**STAFF REPORT**

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| Agenda Item No.: | 9 |
| Work Plan: | State Forests Work Plan |
| Topic: | State Forests Management |
| Presentation Title: | Performance Measures for Western Oregon State Forests Management |
| Date of Presentation: | March 4, 2026 |
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## CONTEXT

Forest Management Plans (FMP) provide the overarching direction for state forestlands managed by ODF. These plans are developed pursuant to Oregon Administrative Rule (OAR 629-035-0030) and are approved by the Board of Forestry to codify the Board's finding that the FMP meets Greatest Permanent Value (OAR 629-035-0020).

The State Forests Division (Division) has initiated the rulemaking process for the draft Western Oregon State Forests FMP. Since the FMP is a high-level policy document intended to allow for a broad range of implementation pathways, the Board has considered multiple scenarios with different management approaches consistent with the draft FMP.

At the November 2025 special Board meeting, Division staff presented an implementation pathway based on an updated model scenario. Based on feedback at that meeting, this presentation will show the expected Performance Measures that would result from that scenario.

## FMP SCENARIO

The Division's forest activity model emulates how the forest could be managed over time with forest stands grown forward from the current inventory. It projects harvest volumes, revenues, carbon sequestration, habitat quality, and other forest stand metrics across the landscape by simulating decisions which meet a set of management objectives according to model inputs, such as silvicultural practices and landscape constraints.

The Division designed scenarios to include departures from even-flow harvest volumes to provide increased near-term revenue to counties and even out the existing unbalanced stand age distribution over time. The levels of the departures are held constant in 10-year steps similar in duration to Implementation Plans. After 30 years, a harvest floor was set to provide certainty about mid-term harvest and other co-benefits while preserving flexibility and options for the next generation.

For this report, the Division is presenting the scenario that harvests 215 MMBF annually for the first 10 years, with subsequent 10-year steps of 205 and 195 MMBF average annual harvest volume (Scenario 5a from the November 2025 Board meeting). Unlike the previous Board meetings that discussed differences between scenarios, this report will share results from one scenario with upper

and lower levels for each metric that would occur with +/- 5% of cumulative harvest volume variation within the first 30 years. From this range of outcomes, the Performance Measures below will show what the Division believes is achievable in actual implementation plans across social, economic, and environmental benefits.

**PERFORMANCE MEASURES**

Performance Measures are a select set of metrics that the Board will use to evaluate management commitments and outcomes with respect to the objectives and intent expressed through the FMP guiding principles, management approach, and goals. The Performance Measures have component metrics (Attachment 1) that will be monitored and reported for the Board and others to track management commitments and outcomes readily across a broad range of ecosystem services provided by State Forests. Component metrics will be measured and reported at different time scales depending on the resource. The best time to consider them as a set for adaptive management would be during Implementation Plan revisions.

**RECOMMENDATION**

Information only.

**NEXT STEPS**

After this meeting, the Division will:

1. Incorporate Board feedback on the Performance Measures and their components.
2. Present the final draft FMP to the Board in June 2026, and initiate a final round of rulemaking on the final draft.
3. Start modeling for Implementation Plans (to begin in FY2028) to accompany the draft FMP.
4. Present the final draft FMP to the Board in September 2026 for final adoption by the Board.

**ATTACHMENTS**

1. List of Performance Measures and their component metrics.
2. Performance Measure graphs based on the FMP modeled scenario.

**11 Performance Measures (arranged alphabetically) with their component metrics and notes about their measurement and reporting.** Note that some have changed since the last presentation to the Board. Other acronyms and terms used in table: emphasis area – land classification into General Stewardship and Habitat Conservation Areas; FIA – Forest Inventory and Analysis, plot network monitored by the US Forest Service; HCP – Habitat Conservation Plan; NSO – Northern spotted owl.

| Performance Measures | Component Metrics | Notes |
|---|---|---|
| 1. Adaptive Capacity of Forests | 1a. Stand age class distribution by emphasis area | Acres by stand age classes in scenario forecasts |
| | 1b. Tree species composition by emphasis area | Mean basal area per acre by species group |
| | 1c. Tree canopy layering (structure) by emphasis area | Mean Diameter Diversity Index (DDI) |
| | 1d. 10-year growth rates by species | From FIA plot remeasurements of trees |
| 2. Aquatic and Riparian Resources | 2a. Physical attributes in streams (habitat limiting factors) | HCP requirement, not yet monitored |
| | 2b. Water temperature monitored for permit area | HCP requirement, not yet monitored |
| | 2c. Catchment assessment of regeneration harvests | Scenario forecasts stand ages <10 years old |
| 3. Carbon Sequestration & Storage | 3a. Carbon sequestration in live trees | Scenario forecasts flux in aboveground carbon |
| | 3b. Live tree carbon storage by emphasis area | Scenario forecasts aboveground carbon |
| | 3c. Harvested wood product sequestration & storage | Modeled from harvest volume |
| 4. Division Finances | 4a. Forest Development Fund balance and forecast | Existing annual reporting |
| | 4b. Annual revenue and operating expenses | Existing annual reporting, scenario revenues |
| 5. Economic Opportunities | 5a. Timber direct/indirect employment and income | 2025 EcoNW socioeconomic report |
| | 5b. Non-timber direct/indirect employment and income | 2025 EcoNW socioeconomic report |
| 6. Financial Support for Counties | 6a. Revenue transferred to counties and taxing districts | Scenario revenues with market assumptions |
| 7. Habitat Elements for Wildlife | 7a. Large trees >30-inch diameter | FIA plot measurements |
| | 7b. Large snags and volume of downed wood | FIA plot measurements |

| Performance Measures | Component Metrics | Notes |
|---|---|---|
| | 7c. Connectivity between late seral forest stands | Mean distance between suitable NSO habitat |
| | 7d. Covered species habitat meets stay-ahead provisions | HCP requirement, all scenario meet it. |
| 8. Harvest and Inventory | 8a. Acres of management by type (including forest health) | Existing annual reporting, scenario forecasts |
| | 8b. Standing merchantable volume in live trees | Scenario forecasts |
| 9. Recreation, Education, and Interpretation Opportunities | 9a. Percent of recreation facilities (not trails) open annually for the recreation season | Access to opportunities |
| | 9b. Critical trail assets (bridges/culverts) in good or better condition | Related to HCP required assessments and best management practices |
| | 9c. Educational interactions with school classes or individual students | Existing annual reporting |
| 10. Transportation | 10a. Transportation assessment (hydrological connectivity and fish passage barriers of road system) | HCP requirement, assessment ongoing |
| 11. Tribal Cultural Resources | 11a. Development of new Division policies following the FMP goals: *Tribal Access and Use of Natural Resources* and *Cultural Resources Protection* | Report on how strategies for these FMP goals are being enacted with Tribal Partners |

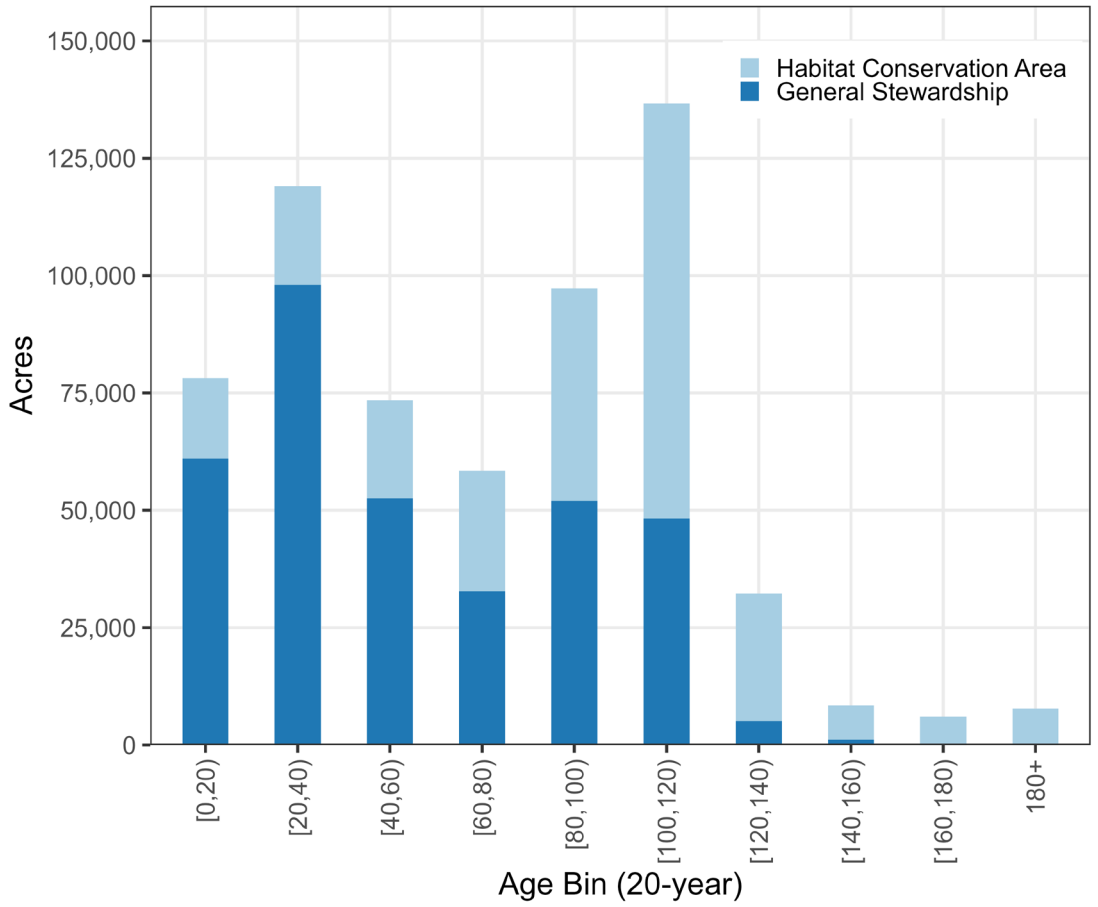
# Board Performance Measures

- Graphs of component metrics present the 30-year forecast for FMP modeled scenario 5a. Departure Steps starting at 215 MMBF.
  - Uncertainty ranges are displayed for harvest levels +/- 5% over 30 years, best represented by the forecasts from 5b. and 1a. modeled scenarios. When displayed by emphasis area (General and Habitat Conservation Area), the HCA graph has no uncertainty range because all scenarios had the same HCA management.
  - When available from FIA monitoring, component metrics show the current baseline for State Forests and comparisons to FIA estimates of Federal and Private forestland adjacent to State Forests. These have 95% confidence intervals for sampling uncertainty.
- Performance Measures or component metrics without current monitoring are included with a description of when they would start.

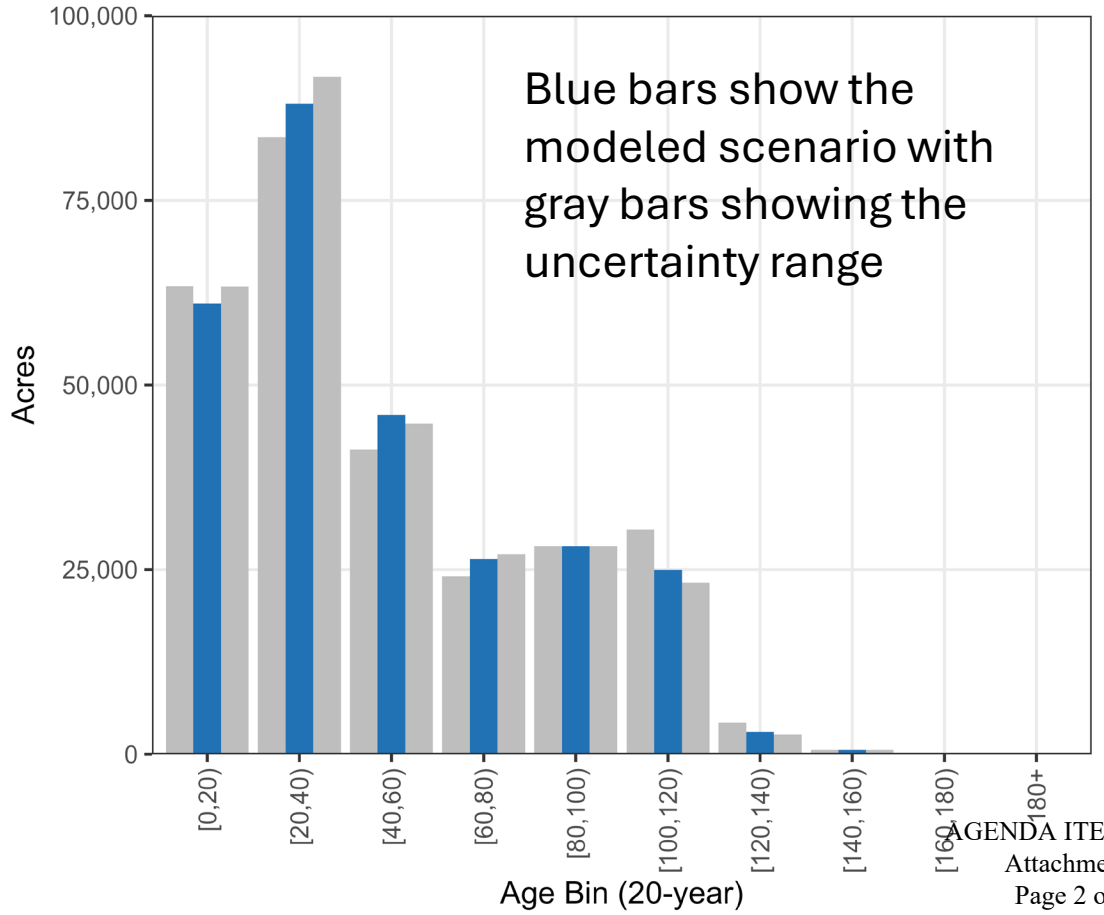
# 1. Adaptive Capacity of Forests

## 1a. Stand age class distribution by emphasis area

Current age classes by emphasis area




General stewardship age classes in 30 years



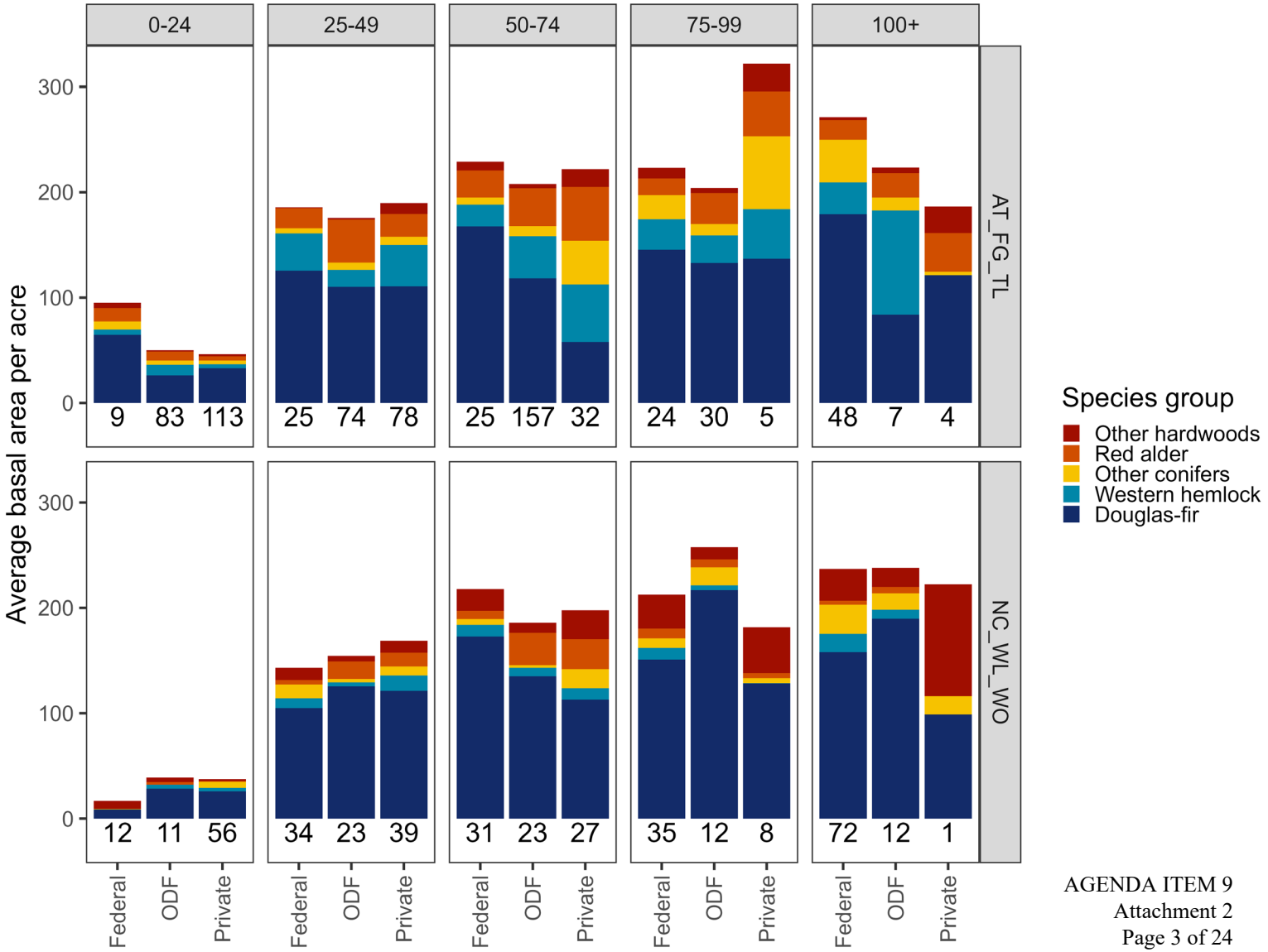
# 1. Adaptive Capacity of Forests

## 1b. Tree species composition by emphasis area

## (slide 1 of 2)

This graph shows the most recent FIA estimates (2013-2022 measurements) of species basal area per acre by ownership group stand age, and georegion.

Stand age is in 25-year groups (columns). Georegion is divided by North Coast districts (top row) and other districts (bottom row). The number of FIA plots averaged in each sample is indicated below the bars.



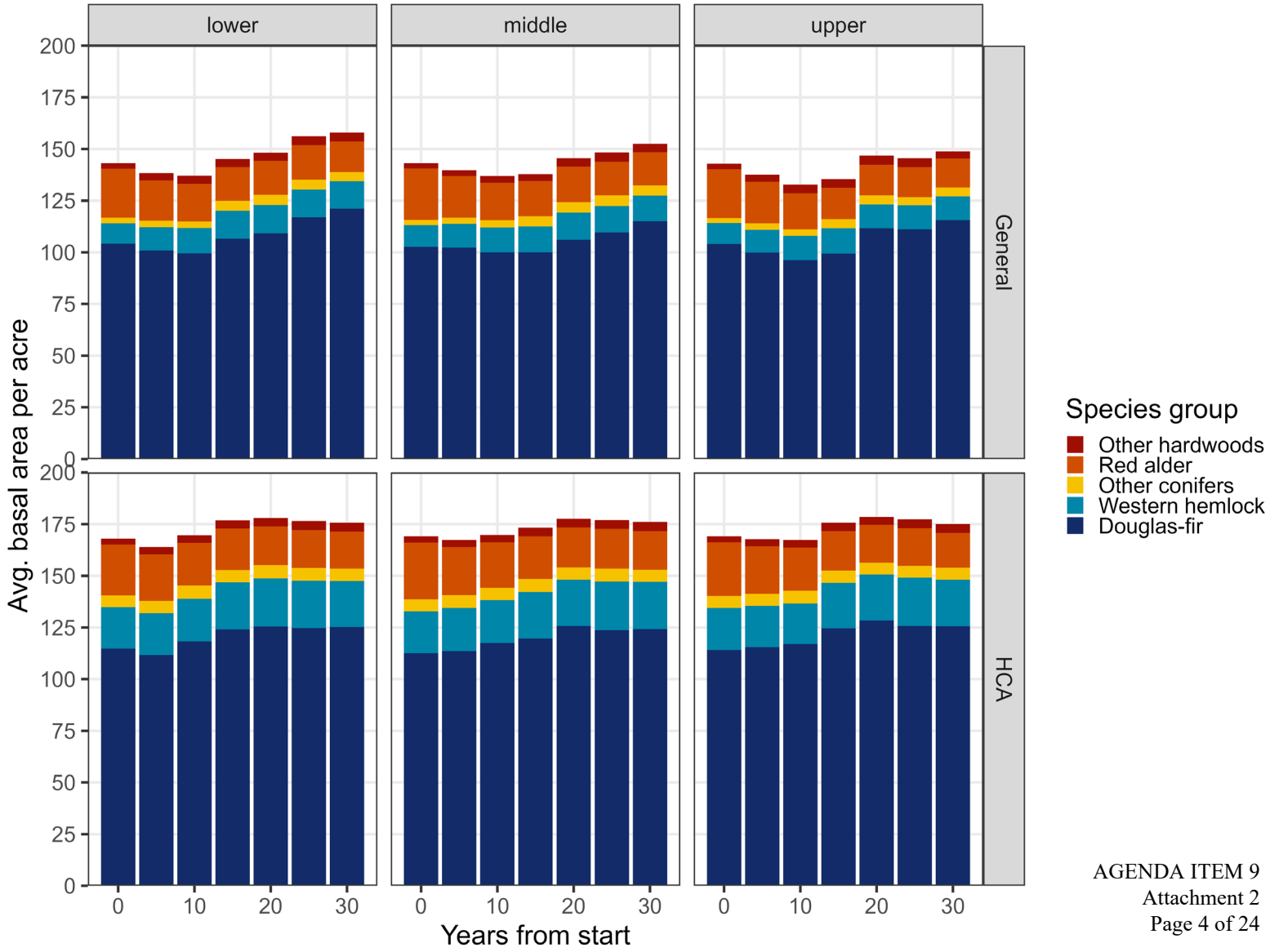
# 1. Adaptive Capacity of Forests

## 1b. Tree species composition by emphasis area

## (slide 2 of 2)

This graph shows the scenario forecast of tree basal area per acre for State Forests by emphasis area (General in top row, and HCA in bottom row).

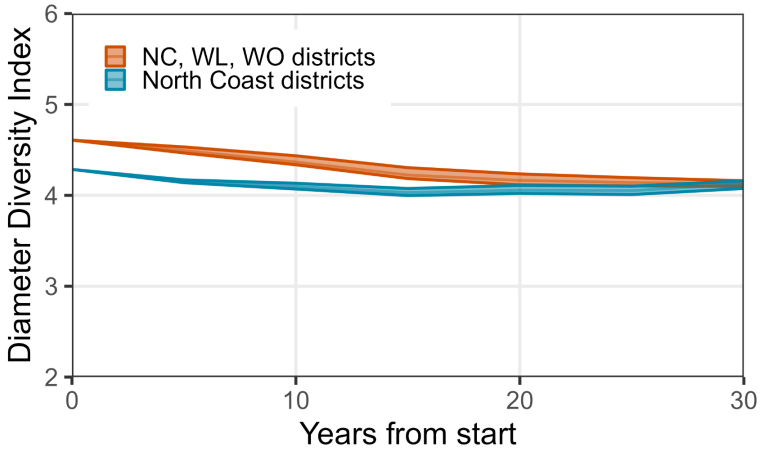
The columns show the uncertainty range for the presented scenario (middle) and the outcomes with harvest volume of 5% lower (left) or 5% higher (right).



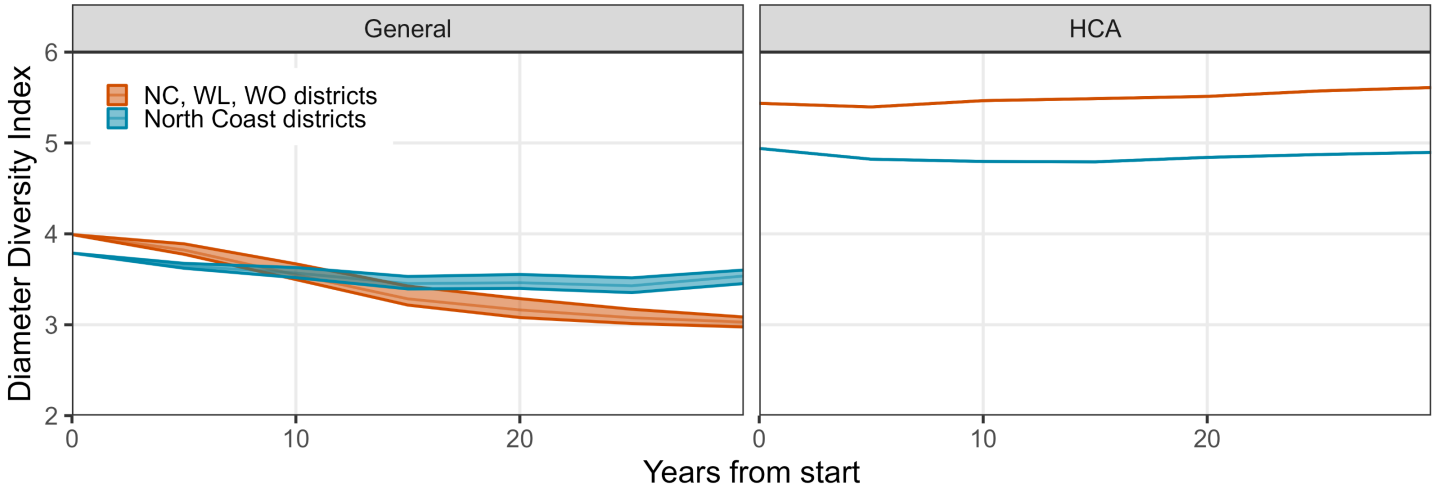
# 1. Adaptive Capacity of Forests

## 1c. Tree canopy layering (structure) by emphasis area

Divided by georegion




Divided by emphasis area and georegion




Diameter Diversity Index (DDI) is commonly used to describe the similarity of a stand's layering to an old-growth stand based on the number of trees in different size classes.

Graphs show the average across all stands in each category.

DDI is a component of the complex forest structure designation in the 2010 FMP (threshold varied by forest type from 5.8-6.5). It is displayed by georegion because the previous Performance Measure for complex forests was for the North Coast districts only.

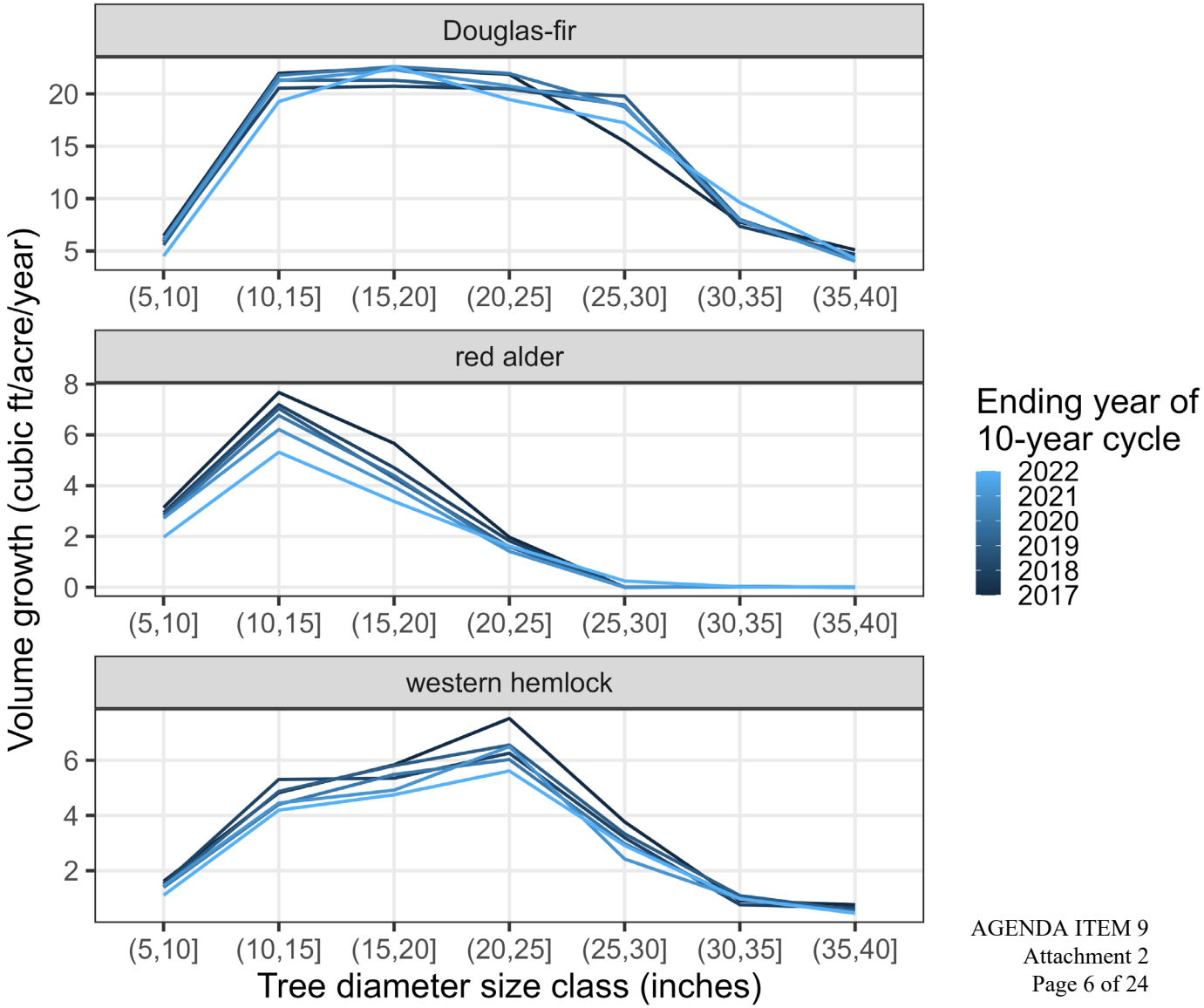
# 1. Adaptive Capacity of Forests

## 1d. 10-year growth rates by species

FIA remeasures the same trees on a 10-year cycle. Average growth rates can be analyzed by species, forest type, or region to assess vulnerability to climate change.

In this example, average volume growth per acre varies by species and tree size. The lines for each species show remeasurement year. Of these trees, red alder and western hemlock growth has been trending lower in recent years.

The modeled scenarios did not include changes in growth rates due to climate change.



# 2. Aquatic and Riparian Resources

2a. Physical attributes in streams (habitat limiting factors)

2b. Water temperature monitored for permit area

These components are monitored as HCP commitments and will be available for the Board when they are reported to the Federal Services. The first HCP monitoring report would be expected in November 2027. Physical attributes will be measured in partnership with the ODFW Aquatics Inventories Program. Water temperature monitoring will be developed with HCP adoption.

# 2. Aquatic and Riparian Resources

## 2c. Catchment assessment of regeneration harvests

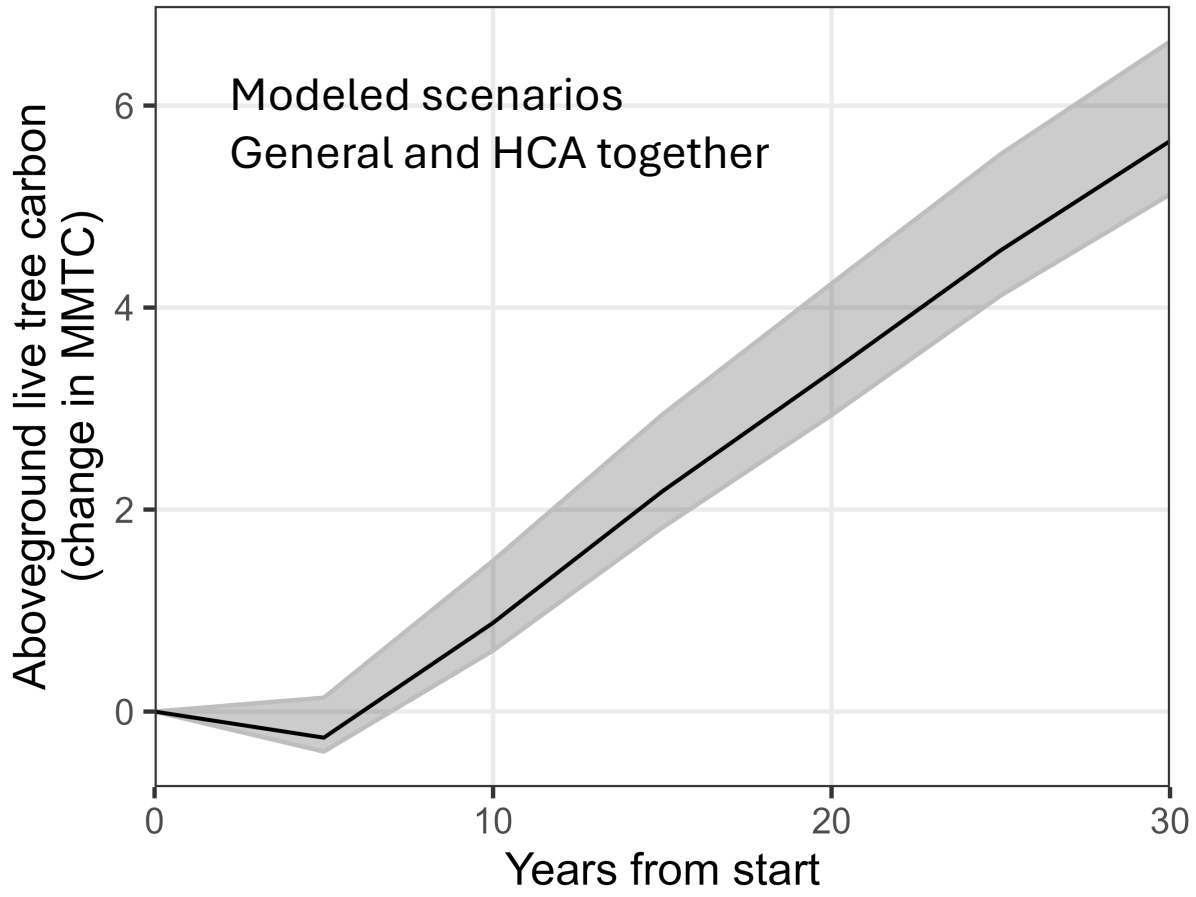
Drinking water source assessment for Public Water Systems with ODF-managed lands comprising more than 10% of the catchment. Forecasted range of the average % of recent (i.e., within 10 years) clearcut harvests over the first 30 years.

| PWS Name | Catchment Acres | ODF % of catchment | Average % <10 years old (lower) | Average % <10 years old (upper) |
|---|---|---|---|---|
| BEAVER WATER DISTRICT | 18,647 | 13 | 9 | 13 |
| BERNDT CREEK WATER CORP | 35,304 | 41 | 7 | 8 |
| DETROIT WATER SYSTEM | 184 | 32 | 0 | 0 |
| FISHHAWK LAKE RECREATION CLUB | 10,004 | 30 | 7 | 9 |
| GEORGIA-PACIFIC CPLP WAUNA | 86,310 | 14 | 4 | 7 |
| HILLSBORO-CHERRY GROVE | 15,565 | 51 | 11 | 17 |
| HILLSBORO-FOREST GROVE-BEAVERTON | 115,415 | 16 | 7 | 11 |
| JEWELL SD #8 | 31,913 | 58 | 7 | 8 |
| LYONS MEHAMA WATER DISTRICT | 107,684 | 14 | 8 | 10 |
| PHILOMATH PUBLIC WORKS | 85,972 | 10 | 8 | 11 |
| SILVERTON, CITY OF | 31,659 | 14 | 8 | 13 |
| TILLAMOOK WATER DEPT, CITY OF | 3,074 | 63 | 6 | 7 |
| TIMBER WATER ASSOCIATION | 7,787 | 98 | 8 | 11 |

ODF will assess HUC10 watersheds by management activity for its prioritization of stream-enhancements projects under the HCP commitments. These assessments will be reported to the Board when performed for the HCP.

# 3. Carbon Sequestration and Storage

## 3a. Carbon sequestration in live trees

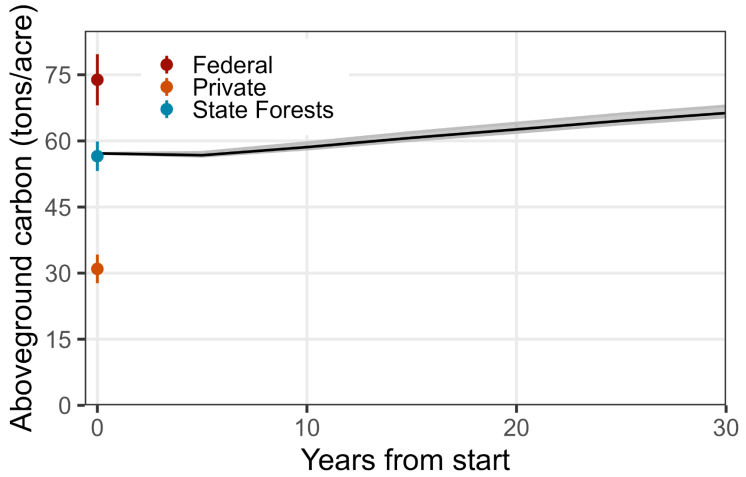


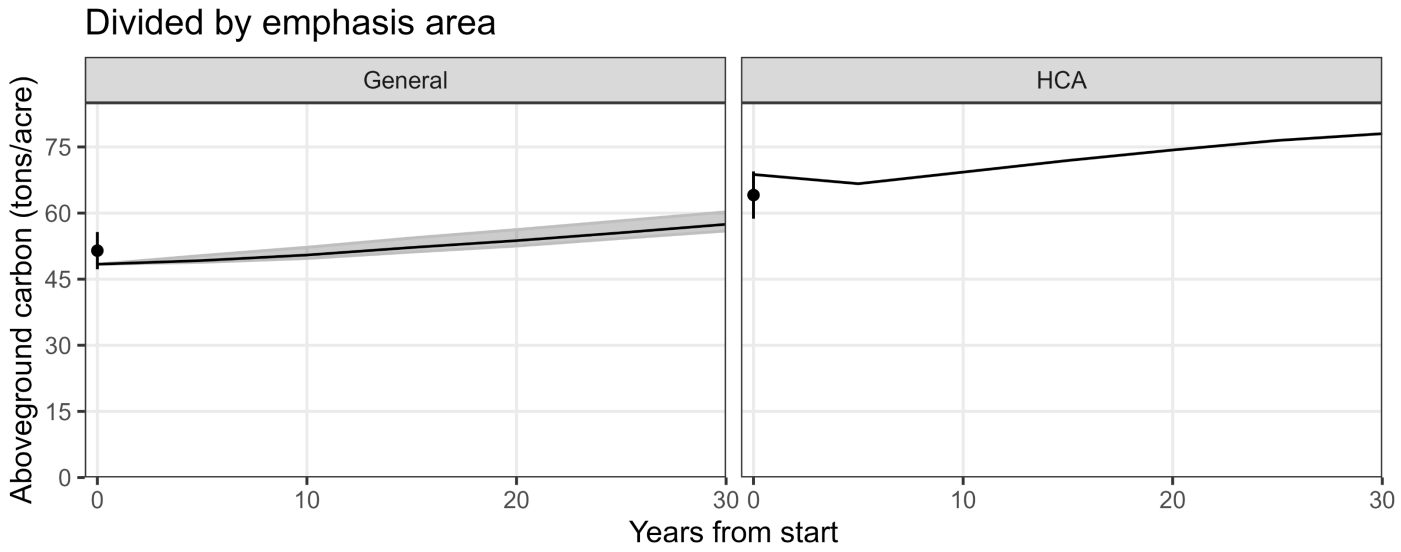

The aboveground carbon is the carbon pool most reliably measured by FIA and State Forests' inventory, even though it excludes belowground tree biomass, soil carbon, and dead wood carbon pools.

The decline in carbon in year 5 of the scenario is a result of a modeling artifact, where most of the permitted HCA harvests were performed in the first 5 years, rather than being distributed over the first 30 years.

# 3. Carbon Sequestration and Storage

## 3b. Live tree carbon storage by emphasis area



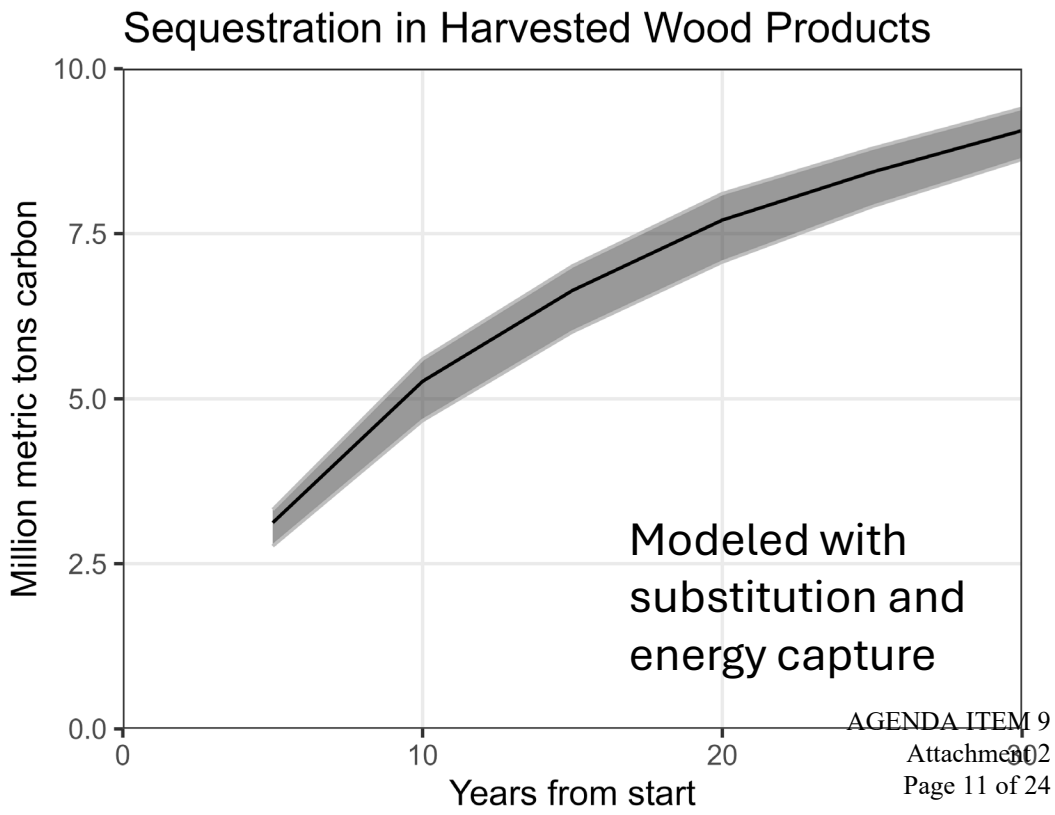

The aboveground carbon is the carbon pool most reliably measured by FIA and State Forests' inventory, even though it excludes belowground tree biomass, soil carbon, and dead wood carbon pools.

The decline in carbon in HCAs in year 5 of the scenario is a result of a modeling artifact, where most of the permitted HCA harvests were performed in the first 5 years, rather than being distributed over the first 30 years.

# 3. Carbon Sequestration and Storage

## 3c. Harvested wood product sequestration and storage

Sequestration in harvested wood products was calculated from the scenarios with two sets of assumptions about emissions (substitution for more carbon-intensive products and energy capture from biomass burning).

# 4. Division Finances

## 4a. Forest Development Fund balance and forecast

## 4b. Annual revenue and operating expenses

4a. These are reported annually by State Forests Asset Management Unit but were not modeled in the scenarios.
4b. Forecasted annual revenue from the scenarios is below. Operating expenses were not forecasted.

Average annual net revenue distribution modeled over the first 30 years

| Scenario | Total net revenue | To Counties | To CSF | To ODF |
|---|---|---|---|---|
| Lower harvest range | 83.4 | 51.5 | 2.4 | 29.3 |
| 5: Departure steps, 215 MMBF start | 90.0 | 55.6 | 2.7 | 31.6 |
| Higher harvest range | 94.1 | 58.2 | 2.8 | 33.1 |

# 5. Economic Opportunities

## 5a. Timber direct/indirect employment and income

## 5b. Non-timber direct/indirect employment and income

5a. Average annual economic (direct, indirect, induced) contributions of timber harvests (in millions, 2024 dollars), first 10 years of scenario forecast

| Scenario | Jobs | Direct | Indirect | Induced |
|---|---|---|---|---|
| Lower | 3472 | 298 | 489 | 1101 |
| Middle* | 3866 | 329 | 541 | 1212 |
| Higher* | 4094 | 349 | 575 | 1285 |

*These scenarios were not modeled in the July 2025 Socioeconomic Report. Values obtained from regression of 10 other modeled scenarios.

5b. Not included, as non-timber output from the new scenarios could not be modeled from the Socioeconomic Report.

# 6. Financial Support for Counties

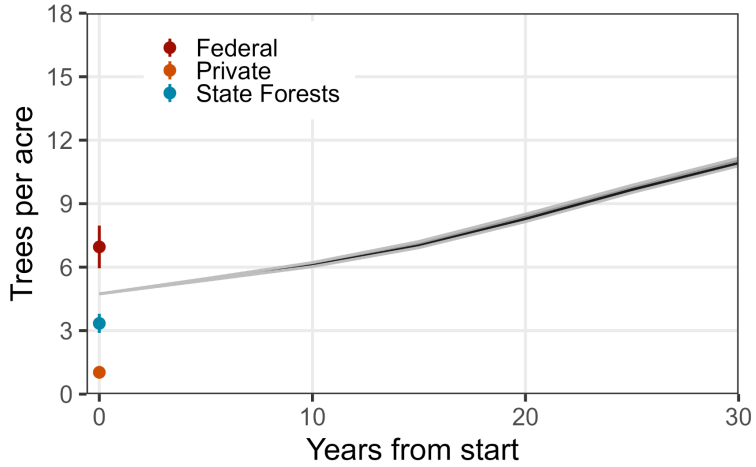
## 6a. Revenue transferred to counties and taxing districts

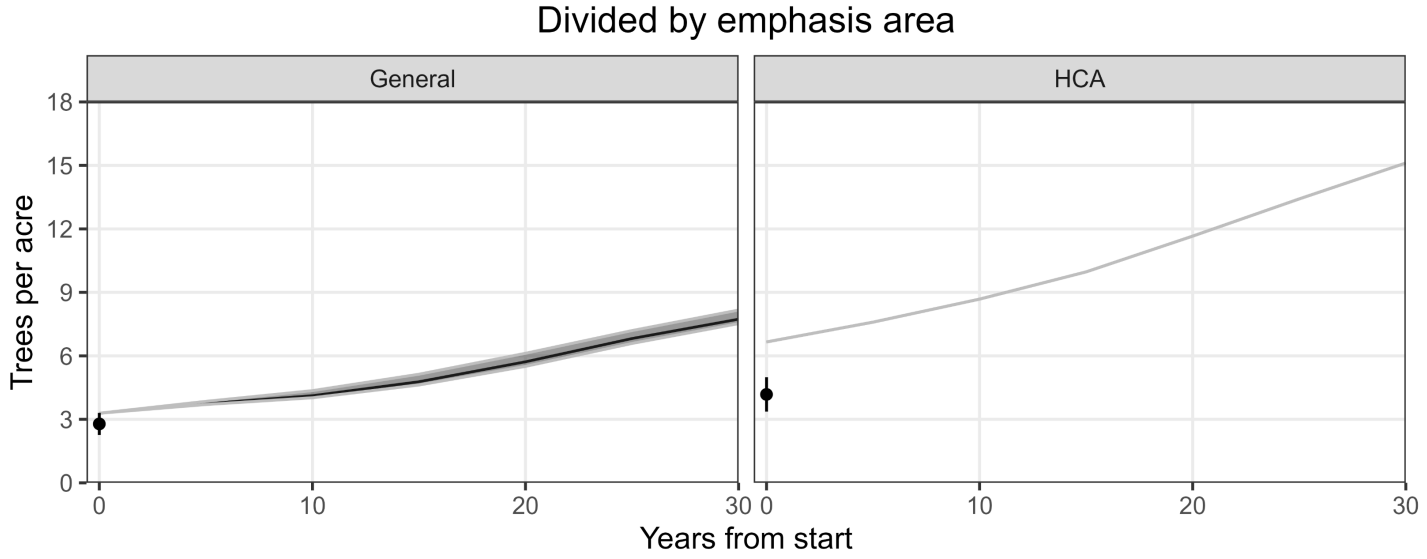
Average annual net revenue distribution modeled over the first 30 years

| Scenario | Total net revenue | To Counties | To CSF | To ODF |
|---|---|---|---|---|
| Lower harvest range | 83.4 | 51.5 | 2.4 | 29.3 |
| 5: Departure steps, 215 MMBF start | 90.0 | 55.6 | 2.7 | 31.6 |
| Higher harvest range | 94.1 | 58.2 | 2.8 | 33.1 |

# 7. Habitat Elements for Wildlife

## 7a. Large trees >30-inch diameter




Large trees are important for covered species in the HCP as well as other native wildlife. It is one component of the complex forest structure designation in the 2010 FMP.

Graphs show the average number of large trees per acre across all stands in each category.

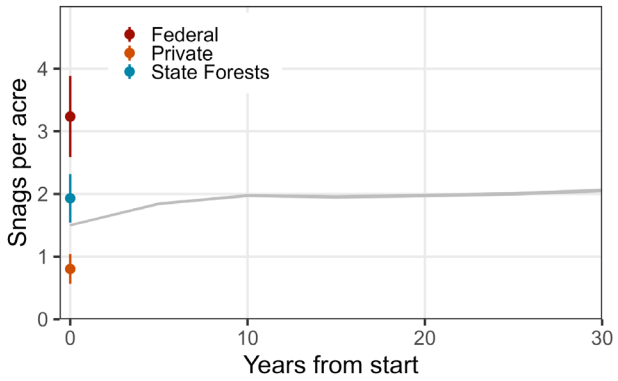
The notable difference in the HCA estimate by FIA (point at year 0) and the scenario may be due to the inventory methods that imputed tree lists for unmeasured stands in the modeling.

# 7. Habitat Elements for Wildlife

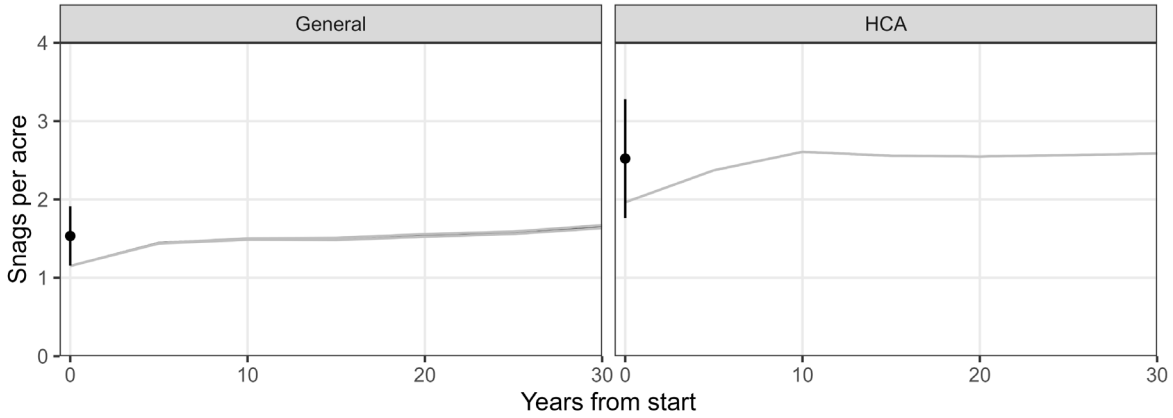
## 7b. Large snags and volume of downed wood

Note: These metrics were components to assign the “Older Forest Structure” class in the 2010 FMP.

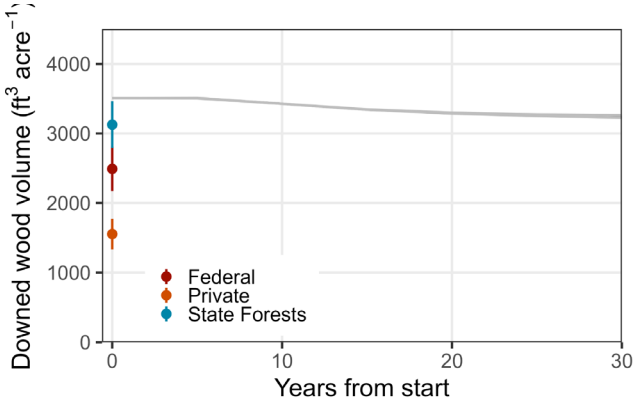
Dead trees >24” diameter (average number per acre)




Divided by emphasis area

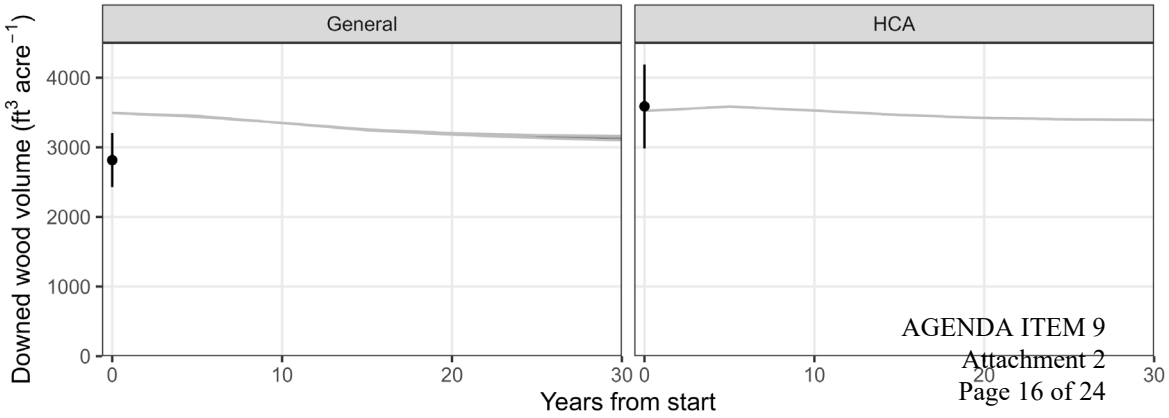



Downed wood >3” diameter (average volume per acre)




Note that FIA measures wood with different methods than ODF. Volumes will be different in HCP compliance monitoring reports.

Divided by emphasis area



# 7. Habitat Elements for Wildlife

## 7c. Connectivity between late seral forest stands

The drat FMP Wildlife strategy for functional landscapes: Maintain connectivity between habitats, and broad landscape permeability, for diverse wildlife species including species of conservation concern.

The arrangement of Habitat Conservation Areas was designed with future landscape connectivity in mind. This component metric will assess the landscape changes in habitat connectivity for species relying on late seral forest stands. This will help prioritize HCP conservation actions, such as those benefiting Northern spotted owls, to HCAs with higher landscape connectivity to support dispersal.

# 7. Habitat Elements for Wildlife

## 7d. Covered species habitat meets stay-ahead provisions for HCP

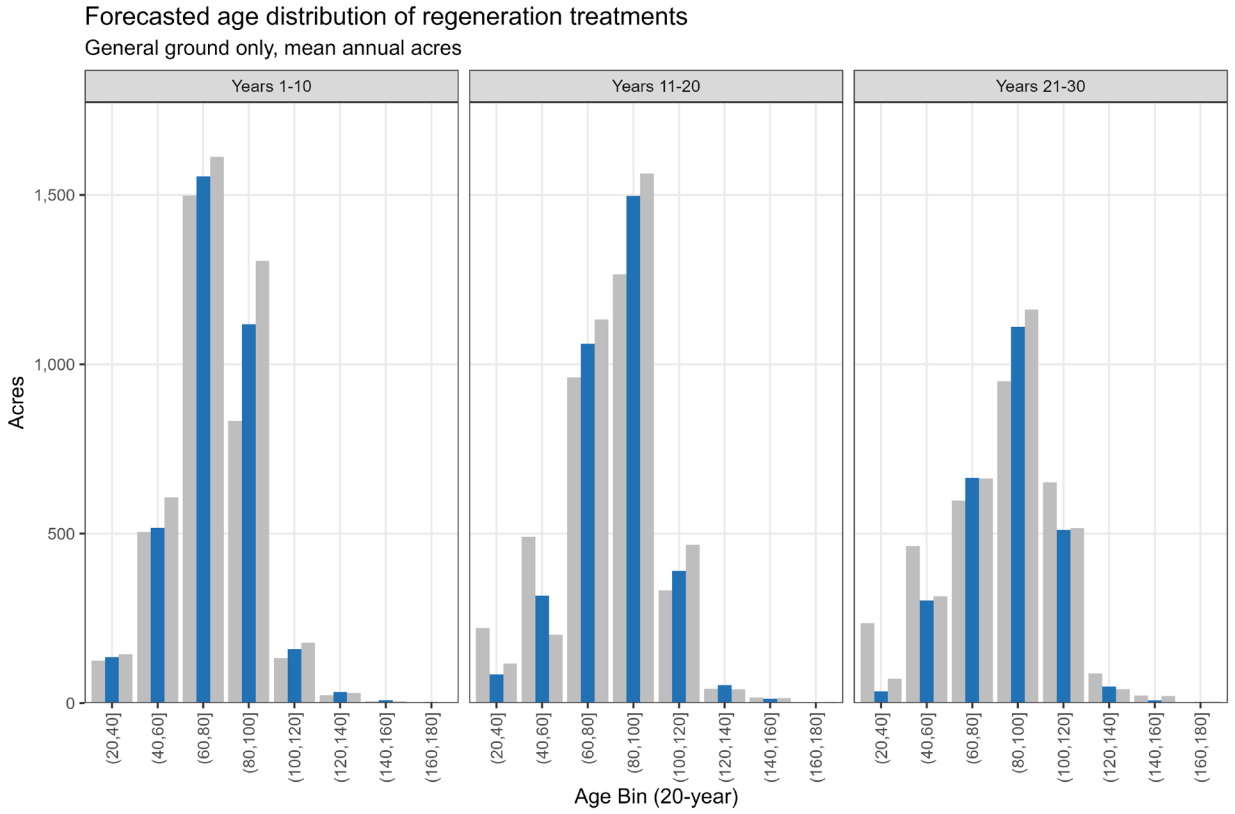
All scenarios were modeled to meet the HCP Conservation Action 13: Stay Ahead Provision. The current HCP draft reads: “The Stay-Ahead provision will minimize or eliminate the risk of any temporal net losses of habitat associated with the impacts from covered activities; there will always be more acres of new habitat grown and maintained in HCAs than lost to harvest across the permit area—both in any 10-year implementation period and cumulatively throughout the permit term.”

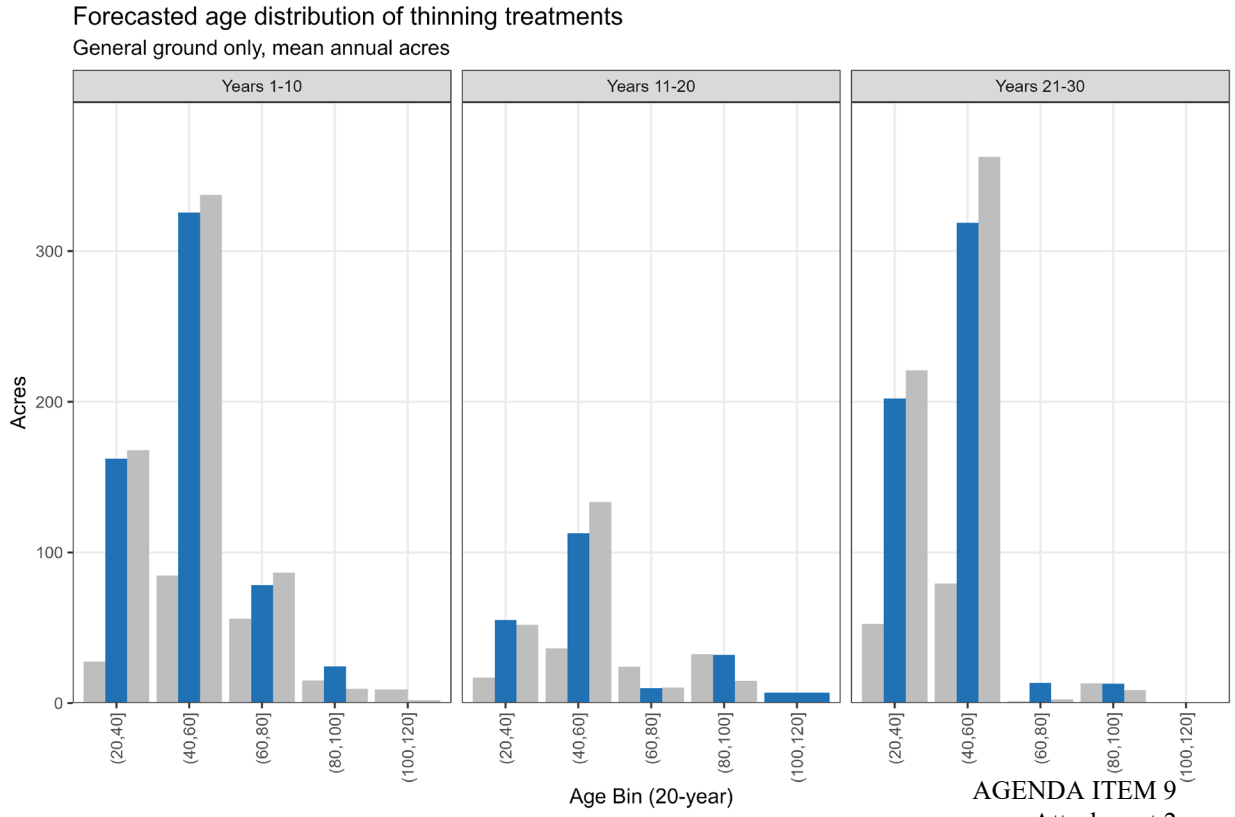
This component metric will be reported to the Board when it is reported to USFWS and NOAA Fisheries annually and during the 5-year check-in and 10-year comprehensive reviews of the HCP. It is derived from modeling covered species habitat from the forest inventory, accounting for modeled growth and depletions from covered activities each year.

# 8. Harvest and Inventory

## 8a. Acres of management by type (including forest health treatments)

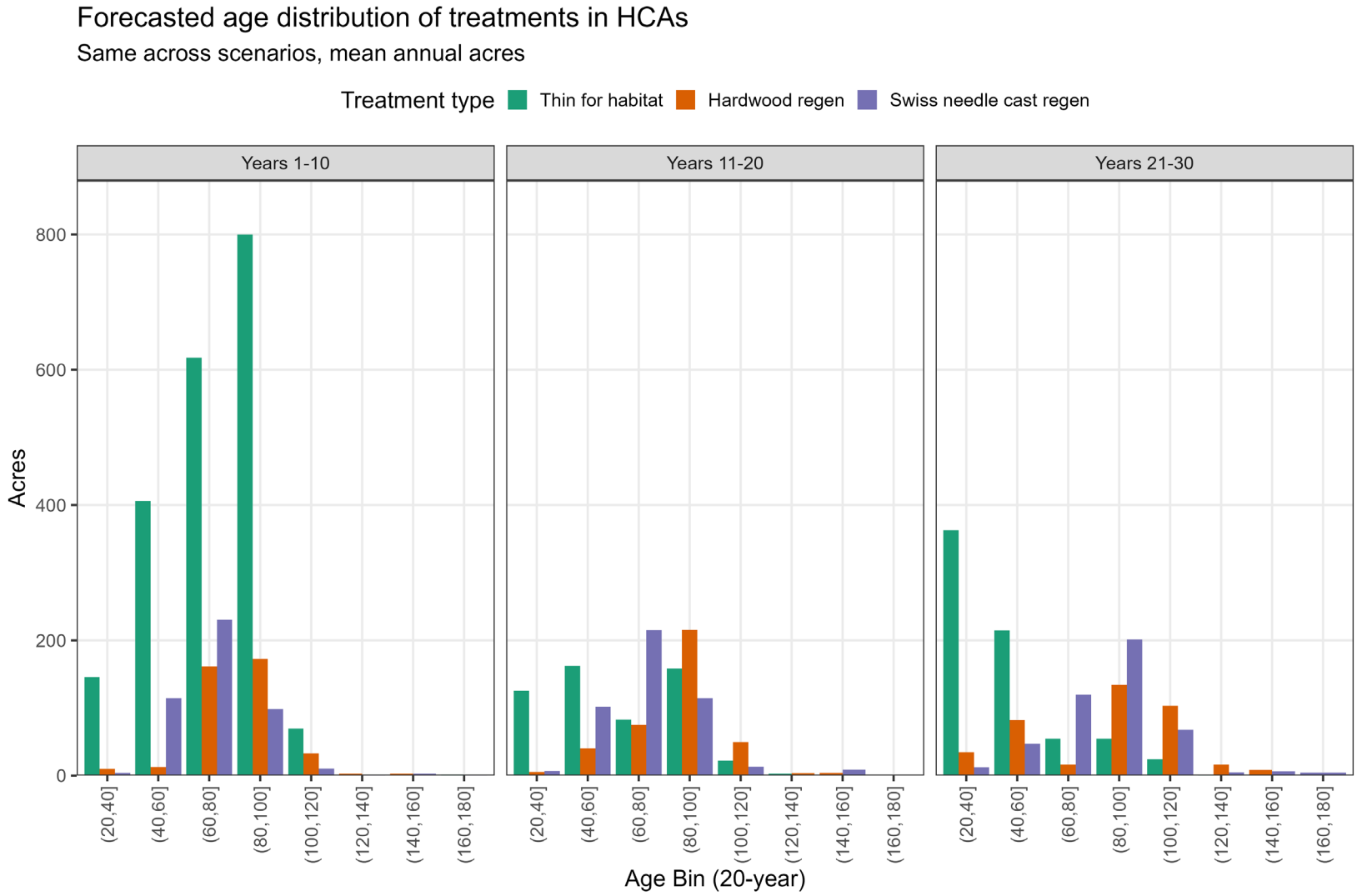
Regeneration and thinning acreage for general stewardship emphasis area in the modeled scenario (blue bars) with uncertainty range (gray bars).



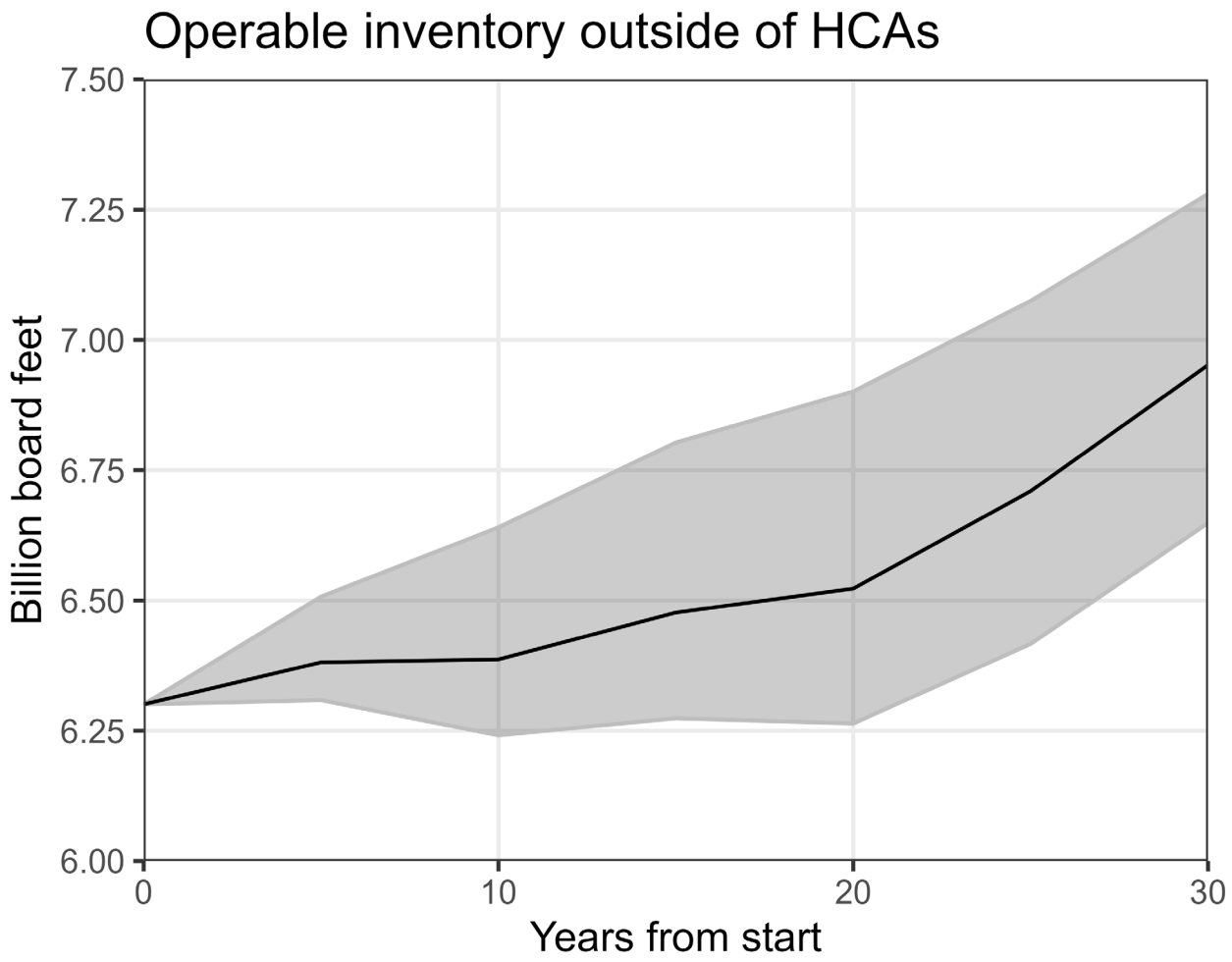
# 8. Harvest and Inventory

## 8a. Acres of management by type (including forest health treatments)



# 8. Harvest and Inventory

## 8b. Standing merchantable volume in live trees



# 9. Recreation, Education, and Interpretation (REI) Opportunities

9a. Percent of recreation facilities (not trails) open annually for the recreation season

9b. Critical trail assets (bridges/culverts) in good or better condition

9c. Educational interactions with school classes or individual students

These component metrics are proposed Key Performance Measures (KPMs) for the Oregon Legislature. The Board Performance Measures will match the KPMs and will be reported annually once the KPMs are adopted.

They are derived from the FMP REI goals and the HCP commitments to protect aquatic resources.

# 10. Transportation

## 10a. Transportation assessment (hydrological connectivity and fish passage barriers of road system)

Assessing and minimizing hydrological connectivity and fish passage barriers on the road network is part of the FMP Transportation goals and the HCP commitments. This assessment is ongoing and will be reported to the Board when it is finalized for HCP reporting.

# 11. Tribal Cultural Resources

11a. Development of new Division policies following the FMP goals: *Tribal Access and Use of Natural Resources* and *Cultural Resources Protection*

Progress on the Cultural Resources FMP goals and strategies will be reported to the Board as a narrative after FMP approval.