Agenda Item No.:	16
Work Plan:	State Forests Work Plan
Topic:	State Forests Management
Presentation Title:	Western Oregon State Forests Draft Forest Management Plan
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CONTEXT

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

The draft Western Oregon State Forests Management Plan was presented to the Board at the September 2023 meeting. This FMP is proposed to replace the current FMPs for the State Forest lands under the Department of Forestry's management in western Oregon. The draft FMP is developed to provide policy direction consistent with the draft Western Oregon State Forests Habitat Conservation Plan (HCP).

The draft FMP under consideration by the Board will be implemented under an adaptive management framework in which the monitoring of outcomes enables learning and improvement of management strategies. In the June 2024 meeting, the Board and the Forest Trust Lands Advisory Committee (FTLAC) discussed draft Performance Measures that would accompany the draft FMP to provide an up-to-date dashboard for the Board and others to readily track management outcomes and commitments across a broad range of ecosystem services provided by State Forests.

When an FMP is adopted as rule, new Implementation Plans are created that set medium-range management objectives designed to meet long-term FMP goals. Since the draft FMP is a high-level document intended to allow for a broad range of implementation pathways, the Board will consider a range of potential implementation scenarios to guide staff towards its desired outcomes for the draft FMP goals. This meeting will have facilitated discussion between the Board, FTLAC, and Division staff to generate scenarios which Division staff will model to demonstrate tradeoffs among resource goals. Scenarios are not management alternatives that will be adopted as is. The intention of modeling FMP scenarios is to show examples of tradeoffs between resources and outcomes under different implementation approaches. Draft Performance Measures, modeled in conjunction with the management scenarios, will help inform future conversations about outcomes.

FMP IMPLEMENTATION SCENARIOS

The Division's forest activity model emulates how the forest would be managed over time with forest stands grown forward from the current inventory. It projects harvest volumes, revenues, and forest stand metrics across the landscape by optimizing management decisions according to model inputs, such as silvicultural practices, goals, and constraints. The resulting forest stand metrics can in turn project a range of Performance Measures, such as carbon storage or habitat suitability for species covered under the HCP.

Division staff presented modeled outputs in December 2023 to the Board and FTLAC from a forest activity model that is similar in structure to the FMP implementation scenarios that will be developed during this Board meeting's discussion. The December 2023 model improvements focused on input data, such as growth and yield models to more accurately represent expected stand development over time and spatial data to better reflect operational considerations. The report, which includes a synopsis of model parameters used, can be accessed at <www.oregon.gov/odf/board/documents/fmp-hcp/fmp-modeled-outputs-report.pdf>.

Board members have expressed interest in FMP scenarios that test a broader range of outcomes than those presented in December 2023. The previous modeling explored scenarios that varied in the geographic scale (georegion or district) and the harvest flow (i.e., the timing and amount of harvest over time). The scenarios ranged from 168-187 million board feet average annual harvest over 70 years. However, the average rotation age for stands in production in the scenarios only ranged from 75-92 years. Division staff recognized that this relatively narrow range of outcomes did not allow for a full discussion of tradeoffs associated with different approaches to FMP implementation.

The discussion between the Board, FTLAC, and Division staff will focus on the main decisions that can affect the outcomes of FMP implementation. In these scenarios, it is assumed that the HCP would be in effect with its Incidental Take Permits, Riparian Conservation Areas, management practices, and landscape design of Habitat Conservation Areas. Silvicultural treatments within Habitat Conservation Areas would be designed for habitat development goals in the first 30 years of the HCP. The main differences to discuss are the management strategies for the areas outside of Habitat Conservation Areas that would have timber production as a main objective.

The key differences in FMP implementation scenarios for discussion are included in the table below. The model parameters, or "levers", to be adjusted for the scenarios are listed with the expected impact their changes would have on the model outcomes and staff effort it would take to update the parameters in the models. A brief explanation of why the parameter matters in the scenario is included.

Model parameter	Impact on the model outcomes	Effort to change in the model	Why the parameter matters
1. Harvest flow (timing, and amount of harvest)	High	Low	Current planning uses even flow to set harvest volume. Scenarios could consider departures from even flow to front-load harvests in time to smooth out revenue changes or allow harvest levels to change over time to optimize harvests for the stand age distribution on the landscape.
2. Rotation age (minimum, maximum, or average)	Medium to High	Medium	Current modeling excludes stands for harvest if the stand age is less than 40 years or more than 174 years. Changing these limits could reduce or increase options for the model to optimize. The model could be directed to target a more specific average age that is less than 175 years. Harvest of stands 175 years old and older is prohibited in the HCP.
3. Net Present Value (discount rate)	Medium to High	Medium	Financial optimization of harvests uses a discount rate to weigh the value of future revenue, with higher discount rates leading to shorter age rotations to maximize the Net Present Value rather than the total volume over time. Stands with high value and/or low costs will tend to be harvested sooner. Current modeling uses a 4% discount rate (3% was used in the Comparative Analysis/Draft Environmental Impact Statement (EIS) modeling).
4. Harvest type and timing of entries	Medium	Low	The model includes goals for thinning and/or regeneration treatments at various scales. Recent models have included goals for treating Swiss needle cast and hardwood stands within Habitat Conservation Areas (HCAs). Additional goals and rules could be used to guide the model towards specific treatments at various spatial and temporal scales.

Model parameter	Impact on the model outcomes	Effort to change in the model	Why the parameter matters
5. Sustainable landscape: forest condition at end of scenario	Medium to High	Medium	The forest at the end of the model scenario can meet requirements, such as remaining volume or stand age classes, that guarantee that the forest resource and management opportunities are retained in the future. Current modeling requires forest inventory levels on general ground to be stable after 100 years. Alternative end-of-model criteria will affect the timing and arrangement of harvest as the model balances near-term goals against long-term outcomes.
6. Silvicultural practices	Low to medium	High	The model can select silvicultural pathways at the unit level. Examples include treatments of Swiss Needle Cast or alder-dominated stands, planting prescriptions (i.e., species, density), variable retention harvest in HCAs, and pre-commercial or commercial thinning. Silviculture treatments affect the volume, revenue, and habitat outcomes in the model. Growth assumptions may need to be adjusted for some treatments, and costs can be accounted for. An increased number of silvicultural pathways increases the complexity and effort of changes.
7. Spatial scale for harvest flow	Low to medium	Medium	Current planning uses Districts to set harvest targets. Expanding the scale allows the model to better optimize for other goals (including overall revenue) at the expense of an even distribution of management.

PERFORMANCE MEASURES

While the June 2024 meeting had a discussion between the Board and FTLAC about draft Performance Measures that would accompany the draft FMP, we are not focusing on them at this meeting. Not all draft Performance Measures are relevant to the modeling exercise. Division staff are gathering feedback from the Board and FTLAC on the draft Performance Measures and their component metrics presented in June. Those that are relevant to the FMP implementation scenarios may be used as metrics presented with future modeling results.

RECOMMENDATION

Information only.

NEXT STEPS

Over the next several months, the Division will:

1. Work with the Board and the Forest Trust Lands Advisory Committee (FTLAC) to gather feedback and revise the draft Performance Measures, with the goal of approving the Performance Measures at a future Board meeting.
2. Add technical details to scenarios for FMP implementation developed by the Board and FTLAC discussion to fit within the Division's modeling framework.
3. Work with the State Forests Advisory Committee to gather feedback on the draft scenarios.
4. Obtain approval from the Board on the final scenarios and move forward with modeling the range of scenarios.
5. Work with the Board and FTLAC through facilitated work sessions to review and discuss tradeoffs associated with draft Performance Measure outcomes from the modeled scenarios.
6. Obtain final Performance Measure targets or thresholds from the Board to guide development of initial Implementation Plans for the new FMP.

ATTACHMENTS

None.