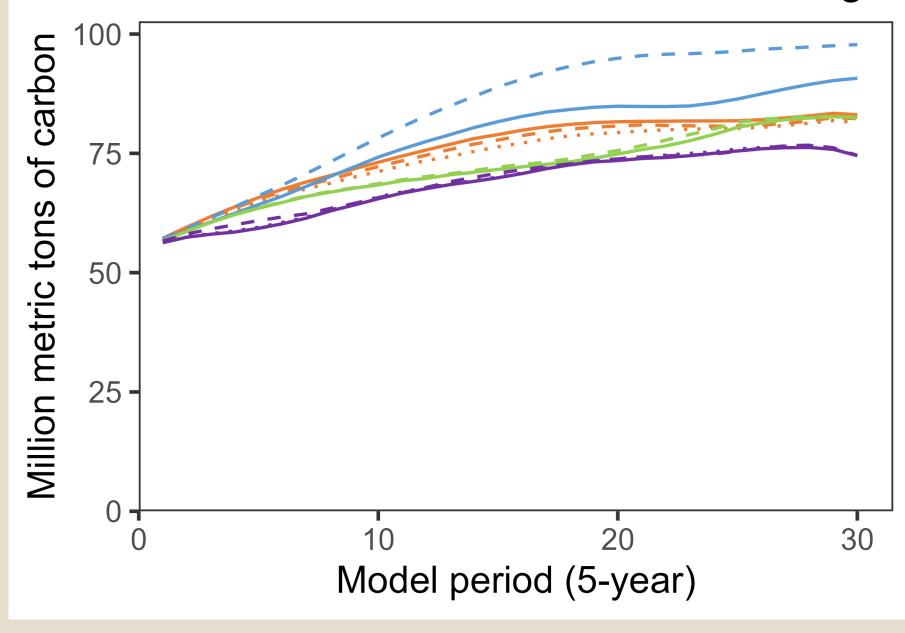
#### 4. Maximize Net Present Value

a. Unconstrained

- - b. 10% periodic limit

· · · c. 30% periodic limit

### Net Forest and HWP Carbon Storage



#### 1: 30-year BOFL target

a. 185 MMBF

– b. 195 MMBF

.... c. 205 MMBF

#### 2: Long rotations

--- a. 120 years

- - b. 150 years

#### 3. Maximize total volume

a. Unconstrained

- - b. 10% periodic limit

#### 4. Maximize Net Present Value

a. Unconstrained

- - b. 10% periodic limit

... c. 30% periodic limit

## Social

- Recreational impacts
  - Recreation infrastructure is affected similarly among all scenarios
- Socioeconomic analysis to come

## Questions?

- Next Steps
  - Socio-Economic Report July 2025
  - Performance Measures September 2025

## Discussion Guidelines

- Honor the agenda
- Respectful, candid, and constructive discussions
- Learn each other's interests
- Ask questions to understand why
- Hard on the problems, soft on the people
- Balance of speaking time
- Avoid side conversations/phones off

## Discussion questions: Harvest volume

 The different scenarios have different cumulative and temporal volume outcomes. What thoughts or concerns do you have about those outcomes?

 What is most important to you and why, maximizing total cumulative volume over time or providing an even flow of volume?

# Discussion questions: Revenue distribution

 What thoughts or concerns do you have about cumulative and temporal revenue outcomes?

 What mechanisms exist for managing revenue volatility? Can you retain revenue from windfall years to spend during lean years, or are there legal constraints on banking that revenue?

## Discussion questions: Forest stand ages

 What thoughts or concerns do you have about the changes in forest stand age class distributions over time?

 Are the outcomes of any specific scenario ideal, or unacceptable?

## Discussion questions: Harvest age

 What thoughts or concerns do you have about the average age of trees harvested in clearcuts (in near or long-term)?

 Do you have thoughts on the specific risks and benefits associated with this average harvest age?

## Discussion questions: Native species habitat

- What thoughts or concerns do you have about the overall habitat suitability of the landscape for the covered fish and wildlife species among the scenarios?
- Should ODF manage towards the lower or higher end of spotted owl dispersal requirements outside of HCAs? Why or why not?
- Do you have thoughts or concerns regarding habitats for noncovered species, e.g. are any habitat types missing or underrepresented on the landscape?

## Discussion questions: Carbon storage

 All of the scenarios are positive for forest carbon storage outcomes, primarily due to the HCAs. What thoughts do you have about the relative outcomes for the general stewardship areas of the landscape?

• Is there a specific amount of, or trend in, forest carbon storage that is important to you, and why?

## Discussion questions: Standing inventory

Different levels of standing inventory provide different decision space at that time (i.e., lower standing inventory makes it difficult to increase harvest, while greater standing inventory provides an additional buffer within which to increase harvest).

 What are your thoughts or concerns on standing inventory at the end of the modeled scenarios, or the end of the permit term?