

Introduction

The Oregon Board of Forestry concluded in 2012 that the current approach for managing state forests was not financially viable. A Board of Forestry subcommittee was formed to address these financial viability issues. Outcomes included directing the State Forests Division to examine alternatives to the current Forest Management Plan (FMP) for Northwest Oregon. The Board further directed the Financial Viability Subcommittee to refocus on the FMP Alternatives project with “twin goals” to develop a new forest management plan that is both financially viable and improves conservation outcomes in state forestlands. This documents highlights direction that was provided by the Board and the Subcommittee, the work that was conducted by the Division, and the products that were developed from 2011 through 2017.

Context for the Current Planning Effort:

ODF’s management of these lands dates back to the 1930s. The following list highlights some of the more recent events, beginning in 1990, that have profoundly shaped current policies and practices.

- 1990: The U.S. Fish and Wildlife Service listed the northern spotted owl as threatened under the Endangered Species Act (ESA).
- 1991: The legislature directs the Department to develop a Recreation plan for the Tillamook State Forest (House Bill 2501) The Plan was to address: interpretation as a major component, including a visitor center; public education, especially school children; and agency responsibilities for recreation management.
- 1992: The U.S. Fish and Wildlife Service listed the Washington, Oregon, and California population of the marbled murrelet as threatened under the ESA.
- 1993: A lawsuit was filed against the Department claiming the decision to harvest a unit with a scenic waterfall could not be substantiated against written policy or guidance, and was therefore arbitrary under Oregon’s Administrative Procedures Act. The Department elected to settle the case through mediation with the Plaintiffs. A condition of that settlement was an agreement to develop administrative rules to define the term “Greatest Permanent Value”.
- 1998: Greatest Permanent Value (GPV) rule adopted.
- 2001: Northwest State Forests are managed under the Northwest State Forests Management Plan (FMP) which the Board of Forestry (BOF) adopted in 2001 pursuant to its GPV Rule. The Department continues its work with US Fish and Wildlife Service and NOAA Fisheries to develop a Habitat Conservation Plan (HCP) for these state forest lands.
- 2006: Harvest & Habitat model effort completed and Implementation Plan harvest volume ranges established for NW FMP districts.
- 2009: BOF officially directs staff to drop the HCP process, develop and peer-review Species of Concern strategies that are not HCP dependent, and to review the policy underpinnings of the GPV rule.
- 2009: The recession drove housing starts to near-record lows, leading to severely depressed timber values and substantial erosion of the Forest Development Fund (FDF). FDF balance dropped by more than half, despite ODF taking counter-balancing measures, including laying off 30 percent of the workforce in 2009 and 2010.

- 2011: BOF revised the FMP to add species of concern strategies, reduce structure goals from 40% - 60% Desired Future Condition (DFC) - Complex on each district to 30% - 50% DFC-Complex, and increase harvest by managing to the low end of the complex structure goals.
- 2012: Financial Viability (FV) workgroup finds that revising the FMP is one tool to improve financial viability and BOF Subcommittee on FMP Alternatives is formed.
- 2013: Governor Kitzhaber submits a letter to the BOF encouraging the Board to embark on a new forest management planning process with the GPV rule at its core, and a focus on financial viability. The Board was asked to consider five specific aspects: (1) improve business practices, (2) diversify revenue, (3) alternative forest management plans (including a suggestion to explore an allocation approach), (4) strategic partnerships, (5) County considerations.
- 2012-2016: Following BOF direction, the Division pursues twin goals of achieving financial viability and improving conservation outcomes through the Alternative FMP process.
- March 9, 2016 Board Meeting: Division Priorities Change. Given the urgency of ODF's financial situation, the complexity of analysis needs, and the uncertainty posed by multiple Notices of Intent to sue (which challenge our management decisions by casting doubt on the sufficiency of Division management decisions and on the Greatest Permanent Value Mandate and creates a barrier to a collaborative approach), the Division shifted focus to four key priority areas:
 1. Third-party technical review of inventory and growth and yield data and processes for near and longer term use;
 2. Alignment of Implementation Plans with the current FMP and further implementation;
 3. Further exploration of ESA compliance mechanisms; and
 4. Continued State Forests business improvements to increase financial outcomes

Stakeholder Processes

At the September 10, 2013 meeting of the Subcommittee on Alternative FMPs, AFMP Goals, Policy Sideboards, and Criteria for Success were unanimously endorsed by Subcommittee members. A Stakeholder Group was formed in October 2013 and consisted of: 2 county commissioners, 2 citizens-at-large, 2 conservation community representatives, and 2 industrial forest management representatives. The group held four working sessions over a period of four months and was directed to work within the policy sideboards and use the criteria for success as a guide to determine if the management alternatives considered were likely to achieve a range of desired outcomes.

The assignment for the Stakeholder Group was to develop and provide input to the Subcommittee on 1-3 approaches as alternatives to the current Forest Management Plan. The Stakeholder Group worked toward these stated goals:

- New FMP will be financially viable while improving conservation outcomes;
- Adhere to proposed timeline; and
- Consider ESA compliance options.

This group failed to reach consensus; however, all members agreed that the status quo was not sustainable – environmentally, economically or socially.

The proposals the stakeholders developed included:

- 70/30 Approach
- Timber Harvest Optimization
- FMP 2.1
- Restoration, Recreation, and Department Stability Plan
- Land Sale Alternative

In February 2015, the stakeholder group was asked to provide additional feedback to the Board on:

- The top variables of a conservation and production strategy that must be addressed in the FMP;
- Goals and definitions for conservation, production and financial viability;
- Vision for desired outcomes from the conservation and production zones;
- How to create and define durability; and
- Vision of how to map a land allocation approach.

Responses to these questions again demonstrated a lack of consensus among the stakeholders and highlighted their differing values and perspectives. For example, on the topic of financial viability, one stakeholder group stated it could be achieved under a land allocation approach, while another stated it could not be. On *Greatest Permanent Value*, one group suggested the currently understood definition of GPV should be used, while another stated the social and recreational aspects of GPV are a luxury.

Public Outreach

The Department worked to engage with Oregonians on a new FMP, and to that end held frequent meetings with forest industry, conservation organizations, recreationists, and the general public. Staff held a series of roundtables and community meetings around the region and conducted a survey. The events invited community members to drive the conversation through initiating discussions, providing feedback and voice comments through an informal forum, with opportunities to interact with ODF staff and forestry-connected stakeholders. A report with the public survey and comments was produced in November 2014. Division staff conducted and documented additional outreach to stakeholders on how to measure conservation and production. Finally, the Division engaged county commissioners and provided updates and sought input through FTLAC meetings.

BOF Direction

At the November 5, 2014 Board of Forestry meeting, the BOF directed the Division to:

- Utilize a Land Allocation (LA) approach as the primary approach for developing a forest management plan;

- Consider a range of production strategies and conservation measures that could include those described in the Draft Land Allocation Option;
- Model and evaluate strategies and measures that present the highest likelihood of achieving the twin goals of financial viability and improved conservation outcomes; and
- Include a set of overarching conservation measures, vision, guiding principles, goals and strategies including: to pursue a Habitat Conservation Plan, the conservation of habitat for Northern Spotted Owls and Marbled Murrelets, Riparian Area Management, monitoring and research, and a conservation/recreation fund.

Analyses

The Division produced many analyses and modeled outputs to support Board decision-making. The most significant among these analyses are briefly addressed here.

The Division prepared a white paper defining financial viability, wood emphasis, and conservation in an effort to align the Board, Division, and stakeholders on what was meant by these terms and to provide a basis for comparing outcomes to the twin goals.

An external science panel was convened to provide an assessment of the likelihood of each of the five alternatives to achieve the twin goals. The panel concluded each approach represented a reduction in at least one of the goals from the current FMP. The best potential to achieve the twin goals was with *FMP 2.0*, as the panel concluded the *Land Sale, 70/30, and Timber Harvest Optimization* plans reduced conservation and the *Recreation and Restoration* plan reduced production from the status quo.

The Division presented forest and landscape conditions, fish and wildlife habitat, and distribution of threatened and endangered species listed under the Endangered Species Act (ESA). Draft maps depicting potential production and conservation emphasis areas, model outputs, financial and conservation outcomes under a 70/30 land allocation approach were also prepared and presented.

Draft Modeled Financial Outcomes:

Under a land allocation approach, the 5-yr revenue projection based on the Winter 2015 revenue projection, indicated revenues would exceed expenditures.

The Division also modeled financial outcomes with a 30-year departure followed by non-declining even-flow, looking out 150 years. Findings suggest financial viability was possible for 2-3 decades followed by lack of financial viability. This projection did not include cost inflation or stand investments in converting underproductive stands such as Swiss needle cast stands, and compromised alder stands. The projection also did not account for encumbrance risk/future constraints in production areas due to new sites being found during surveys for owls or murrelets or from new species being listed (e.g. red tree voles). The Wood Emphasis Zone, 69.4% of the forest, would have 95.0% of stands less than 80 years old in 100 years.

Draft Modeled Conservation Outcomes:

The conservation areas were selected by identifying areas based on current operational and legal constraints (e.g. steep slopes, high landslide hazard areas, some owl and murrelet sites, and riparian areas). This differs from the “landscape design” approach of the current FMP. A constraints-based approach does not account for ecological function at larger scales or emphasize ecological principles such as consideration of the size and arrangement of patch types, amount of interior habitat, presence of late-seral characteristics, and habitat connectivity. Some conservation values might be provided by stands in older age classes in the production zone.

This selection of conservation areas results in 18% of the landscape currently designated for complex structure to be allocated into the wood emphasis zone – resulting in a substantial decrease in conservation acreage (110,748 acres). The Conservation Emphasis Zone, 27.3% of the forest, would have 89.9% of stands greater than 120 years old. There are approximately 52,000 acres of inoperable areas in the planning area that provide varying degrees of short- and long-term conservation benefits. Many inoperable areas have other, overlapping constraints (e.g. riparian buffers, wetlands) with clear conservation benefits. Otherwise unconstrained inoperable areas are generally similar to other acres on the forest (i.e. < 80 years old, < 24” DBH). The conservation benefits of such areas are contingent on site conditions and landscape context.

Riparian Management: Applying the current strategies maintains conservation outcomes as demonstrated by available research and monitoring and account for approximately 7% of the total area managed. Around half of the buffer area directly benefits fish-bearing streams by providing adequate shade and large wood. The remaining buffer area maintains stream temperature (small perennial Type N) and adequate gravel and wood from upstream sources (seasonal streams with high debris flow potential). Current standards achieve DEQ’s water quality standards and promote “properly functioning aquatic habitats for salmonids, and other native fish and aquatic life” as directed in GPV.

Wildlife Habitat Protection: Current green tree, snag, and downed-wood retention strategies are more likely to promote long-term persistence and recruitment of legacy structures than through the application of the Forest Practices Act (FPA). Under an FPA approach, abundance and diversity of large trees, snags, and downed-wood would decline at stand and landscape levels, resulting in reduced capacity of the landscape to support wildlife dispersal and leaving individuals of some species more vulnerable to local disturbance. It is not clear that such a strategy would meet GPV and green tree retention strategies were determined to have a low impact on financial outcomes. For ESA-listed species, the Division has adopted robust “take avoidance” measures which include extensive consultation with the U.S. Fish and Wildlife Service. Existing sites and current measures were incorporated into landscape planning and associated harvest models. Model constraints that reflect these policies influence volume and revenue outputs. Alternative approaches to take avoidance yield different outcomes. Modeling did not account for new sites that may be discovered, or new species that may be listed

Policy Drivers: Material presented to the October 15, 2015 BOF subcommittee included an assessment of the degree of impact on outcomes of various policy choices, model methodology, and model data.

High-impact items are those that are the primary drivers of model outputs. Low-impact items have less effect on outcomes. Consequently changes to the high-impact items will likely affect changes in outcomes, these are arguably the areas where decisions, methods, or quality of data will make the most difference in outcomes. The high-impact items are discussed below.

Geographic Scale: The Land Allocation (LA) model aggregated the six districts as a whole, removing geographic constraints of the current FMP approach, and presented financial and conservation outcomes (summarized above) based on this aggregation. For example, implementation of the LA approach could defer harvest for a district, and increase harvest on another district to achieve value or volume targets. This resulted in dramatic variation in timber harvest between model periods by district and county. Implementing this approach would present organizational challenges, and wider variations in individual county revenue distribution.

Conservation Goal: In the LA approach, Conservation Emphasis Areas were delineated at the planning area level (i.e. across all six NWOA districts) rather than the district level of the current approach. The conservation area locations were primarily composed of areas required to meet legal objectives, or were inoperable. This contrasts with the current FMP “landscape design approach,” which is built on principles of ecological function and is implemented at the district level.

Even-flow: There was a short-term target of financial viability over the first 20 years, and a long-term target of even-flow timber harvest. Over the first 20 years, the timber revenue targets matched (non-inflated) future State Forests’ budgets. Over the remainder of the 100 year horizon, a non-declining even-flow timber harvest was targeted. There was no timber revenue target after the first 20 years.

Operational Costs: The LA model included a fuller representation of management costs and includes variable and fixed costs, rather than just harvest unit costs. Variable costs include planning and layout, reforestation, and T&E surveys. Fixed costs include fire protection, and administration and support staffing and resources.

Starting Inventory; Growth and Yield: The starting inventory has a large effect on model outcomes. The LA model incorporated improvements to the starting inventory estimate and to growth and yield information. Following this modeling, the Division has made subsequent improvements to growth and yield, which improves the estimate of the starting inventory.

Values and Costs Updates: The LA model included updates to pond values, logging costs, hauling costs, and road construction/maintenance costs. Any subsequent changes or improvement to this information is likely to have a high impact on outcomes.

Conservation Outputs: The approach to measuring conservation has high impacts on outcomes. Both the LA and previous models report broadly on “complex forest structure” (layered and older forest stands) as a surrogate for “habitat”, and this has been used as a measure of conservation outcomes. Neither the LA nor previous modeling were able to incorporate leave trees, downed wood, and other legacy structures in the reporting – these elements would refine the assessment and reporting of

“habitat.” Decisions on how conservation is measured and reported will feed back into how strategies are developed, modeled, and implemented.

Silvicultural prescriptions under the LA approach had a moderate impact. The LA approach used a simpler set of silvicultural prescriptions as structure based management (current FMP) was not the approach being used for LA approach. The simpler LA prescriptions had a moderate impact on model outcomes.

Low impact items included: legacy structure rules and strategies; owl and murrelet rules and strategies, and updates to owl and murrelet site locations (note: across 6 districts overall impact was low, but for some individual districts it was high).

The Division formed a Technical Expert Review Group (TERG) comprised of three forest modeling experts, one each from the conservation and private forest stakeholders, and one from FTLAC. The group reviewed the Division’s modeling processes and outputs, and provided feedback. The Division hired a private consultant to reconcile input from the TERG.

Current status:

ODF continues to implement the 2010 FMP, including the landscape design principles, riparian standards, leave tree and legacy components, and species of concern strategies, among other conservation measures. From a financial standpoint, since 2010, total county revenue distributions have gone from \$42.6 million (2010) to \$59.0 million (2017). In this same time period (2010-2017), the Division revenue was \$24.9 million (2010) and \$34.9 million (2017).¹ Division expenditures have increased to reflect increased management costs and inflation, and increased costs due to litigation. Since 2010, the Division has under-invested in stand treatments, research and monitoring, forest inventory, and other core business. In recent years, the Division has focused on harvesting higher-value stands, and deferring management in lower-value stands, and has instituted a hiring freeze to control costs.

The Division entered into a Safe Harbor Agreement for the Western Lane District and revised the Implementation Plan. The landscape design changed the amount of DFC Complex from 43% to 37% but better aligned the DFC with existing complex forest, known constraints (e.g. existing T+E sites), and habitat conditions on adjacent federal lands. Revenue targets go from 8 to 12 MMBF per year over the 10 year period and then back down to 8 (i.e. a 50% increase for 10 years). As a result, the Division has an improved landscape design, increased harvest levels and greater certainty around harvest restrictions associated with owls.

The Division has drafted a new Tillamook Restoration Strategic Initiative that focuses on strategies to restore portions of the Tillamook State Forest, currently dominated by Swiss Needle Cast (SNC) and low-value alder stands, to a healthy condition and put the forest on a better path to provide economic,

¹ Source – Division Fall 2017 revenue projection graph of actual distributions, ODF revenues and expenditures.

social, and environmental benefits over the long term. Today, approximately 26% of the Tillamook District is dominated by low-value alder due to the challenges of reforestation following the Tillamook Burn. SNC is affecting 46% of Douglas-fir stands. Aerial surveys, research plots, and stand growth evaluations show a significant loss of growth on SNC-impacted stands. These stand conditions, combined with operational constraints such as steep slopes lead to costly logging and have a significant impact on the ability to generate revenue. Investing in forest restoration now is a good business decision that will have immediate benefits to local communities and establish a healthy and productive forest for future generations. Given the value of the forest to local communities and the financial implications of harvesting low-value stands, the Division is designing a “SNC Adaptive Management Strategy” and developing “Economic Analysis Tools” to guide business decisions that contribute to forest health and improve financial viability for the Division.