

Forest Management Assessment Report

For the Oregon Department of Forestry's
Northwest & Southwest Forest Management Plans

Conducted by

Strategic Resource Systems

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Executive Summary

The Oregon Department of Forestry (ODF) manages about 634,000 acres of State Forest land in northwest and southwest Oregon under two forest management plans (FMPs) finalized in 2001. ODF commissioned Strategic Resource Systems to evaluate the effectiveness of these plans in terms of their resource management goals (RMGs) and their implementation. The assessment findings are summarized as follows:

General Findings. Due to the history of the State Forests, most stands are “middle-aged” just when habitat protection for the northern spotted owl, marbled murrelet, and salmon has stimulated a move toward older stand structures and more streamside protection. The FMPs mark a significant change from traditional rotation-based to structure-based management.

- ODF is implementing the FMPs, with a strong, innovative staff, management culture, and tradition, and is meeting its challenges using the strategies in the FMPs.
- Structure-based management is moving the State Forests toward the structural goals outlined in the FMPs, and the RMGs are being met.
- Some shortcomings may occur in road- and recreation-related water-quality impacts (see below, along with the findings and suggestions for the other RMG areas).

Land Base. The state forest land base is being conserved, but compatibility with Oregon Statewide Planning Goals and the Oregon Coastal Management Program should be clarified. An efficient land ownership pattern could be more actively pursued.

Agriculture and Grazing. There are few agriculture and grazing permits. Promoting these opportunities more actively, could be incompatible with other resource goals.

Energy and Minerals. No such activities were found. ODF might promote these opportunities more actively, but to do so would not often be compatible with other resource goals.

Special Forest Products. Fire-wood is the most common special forest product. There are also permits for small quantities of other products like salal, mushrooms, and mosses, and additional unauthorized gathering occurs as well. Monitoring of use could be increased, but this would be expensive relative to current levels of use or the revenues they generate.

Air Quality. Prescribed burning is limited but, if more burning is desired, ODF might work with other agencies to develop an expedited air-quality permitting process.

Scenic Resources. Aesthetic goals are met with through clear criteria in a specific GIS layer and forest harvesting patterns that leave residual trees in clearcuts.

Cultural Resources. Protection occurs, but some districts lack inventories and some new discoveries might not reach a database. More might be done to locate possible Native American sites.

Access. The access system is good and is being improved, but a few roads still need major upgrades, some other roads and stream crossings introduce sediment to streams, and wet-weather log hauling can harm even good roads. ODF should consider means for funding road improvements independent of timber-sale revenues and maintaining roads in wet conditions.

Recreation. Diverse forest recreation opportunities are being provided, but some districts lack recreation staff, inventories, and plans. Some OHV use near streams is causing erosion and sedimentation problems. More gated roads could reduce conflicts among users. More cooperation with recreational users could be used to construct and maintain facilities and control problematic users.

Wetlands. Wetlands near streams are routinely protected, and old roads are being relocated out of stream bottoms. Upland “perched” wetlands are rare, but could benefit from more protection.

Water Supply. Water supply goals are met through in FMP implementation-plan basin analyses, emerging watershed analyses and assessments, and interaction with water purveyors.

Water Quality. Other than the “Access” and “Recreation” issues mentioned above, forest operations protect water quality through riparian/aquatic management standards and emerging watershed assessments for high-priority basins.

Fish and Wildlife. The FMPs are providing, diversifying, and protecting fish and wildlife habitats well. “Salmon anchor habitat” designations may restrict future forest operations in some basins if extended beyond the current agreement. Habitat needs of spotted owls and marbled murrelets) are addressed through surveys, habitat management and protection, and restriction of activities. ODF’s habitat protection could become less cautious as FMPs’ strategies are tested and more is learned about species’ needs.

Plants. FMP strategies will provide more diverse plant habitats, protections appear adequate, and efforts to locate and protect rare plants should continue.

Forest Condition (Health and Biodiversity) and Soils. Soil productivity is protected by cable and shovel logging; leaving abundant slash, large woody debris, and live trees and snags; and restricting operations. Fire protection and pest management programs are well-developed. Management of diseases can both challenge and advance forest structure goals.

Timber. Harvest levels appear to be sustainable and silvicultural techniques are achieving the FMP RMGs. Wildlife browsing on regeneration should be more formally monitored and more complete burning of slash could reduce habitats for over-abundant rodents. Lower-density plantings could reduce the need for precommercial thinning. Better stand-level record-keeping would help to determine the efficacy of past treatments. Additional marketing opportunities might exist for both smaller- and large-diameter wood.

Social and Economic Resources. ODF is conscientiously balancing the elements of “greatest permanent value”, and will continue to refine this balance by implementing the FMPs. Stable and sustainable timber-harvest levels and other management programs appear to be providing a mix of values and outputs desired by the citizens of the state. In addition to seeking objective information about public perceptions, ODF could provide more opportunities for regular, direct, and local interaction with the public about the FMPs and their implementation.

Introduction

The Oregon Department of Forestry (ODF) manages approximately 634,000 acres of State Forest land in northwest and southwest Oregon under two forest management plans (FMPs) finalized in 2001. To evaluate the effectiveness of these plans and ODF's implementation of them, ODF commissioned Strategic Resource Systems (SRS) to assess:

- the clarity of the plans' goals addressing a range of environmental, social, and economic issues,
- the adequacy of the plans' strategies and ODF's procedures for achieving the plan's goals,
- ODF's implementation of these strategies and procedures, and
- whether any plan or implementation changes are warranted.

The assessment addressed the operations and lands covered by ODF's 2001 Northwest (NW) Oregon and Southwest (SW) Oregon State Forest Management Plans. To support the Oregon Board of Forestry in their ongoing oversight function of these plans and ODF in its continuing review and revision of its management and monitoring practices, the assessment was designed to:

- provide an independent, objective review,
- help ODF find solutions to any problems identified in the review,
- provide a baseline for future re-assessments or forest management, certifications, and
- help ODF develop its own implementation and performance monitoring systems based on its own existing initiatives.

The qualifications of the assessment team are provided at the end of this report.

Assessment Methods

The FMPs are voluminous documents, and they are further guided by laws, rules, policies, and procedures, and implemented through other, more-detailed plans. To focus on a tractable set of criteria, the assessment team used the Resource Management Goals (RMGs) in the respective FMPs (NW FMP, pp. 3-13 to 3-17; SW FMP, pp. 3-7 to 3-11). These goals are of a scope and number comparable to the audit criteria embodied in forest certification standards, but are tailored specifically to the mission and conditions of ODF State Forests.

To provide an understanding of ODF's forest management processes for achieving these goals, other provisions of the FMPs (notably, their strategies) and other ODF plans and procedures were evaluated by the assessment team prior to their visit to Oregon to conduct the field assessment.

Then, during the first full week in March, 2006, the entire team visited the following NW ODF districts for one day each:

- Forest Grove (eastern part of the Tillamook State Forest),
- Astoria (Clatsop State Forest), and
- Tillamook (western part of the Tillamook State Forest).

Then, splitting up for a fourth day, individual team members visited the:

- North Cascade district (the Santiam State Forest),

- Western Lane, and
- West Oregon districts.

(Due to limited forest operations, the Southwest Oregon District was not visited in the field.)

An opening meeting was held in each district office to review the assessment process and to interview staff on their forest management procedures (and SW District staff was interviewed briefly by phone). After the opening meetings (and, at Forest Grove, a full team meeting with ODF staff at one field site), the assessment team split up to visit field sites with ODF staff who explained the management of each site.

At each field site, management issues relevant to the RMGs were reviewed with ODF land managers to determine how the site was being management to meet the RMGs, and detailed notes were made by the assessment team. Each day concluded with a brief closing meeting to review the day's findings and confirm plans for the next day. Each evening (except Wednesday, when the team traveled to separate locations), the assessment team met to discuss the day's findings.

The assessment team completed the field assessment by orally reviewing its findings in a two-hour meeting on Friday, March 10, with 34 ODF staff from both Salem and the field. This review provided staff with an early indication of the results of the assessment and resulted in further feedback on the assessment findings.

Although the assessment team did not visit as many field sites (65) as planned (90), the assessment team feels confident in its findings.

General Findings

Due to the history of the lands that became the State Forests of western Oregon, most stands on these forests are "middle-aged" and not in a balance of young, middle-aged, and old stands. Furthermore, habitat protection for the northern spotted owl and marbled murrelet has stimulated a shift toward management for older stand structures just when many of these stands were approaching traditional rotation age as defined by financial maturity for wood production. In addition, concerns about salmon habitat have led to riparian management strategies for increasing the complexity of streamside vegetation.

As a result, the FMPs represent a significant departure from previous forest management. In addition, the FMPs' transition from rotation-based to structure-based management (SBM) has challenged ODF to adjust quickly to a new way of managing forests. The prevalence of Swiss needle cast on the Tillamook District has only made this challenge greater, as traditional treatment regimes would have suggested that infected stands be clearcut as soon as possible.

In spite of these challenges, the assessment team finds that ODF is doing an exceptional job of implementing the FMPs. With a strong, innovative staff, management culture, and tradition, ODF is meeting its challenges creatively and enthusiastically using the strategies in the FMPs.

As a result, the "structure-based management" approach aimed at "desired future conditions" is moving the western Oregon State Forests toward the structural goals outlined in the FMPs, and the Resource Management Goals (RMGs) are being met. "Adaptive management" is helping ODF staff to test new management strategies on an ongoing basis, and some suggestions below will encourage this trend. Marginal shortcomings appear to occur in the areas of road- and recreation-related water-

quality impacts, each of which will be discussed in more detail below. Finally, more regular, direct community contacts to discuss forest operations would help citizens to understand the direction of the FMPs and could help to provide more focus on recreation and its impacts.

The consistent meeting of the RMGs does not mean that all RMGs are being met in the same way everywhere. Because the districts vary significantly ecologically and in landownership size and landscape pattern, ODF provides flexibility for its districts to develop their own ways of meeting the RMGs while maintaining accountability for meeting them. This is a strength of the organization which, in addition to encouraging locally effective management, allows districts to develop a range of responses to issues that other districts may find useful and which they may also adopt in time. This strength fits well with the agency's culture of proactive continuous improvement.

More detailed assessment findings are provided by resource management goal, below.

Findings by Resource Management Goal

The following findings are organized by grouping similar RMG areas in a logical order, rather than in the alphabetical order in which they appear in the FMPs. The numbered items under each RMG area heading (e.g., "**Land Base**") are the actual RMGs. Findings appear in *italics*, and apparent deficiencies in ***bold italics***.

For some RMG areas, the findings apply to the RMG area as a whole (and appear right after the RMG area heading); in other areas, findings are reported for each individual RMG. (Because the Southwest Oregon District was not visited in the field, the assessment findings by RMG apply directly only for the Northwest FMP districts, although interviews indicate that they likely apply to the SW FMP as well.)

Most of the findings include suggestions that do not reflect deficiencies in performance. The assessment team is not in a position at this time to judge the relative benefits and costs, advisability, or priorities of pursuing these suggestions. Where the Sustainable Forestry Initiative® or Forest Stewardship Council forest certification programs may require specific activities, these requirements are noted as related to "SFI" or "FSC", respectively.

Land Base

1. Conserve the state forest land base to maintain resource values.

Finding: This is being done by virtue of meeting the other RMGs.

2. Maintain compatibility with all Oregon Statewide Planning Goals and the Oregon Coastal Management Program.

Finding: It is assumed that these goals are being met by meeting the other RMGs using the strategies in the FMPs, but ODF should confirm this and, if necessary, direct the Districts where specific attention may be needed to address these other goals. This finding also applies where specific Statewide Planning Goals are listed under other RMGs, below, but it will not be noted separately there.

3. Achieve a land ownership pattern that can be efficiently managed.

Finding: Pursuit of this goal varies by district according to local needs and opportunities. ODF should review the districts' performance in this regard to assure that land-ownership

adjustments are prioritized appropriately among the districts, and encourage the development of ownership adjustment plans where needed.

In addition, ODF could consider establishing a more routine capacity for "three-way trades" and/or a "bank" for facilitating land exchanges that may align most advantageously between ODF and more than one other party.

Agriculture and Grazing

1. Permit agriculture and grazing, to the extent that they are compatible with other resource goals.

Finding: There are very few permits, and those that exist are being phased out as they expire and management goals change. ODF might consider promoting these opportunities more actively, but to do so would likely not often be "compatible with other resource goals".

Energy and Minerals

Finding: No such activities were found. ODF might promote these opportunities more actively, but to do so would not often be compatible with other resource goals. The FMPs specify development plans for these resources, but the lack of such plans does not appear to be a problem.

1. Manage gas, oil, and mineral resources on Board of Forestry Lands to provide revenues to counties and local taxing districts.
2. Manage gas, oil, and mineral resources on Common School Forest Lands to maximize long-term revenues to the Common School Fund.
3. Provide products useful to society, while minimizing impacts to surface resources (i.e., forests, fish, wildlife, etc.).
4. Maintain compatibility with Oregon's Statewide Planning Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources).

Special Forest Products

Finding: The most common special forest product is firewood, which is offered to the public in conjunction with timber harvests where its collection helps to reduce slash concentrations on accessible harvest sites near population centers. There are also permits for other products like salal, mushrooms, and mosses, but the quantities collected are not large.

There is some concern with unauthorized gathering of some such products, but the potential for damage does not seem to be significant at this time. Monitoring of use could be increased, but to do so would be expensive relative to the current levels of use or the revenues they generate.

Periodic review of the status and classification of plants being harvested could be done in concert with the State Department of Agriculture or the Natural Heritage program to ensure none are at risk.

If this program grows or as concern grows over individual resources, GIS layers and a standard special-forest-products database might be used to keep track of permits and resources. ODF might consider promoting these opportunities more actively, but to do so would likely seldom be compatible with other resource goals.

It should be noted that FSC certification might require a more active promotion of such use, as well as of the monitoring that would be required to ensure that such use would not be damaging. (Opportunities for improved marketing of timber products are noted under the "Timber" RMGs, below.)

1. Manage the special forest products resource to provide healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon.
2. Manage special forest products for sustainability over time.

Air Quality

Finding: Air quality is controlled by the requirement to get permits for prescribed burning. This appears to be discouraging some burning that might otherwise occur in some locations, especially where smoke may become a problem near towns and highways, although personnel and "burning window" limitations also apply.

If expanded prescribed burning is considered to be an attractive alternative for meeting other RMGs, ODF might consider working with other agencies to develop an expedited air-quality permitting process for high-priority burns.

1. Contribute to meeting National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration standards (PSDs) established under the federal Clean Air Act (42 USC 7401 et seq.).
2. Manage prescribed fire to comply with the Oregon Smoke Management Plan.
3. Maintain compatibility with Oregon's Statewide Planning Goal 6 (Air, Water, and Land Resources Quality) direction to maintain and improve the air resource of the state.

Scenic Resources

Finding: These goals are consistently met with the assistance of clear management criteria embodied in a specific GIS layer and with the use of forest harvesting patterns that leave residual trees in clearcuts.

1. Meet the scenic protection requirements of the Oregon Forest Practices Act for visually sensitive corridors associated with designated scenic highways (ORS 527.755).
2. Manage the forest to minimize visual effects in areas designated by the Department of Forestry as visually sensitive.
3. Maintain compatibility with Oregon's Statewide Planning Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources).

Cultural Resources

Finding: Protection of historic sites since European settlement appears to occur routinely, although not all districts have cultural resource inventories and some informal discoveries may not be recorded in a standard database. Records of Native American archeological or cultural sites appear to be rare due to little native use of forested uplands and the understandable unwillingness of native groups to identify specific sites.

A more vigorous "due diligence" regarding the location of possible Native American sites – including the use of the kinds of predictive GIS models that have been used elsewhere – might be in order, and might even be required in an FSC certification audit.

In addition, procedures assuring more consistent coverage of cultural and historic sites in a GIS database should be established and implemented.

1. Preserve and protect archaeological sites or archaeological objects in accordance with state law (ORS 97.740 to 97.760; 358.905 to 358.955; and 390.235).

2. Conserve historic artifacts and real property of historic significance in accordance with state law, in consultation with the Secretary of State and the State Historic Preservation Office (ORS 358.640 and 358.653).
3. Protect additional cultural resource sites that are determined by the Department of Forestry to have special educational or interpretive value.
4. Maintain compatibility with Oregon's Statewide Planning Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources).

Access

1. Develop and maintain an access system adequate for fire protection and management activities.

Finding: Except for a few "legacy" roads, most roads are well-constructed and well-maintained, and access is probably as good as it can be due to difficult terrain.

2. Minimize potential adverse environmental and biological impacts of roads and other components of the access system.

Finding: The access system has been improved significantly through time and there is a continuing effort to build new roads on ridge tops, so most roads are in excellent condition.

Deficiency: A few roads have not been upgraded to current standards, however, and many older roads (although upgraded in quality) still lie in river and creek bottoms where sediment can occasionally end up in streams. Although disconnection of roadside ditches from streams has been a major goal, some older bridges, culverts, and ditches are of designs that can allow runoff to enter streams.

Furthermore, wet-weather log hauling can harm even good roads, and the difficulty of winter maintenance on roads (due to almost continuous wet conditions) can make it difficult to repair roads that introduce sediment to streams.

Finally, there are limitations on the availability of people, equipment, and funds to improve and repair roads not associated with timber sales. These problems tend to be most severe where slopes are most steep, rainfall amounts are greatest, many improperly-located historic roads are in poor condition, and forest-health concerns have motivated salvage and pre-salvage operations at a scale which stretches a district's ability to invest in roads at a commensurate pace.

In total, these problems were not widespread, but they appear to be of a scale and are systematic-enough in nature to result in a "major-non conformance" precluding certification to the SFI Standard until they are corrected.

Finding: To address these issues, ODF should consider means for funding road construction, reconstruction, and maintenance at an accelerated rate independent of timber sale revenues, and more closely look at ways to maintain roads in wet conditions and/or to limit winter log hauling.

The further development and deployment of the "RIMS" system should help in identifying and addressing these problems, as should the expansion of watershed analyses and assessments. The RIMS database, however, should include (or be augmented by a related system with) a capability for resource managers (and possibly even the public) to record newly emerging road problems, to prioritize repairs, and to plan road and bridge construction, reconstruction, closure, vacation, and relocation.

3. Allow public access where it is compatible with resource protection, management activities, and where impacts to adjacent landowners can be minimized.

Deficiency: Off-highway vehicle (OHV) use near some streams is resulting in erosion and sedimentation, and is addressed in detail below under Recreation RMG 3.

Recreation

1. Provide diverse forest recreation opportunities that supplement, rather than duplicate, opportunities available in the region.

***Finding:** The recreation program is generally strong, although some districts lack recreation inventories and plans and may lack adequate recreation staff support. ODF should proceed with recreation inventories and plans where lacking – and keep them up-to-date – and consider strengthening recreation staffing levels in some locations as needed.*

The recent expansion of horse campgrounds could result in increased levels of user conflicts and horses might negatively affect some streams, so both should be monitored.

Increased attention to organized recreational user groups could result in more cooperative agreements to construct and maintain recreation facilities and to control problematic recreation users.

2. Provide opportunities for interpretation and outdoor education on state forest lands.

***Finding:** Forestry presentations to schools and tours for students and the public are offered at varying levels between districts. In-forest interpretation opportunities – like signed trails – appear to be rare and could be expanded. The new Tillamook Forest Center is an excellent core resource for expanding the interpretation and education program.*

3. Manage recreational use of the forests to minimize adverse impacts to other resources and adjacent ownerships.

***Deficiency:** Both authorized and unauthorized OHV use near at least some streams is causing erosion and sedimentation problems – and these problems can be expected to grow – but the actual magnitude of such use is not known. These problems could be of a scale and systematic-enough in nature to result in a “major-non-conformance” precluding certification to the SFI or FSC standards until they are corrected.*

***Finding:** More ODF resources should be focused on identifying, preventing, and rectifying these problems, perhaps with the cooperation of OHV user groups.*

4. Minimize conflict among user groups.

***Finding:** Conflicts among user groups appear in damaging OHV use, between hunters wanting vehicle access and those who would like more solitude, and from those who litter or dump trash.*

To address these concerns, ODF should do more to control OHVs (see above), could gate more roads (at least during hunting season), and could more aggressively pursue litterers and trash dumpers. In some cases, increased sponsorship of full-time sheriff deputies may be warranted.

5. Maintain compatibility with Oregon’s Statewide Planning Goal 8 (Recreational Needs).

Wetlands

***Finding:** Lowland wetlands near streams are routinely protected. Old roads are slowly being relocated out of stream bottoms to restore certain aspects of wetland integrity, and these efforts could be accelerated. Upland “perched” (and often seasonal) wetlands are rare but significant, and they could benefit from more emphasis on their importance and protection.*

1. Maintain the natural functions and attributes of wetlands over time.
2. Ensure that no net loss of wetlands occurs as a result of our management activities.
3. Maintain compatibility with Oregon’s Statewide Planning Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources).

Water Supply

***Finding:** These goals are adequately advanced through the basin analyses in the FMP implementation plans and the separate emerging watershed analyses and assessments. In particular, municipal water supplies are also protected through operations reviews and field tours with water purveyors.*

1. Maintain healthy watershed conditions to support the beneficial uses of the waters of the state.
2. Maintain natural watershed storage capacity processes.
3. Protect water-related functions of riparian lands.

Water Quality

***Finding:** Forest operations routinely protect water quality through the common implementation of riparian/aquatic management standards and emerging watershed assessments for high-priority basins, which are expected to continue.*

***Deficiency:** For related problems affecting water quality, see "Access" and "Recreation", above.*

1. Maintain a level of water quality sufficient to support beneficial uses of the waters of the state, including propagation of fish and aquatic life, wildlife, domestic, agricultural, industrial, municipal, recreational and other legitimate uses (ORS 468B.015(2)).
2. Maintain water quality that meets standards established by Oregon under the mandates of the federal Clean Water Act (33 USC et. seq.).
3. Maintain compatibility with Oregon's Statewide Planning Goal 6 (Air, Water, and Land Resources Quality).

Fish and Wildlife

***Finding:** Providing and protecting fish and wildlife habitats are central to the focus of the FMPs, and are being done very well. After recovering from an early-settlement history of forest burning and heavy cutting affecting most ODF lands, the current FMP is moving strongly in the direction of converting middle-aged stands to a wide range of stand ages and structures to provide habitats for a wide variety of terrestrial species while protecting and improving habitats for aquatic species.*

"Salmon anchor habitat" designations call for protective measures that are likely to be effective but which may significantly restrict future operations in some basins if they were to be extended beyond the current agreement.

Habitat needs of the principal threatened species on ODF lands (the northern spotted owl and the marbled murrelet) are being addressed through a combination of regular surveys, habitat protection, restriction of activities causing disturbance, and management strategies specific to the habitats of these species. ODF cooperates actively with other State and Federal agencies in these endeavors.

If anything, ODF is acting cautiously in ensuring the protection of both terrestrial and aquatic habitats, but this is appropriate in light of current forest conditions, uncertainties about habitat needs, and the somewhat untested nature of the FMPs' terrestrial and aquatic/riparian management strategies. As more confidence is gained with these strategies and more becomes known about the habitat requirements of various species, it can be expected that ODF will become more aggressive in treating forest stands while continuing to protect terrestrial and aquatic species.

The adaptive management approach is essential for the refinement of protection strategies for fish and wildlife habitat over time. Note: both FSC and SFI certifications could require a more formal analysis of habitat conditions according to their respective standards.

1. In a regional context, provide habitats that contribute to maintaining or enhancing native wildlife populations at self-sustaining levels, and contribute to properly functioning aquatic habitats for salmonids, and other native fish and aquatic life.
2. Meet the requirements of federal and state endangered species acts.
3. Contribute to maintaining fish and wildlife populations at levels that allow recreational and commercial opportunities, including fishing, hunting, and wildlife viewing.
4. Maintain compatibility with Oregon's Statewide Planning Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources).

Plants

***Finding:** Implementation of the current FMP strategies will provide an increasingly diverse array of plant habitats. Although there are not many threatened and endangered plants on the State Forests, current protections appear to be adequate.*

Through contacts with the State Department of Agriculture and/or state Natural Heritage program, continued efforts to determine rare plant locations (perhaps in part through the use of the kinds of predictive GIS models that have been used elsewhere) and appropriate protective measures might be in order.

1. In a regional context, provide habitats that contribute to maintaining or enhancing native plant populations at self-sustaining levels.
2. Meet the requirements of federal and state Endangered Species Acts.

Forest Condition (Health and Biodiversity)

***Finding:** The first three goals below are provided by the same management strategies that promote fish and wildlife habitats as discussed above, primarily under "Fish and Wildlife".*

1. Maintain or restore healthy forest conditions, thereby promoting sustainable, productive, and resilient ecosystems.
2. Maintain biological diversity across the landscape.
3. Provide for structural complexity and age diversity within and among stands.
4. Maintain long-term forest soil productivity.

***Finding:** Soil productivity is protected by the use of cable and shovel logging methods and by leaving abundant slash, large woody debris, and live trees and snags that will fall and become large woody debris.*

Guidelines are in place and are being used for restricting operations when the potential for soil damage is high.

5. Protect forest resources from unwanted fire and damaging pests.

***Finding:** Fire protection and pest management programs are well-developed. A number of approaches are being used to address damage to reforestation by rodents and ungulates.*

Aggressive management of root rot and Swiss needle cast provide both challenges and opportunities for advancing forest structure goals.

Soils

Finding: See Forest Condition RMG 4, above.

1. Maintain long-term forest soil productivity.

Timber

1. Manage the timber resource to provide sustainable timber harvest and revenues to the state, counties, and local taxing districts; maximize long-term revenues to the Common School Fund; and contribute to Oregon's timber supply.

Finding: Timber harvesting and marketing is the primary means by which the forest is managed and revenues are generated for other RMG programs and governmental units. Additional marketing opportunities could exist or might be developed through time for smaller-diameter wood coming from timber sales and precommercial thinnings.

Promoting the use of the large-diameter wood that will come from some delayed harvests – including estimates of its annual volumes and assurance of its continued supply – would assure a market and bring better prices for such material as it becomes available. (The balancing of revenue with other RMG goals is addressed below under Social and Economic Resources.)

2. Produce a sustained yield of timber harvest from state forest lands.

Finding: Current levels of timber production appear to be sustainable and current management strategies should prevent future timber harvest levels from exceeding sustainable levels unless planned temporarily for other RMG purposes like forest health.

If anything, ODF is being cautious in its timber harvesting program, but this is appropriate in light of current forest conditions, uncertainties about wildlife habitat needs, and the new nature of the FMPs' management strategies. As more confidence is gained with these strategies and more becomes known about the habitat requirements of various species, it can be expected that ODF will become more aggressive in treating forest stands.

The adaptive management approach is essential for the refinement of protection strategies for fish and wildlife over time. Note: the SFI Standard would require a more formal analysis of long-term sustained-yield levels and more documentation of current management practices in terms of those levels.

Finally, rodent and ungulate browsing on forest regeneration are potential threats to long-term productivity that should be more formally monitored and for which continued efforts to develop improved protection methods are warranted.

3. Promote the maintenance, growth, and development of forest trees and stands through the use of appropriate silvicultural techniques.

Finding: Current silvicultural techniques are effectively achieving the FMP RMGs. More complete burning of slash would reduce habitats for overly abundant rodent species – particularly mountain beavers – that damage forest regeneration without reducing soil productivity. Lower-density plantings could preclude the necessity for and cost of precommercial thinning.

It is obvious from interviews and field visits, ODF staff recognize that forest structure change is needed to accomplish the complex public goals which often do not fit with traditional silvicultural techniques.

Staff is using a range of harvesting prescriptions and techniques to establish baseline information for future adaptive management strategies. For this to succeed, a historical

stand-level GIS-based recordkeeping system to track accomplishments on each acre and determine the efficacy of past treatments will be key.

Social and Economic Resources

***Finding:** The mandate for the State Forests to be managed for their “greatest permanent value” is a complex goal to achieve, and it may compete politically with the expressed financial interests of local governments. ODF appears to be conscientiously achieving such a balance, however, and will continue to refine this balance through the implementation of the FMPs.*

(“Maximizing” school revenue does not provide an analytic framework for providing a balance with other RMGs, so it is assumed that this will be done within the context of “greatest permanent value”.)

ODF’s implementation of the FMPs appears to promote a range of RMGs amenable to the long-term sustainability of state and local economies. Timber-harvest levels appear to be stable and sustainable, and to be providing a mix of values and outputs desired by the citizens of the state.

Public involvement in defining this balance took place in the FMP and District Implementation Plan development processes, and ODF is seeking objective information on citizens’ interests via focus groups and mail surveys. In addition, Annual Operating Plans (AOPs) are available on the ODF website for comment by the public, and these comments all receive a response.

To provide more continuity of effective interaction with the public about the FMPs, however, it is suggested that the AOP public reviews:

- *use a more standard format, particularly for the header material, and AOP information be more readily available in a standard database over a number of years,*
 - *several “glitches” in the current AOP review website – like an initial white screen and the appearance of requiring a password – be repaired,*
 - *be augmented with some sort of annual, direct, local, and personal public contact, and*
 - *be used as a mechanism to engage recreationists and potential recreation-group program cooperators.*
1. On Board of Forestry lands, provide sustainable timber harvest and revenues to the state, counties, and local taxing districts.
 2. On Common School lands, maximize the long-term revenues to the Common School Fund.
 3. Select sound forest management practices that promote sustainable state and local economies.
 4. Provide for a mix of resource outputs and amenity values that promote the long-term social health and economic viability of state and local communities.
 5. Enhance public understanding of forest resources and forest resource management.
 6. Maintain compatibility with Oregon’s Statewide Planning Goal 9 (Economic Development).

Conclusions

The SRS assessment team finds ODF's management of the Oregon Northwest State Forest districts (and the Southwest district, to the extent that this could be determined without a field visit) to conform substantially to the Resource Management Goals of their respective 2001 Forest Management Plans.

The methods being used to achieve these goals appear to be appropriate, effective, and professionally applied by a highly qualified staff, and they are continually being improved in an adaptive manner in keeping with the mission of the Department and the provisions of the Plans.

The one possible exception to this finding is that some OHV use and a few stream crossings are contributing sediment to streams to a degree that, although not serious, is not fully compatible with the goals and provisions of the Plans. Correction of these issues appears to be within the skill and resource capacities of the Department, but complete development of some supporting programs currently underway in the Department may be required to fully mobilize these capacities.

The Assessment Team

Strategic Resource Systems (SRS) emphasizes prompt, client-tailored, high-quality consulting via a network of professional associates to provide the most appropriate staff to meet client needs. To this end, SRS assembled the following ODF FMP assessment team:

William Rockwell, SRS President, was the primary contractor and consultant on the ODF assessment. He is an SAF Certified Forester® and Certified Forest Auditor®, a RAB-certified EMS Lead Auditor, immediate past Chair of the SFI Auditors' Forum, and has led thirteen certification audits.

He designed and co-teaches the SAF-sponsored course in sustainable forest management system auditing, co-authored SAF's new book on the same subject, and was the founding Chair of the SAF Sustainability & Certification Working Group.

He has been forest planner, fire management specialist, and the Forest Planning Section Leader for the Michigan Department of Natural Resources and its four-million-acre state forest system, and recently helped that organization achieve SFI and FSC certification in a year-long consulting arrangement.

He has also consulted with the Missouri Department of Conservation on their preparation for SFI certification and, with George Banzhaf & Company, was a forestry consultant to the Pacific Northwest Regional Commission's Forest Policy Project and the Legislative Commission on Minnesota Resources.

He holds the following degrees: Bachelor of Science in Natural Resources, Master of Forestry, and Master of Business Administration, all from The University of Michigan, and Master of Arts in Economics and Doctor of Philosophy in Agricultural Economics, from Michigan State University.

Frederick Ebel, a forestry consultant based in Idaho, served as the assessment team's forest operations specialist. He is an SAF Certified Forester®, and has participated in SFI forest certification audits in the Pacific Northwest.

A former industry Regional Chief Forester, he has worked extensively in Oregon, and has served as Chair of the Oregon Society of American Foresters and was OSAF's National Council representative (and SAF President), and as President of the Oregon Forest Protection Association and the Northwest Natural Resources Institute.

He holds a Bachelor of Science degree in Forest Management from the University of Montana, and has pursued advanced graduate studies in Forest Economics at the University of Montana as well as many executive training programs related to natural resource management and policy.

James Rochelle, a forest wildlife consultant from Washington, served as the assessment team's fisheries and wildlife specialist. He is Weyerhaeuser's former Chief Biologist, and has participated in the development of the SFI Standard, forest practice regulations and water-quality Best Management Practices in the Pacific Northwest, and in Washington State's Timber, Fish and Wildlife agreement.

He has participated in several SFI audits in the Pacific Northwest, as well as in field reviews of ODF's NW FMP.

He holds Bachelor's and Master's degrees in Wildlife Biology from Washington State University and a doctorate in Forest Wildlife Ecology from the University of British Columbia.