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BOARD ISSUES WORK PLAN

Issue #8: Invasive Species

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CONTENTS

BACKGROUND.....2

 Current Issues2

 Historical Context.....3

GOAL.....6

OBJECTIVE 1: Review the invasive species responsibilities and programs of other agencies and organizations. Review the Forestry Program for Oregon’s strategies and actions related to invasive species.6

 Historical Context.....6

 Current Issues6

 Board Products6

 Research and Information Gathering.....7

 Stakeholder/Public Involvement.....7

 Timeframe with Milestones.....7

 Resources Required.....8

 Monitoring Achievements of this Objective.....8

OBJECTIVE 2: Review the statutes, rules, and voluntary measures that affect invasive species and pursue changes as necessary to meet board policies.....8

 Historical Context.....8

 Current Issues8

 Board Products10

 Research and Information Gathering.....10

 Stakeholder/Public Involvement.....10

 Timeframe with Milestones.....10

Resources Required.....	11
Monitoring Achievements of this Objective.....	11

OBJECTIVE 3: Review and approve an agency strategic plan for invasive species affecting forestland in Oregon.....	11
Historical Context.....	11
Current Issues	11
Board Products	12
Research and Information Gathering.....	12
Stakeholder/Public Involvement.....	12
Timeframe with Milestones.....	12
Resources Required.....	13
Monitoring Achievements of this Objective.....	13

TABLE 1: ELEMENTS OF AN STRATEGIC PLAN FOR MANAGEMENT OF INVASIVE SPECIES AFFECTING OREGON’S FORESTS.....	14
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REFERENCES.....	15
------------------------	-----------

BACKGROUND

Current Issues

“Invasive species” means a non-native species whose introduction to an area outside its range does, or is likely to, cause economic or environmental harm or harm to human health¹. Invasive species can be terrestrial or aquatic plants, animals, or disease. The definition highlights the threat invasive species pose to the economic, environmental, and social legs of sustainability. This work plan focuses on invasive species that affect Oregon’s forests.

Examples of invasive species with the potential devastating effects in Oregon are tansy ragwort (*Senecio jacobaea*), European gypsy moth (*Lymantria dispar*), and the sudden oak death pathogen (*Phytophthora ramorum*). Costs of controlling such species can be high, but the consequences of inaction are often much greater. Scotch broom has become well established in Oregon, and associated economic costs exceed \$45 million (Oregon Department of Agriculture 2000). One critical element in the fight against invasive species is to focus on prevention, and if that fails, on early detection and rapid response. If an invader escapes beyond that stage, control costs skyrocket and chances for success drop. Vigilance is needed, since species introductions are increasing with the acceleration of global trade and travel.

A broad spectrum of agencies and organizations are addressing invasive species. For example, the Oregon Department of Agriculture is the designated lead agency for control of noxious weeds in Oregon. The State Weed Board and county weed departments are also involved. The Nature Conservancy controls invasive species on its own lands and helps with outreach on other

¹ Oregon Invasive Species Council - <http://www.oregon.gov/OISC/>

lands. The Oregon Invasive Species Council provides a coordinating body for invasive species work in the state. As of January 2008, the Oregon Department of Forestry took a seat on the council, which is looking to the Department and the Board for leadership and coordination related to invasive species that affect Oregon's forests.

Because there are many existing authorities and programs, the role of the Board and Department is to provide leadership and coordination within the overall context of many existing authorities and programs. This work plan will help the Board establish its leadership and coordination role in the fight against invasive species in Oregon's forests.

The department has used existing resources for planning and control programs related to invasive species. Given limited resources for the Board and Department, the Board will examine the invasive species issue and determine its priority within existing Board work plans. The Board will provide direction concerning how the invasive species issue fits within department priorities, and what additional resources should be requested to address the issue.

Historical Context

2003 Forestry Program for Oregon

In developing the *2003 Forestry Program for Oregon (FPFO)*, the Board recognized that invasive species could detract from achieving sustainability in forest management in Oregon. The 2003 Forestry Program for Oregon addresses the issue in Strategy F and Action F.3, as follows:

STRATEGY F. Protect, maintain, and enhance the health of Oregon's forest ecosystems, watersheds, and airsheds within a context of natural disturbance and active management.

Action F.3. The board will encourage state and federal agencies to closely monitor and aggressively act to prevent and mitigate the adverse effects of air pollution and invasive, non-native species on Oregon's forests.

Many of the other FPFO strategies and actions, as well as the vision and value statements implicitly address or are related to the effects of invasive species. Invasive species can negatively affect each of the environmental, economic, and social legs of sustainability the FPFO is designed to promote.

2004-2006 Private and Community Forests Development Team

As part of a review of the Private Forests Program, the Department conducted surveys of forest landowners and found that they considered invasive species a threat to forestland. The team's draft report included a recommendation for the Private Forests Program to "provide proactive detection, monitoring, and control of invasive species." (Oregon Department of Forestry, 2006)

Oregon Department of Forestry Agency Strategic Plan 2004 to 2011

In 2004, the Department adopted the *Oregon Department of Forestry Agency Strategic Plan 2004 to 2011*. The plan describes the high-priority actions the agency will undertake between 2004 and 2011. These actions will enable the department to meet its statutory mandates and

assist the Oregon Board of Forestry in achieving the strategies, actions, and vision expressed in the *2003 Forestry Program for Oregon*. The agency strategic plan includes the following items to address invasive species (listed under the Private Forests Program):

- Strategy 4.2. Prevent new and eradicate when needed invasive nonnative species
- Vital Action 4.2.1. Continue to partner with Oregon Department of Agriculture in the Sudden Oak Death prevention and eradication efforts on forestlands using surveys, monitoring, applied research and technical assistance.
- 4.2.2. ...develop and implement an agency policy for the prevention and control of invasive species.

In addition, in its current review of 2009-11 biennial budget investment strategies, the Department has identified the following as one of its focus areas:

...develop capacity to implement the BOF's invasive species work plan.

2005-2006 Board of Forestry Issue Scan

Several respondents to the Board's request for comments identified invasive species as a potential issue. The Board Issue Scanning Work Group recommended invasive species as one of three new issues to be considered in the Board's work in 2006.

November 2005 Board of Forestry Planning Session

The Board reviewed Issue Scanning Work Group recommendations for the 2006 Issue Scan. Staff presented to the Board a topic overview that provided background for the invasive species issue. The Board requested clarification on what specifically would be the Board's work and deliverables in a work plan.

November 2006 Board of Forestry Meeting

The Department presented an invasive species background paper, which provided the requested clarification, defined some potential Board Department products, and recommended that that Board elevate invasive species to issue status (Oregon Department of Forestry 2006a). The Board accepted that recommendation and directed the Department to prepare an invasive species work plan.

Sustainability Indicators (January 2007)

On January 3, 2007, the Board endorsed a list of sustainability indicators related to the strategies and actions outlined in the Forestry Program for Oregon. The indicators for invasive species are as follows (from Oregon Department of Forestry 2007a):

F.b. Invasive species trends on forestlands (Related *Forestry Program for Oregon* Action: F.3.) Metrics:

- Biotic stressors: exotic insects and diseases, invasive plants, and animals (acres affected)
- The number or percent of invasive pests on Oregon's 100 most dangerous list excluded or contained in native and urban forests

Desired trend: No invasive species on Oregon's 100 most dangerous list are uncontained in the state's forests, and a stable or decreasing forest acreage is affected by invasive species.

Federal Forestland Advisory Committee (ongoing)

The Board's Federal Forestland Advisory Committee is currently working on issues relating to federal forestland in Oregon. While the committee's key issues list does not include invasive species on federal forestland, the committee's Goal 1 includes the following statement:

Diverse native forest and rangeland types are maintained, in the absence of non-native and invasive species, to provide for healthy populations of native fish and wildlife species. (Oregon Department of Forestry 2007)

In addition, Issue/Impediment 2.19 describes overstocked federal forests as being susceptible to forest insect pest epidemics. The subsequent tree mortality makes forests more susceptible to large scale wildfires. Although some forest insect pests are native, others are introduced pests.

Oregon Plan for Salmon and Watersheds Voluntary Measures

The mission of the Oregon Plan for Salmon and Watersheds (Oregon Plan) is as follows:

Restoring our native fish populations and the aquatic systems that support them to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits.

As participants in the Oregon Plan, the Board, Department, and stakeholders have developed a set of voluntary measures designed to improve salmonid habitat. Voluntary measures that would address invasive species in the context of the Oregon Plan for Salmon and Watersheds are under development.

Oregon Department of Forestry Programs and Activities

The department's four operating programs (State Forests, Private Forests, Urban and Community Forests, and Protection from Fire) are either engaged in planning and implementing activities related to invasive species or are considering such activities.² The Agency Affairs Program has been involved in outreach and education related to invasive species. Each of these five programs has designated an invasive species coordinator or representative. In addition, Forest Resources Planning Program staff work with invasive species issues including sustainability indicators and interpretation of U.S. Forest Service Forest Inventory Analysis data.

Although the department is working to address invasive species, it has no specific budget allocations for invasive species coordination. The Department does not have an invasive species strategic plan at this time, but is developing a invasive species charter work plan as part of its new strategic planning process.

² More information on program activities is available in Oregon Department of Forestry 2007b.

The 2007 Oregon Legislature gave the Department a voting, ex officio seat on the Oregon Invasive Species Council (OISC). The four primary functions of the council are as follows:

- Create and publicize a system for reporting sightings of invasive species and referring those reports to the appropriate agencies (this is the 1-866-INVADER hotline).
- Undertake educational activities to increase awareness of invasive species issues.
- Develop a statewide plan for dealing with invasive species (the first iteration of the action plan has been developed).
- Administer a trust account for funding eradication and education projects.

More information is available at <http://www.oregon.gov/OISC/index.shtml>.

GOAL

Support healthy forests that provide a sustainable flow of environmental, economic, and social outputs and benefits by providing leadership to prevent and control introductions of damaging invasive, nonnative species on Oregon's forests. (Based on Board of Forestry Vision Statement #1.)

OBJECTIVE 1: Review the invasive species responsibilities and programs of other agencies and organizations. Review the Forestry Program for Oregon's strategies and actions related to invasive species.

Historical Context

See the Background section at the beginning of this work plan.

Current Issues

To be effective in providing leadership on forest-related invasive species, the Board will develop an understanding of the current state of regulations, responsibilities, and programs that relate to invasive species in Oregon's forests.

The Board of Forestry describes its own mission, vision, values, strategies, and actions in the Forestry Program for Oregon (FPFO). The focus of the 2003 FPFO is on sustainability, and management of invasive species is needed to meet that goal. The FPFO directly addresses invasive species in Strategy F and Action F.3, as follows:

STRATEGY F. Protect, maintain, and enhance the health of Oregon's forest ecosystems, watersheds, and airsheds within a context of natural disturbance and active management.

Action F.3. The board will encourage state and federal agencies to closely monitor and aggressively act to prevent and mitigate the adverse effects of air pollution and invasive, non-native species on Oregon's forests.

Board Products

The Board will gain a solid understanding of the forest invasive species-related regulations, responsibilities, and programs administered by other agencies and organizations.

The Board will review FPFO Strategy F and Action F.3 based on input provided by the department. The Board will determine if changes are needed on an interim basis until the Board begins its revision of the FPFO. Reviewing policies at this time will:

- Allow the Board to take action in the short term; and
- Accomplish some of the work needed on the invasive species topic for the 2011 Forestry Program for Oregon.

Research and Information Gathering

The Department will gather information on forestland invasive species policies and programs developed by other western states, federal land management agencies in Oregon, local governments, and nongovernmental organizations.

Stakeholder/Public Involvement

The Department will gather input from the following organizations:

- Oregon Forest Industries Council
- Oregon Small Woodlands Association
- Committee for Family Forestlands
- Representatives of the conservation community
- Oregon Invasive Species Council
- Other state and federal agencies involved in invasive species management

The Department will use individual review requests and existing processes such as scheduled meetings of the Committee for Family Forestlands to gather input.

Timeframe with Milestones

May 2008 through June 2008: Staff will gather information on policies for management of invasive species affecting Oregon's forests.

July 24, 2008: The Board will review its own strategies and actions related to invasive species affecting Oregon's forests. The Board will review forest invasive species-related regulations, responsibilities, and programs of other agencies and organizations.

August 2008 through October 2008: Staff will gather public input related to Board strategies and actions related to invasive species that affect Oregon's forests. Staff will develop recommendations for revisions to Board strategies and actions related to invasive species that affect Oregon's forests.

November 2009: The Board will review staff recommendations for strategies and actions related to invasive species that affect Oregon's forests.

January 2009 through February 2009: Staff will revise recommendations based on Board direction.

March 2009: The Board will consider approval of staff recommendations for strategies and actions related to invasive species affecting Oregon's forests.

Resources Required

The Department will support achievement of Objective 1 with existing resources.

Monitoring Achievements of this Objective

The Department will report to the Board periodically on progress toward achieving this objective.

OBJECTIVE 2: Review the statutes, rules, and voluntary measures that affect invasive species and pursue changes as necessary to meet board policies. These statutes, rules and voluntary measures include:

- Oregon Forest Practices Act and Oregon Forest Practices Rules
- State Forest Management Plans and supporting statutes and rules
- Oregon Fire Protection of Forests and Vegetation statutes and rules
- Oregon forest insect and disease statutes and rules
- Oregon Plan for Salmon and Watersheds voluntary measures.

Historical Context

See the Background section at the beginning of this work plan.

Current Issues

Oregon Forest Practices Act

The Oregon Forest Practices Act is contained in ORS 527.610 through 527.770, 527.990(1), and 527.992. The primary policy statement in the Act is from ORS 527.630(1), as follows:

...it is declared to be the public policy of the State of Oregon to encourage economically efficient forest practices that ensure the continuous growing and harvesting of forest tree species and the maintenance of forestland for such purposes as the leading use on privately owned land, consistent with sound management of soil, air, water, fish and wildlife resources and scenic resources within visually sensitive corridors as provided in ORS 527.755 and to ensure the continuous benefits of those resources for future generations of Oregonians.

This policy statement does not explicitly address the effects of invasive species on forest resources. However, invasive species can have significant negative impacts on the described policy goals, including economic efficiency, the continuous growing and harvesting of forest trees, and sound management of soil, air, water, and fish and wildlife resources.

ORS 527.710(2) provides additional policy direction to the Board for rulemaking, as follows:

ORS 527.710(2) The [forest practice] rules [adopted by the Board] shall ensure the continuous growing and harvesting of forest tree species. Consistent with ORS 527.630, the rules shall provide for the overall maintenance of the following resources:

- (a) Air quality;
- (b) Water resources, including but not limited to sources of domestic drinking water;
- (c) Soil productivity; and
- (d) Fish and wildlife.

Again, the statute does not single out invasive species for consideration, but negative effects on the listed values and resources are likely.

Oregon Forest Practice Rules

The Board promulgates forest practice rules under the authority of the Forest Practices Act. The forest practice rules are made up of OAR 629-600 through 629-660, 629-670, 629-672, 629-674, and 629-676. The rules are based on the policy statements in the Forest Practices Act, and individual rule divisions. However, the rules do not contain a statement of overall board policy, nor do they address invasive species in any direct fashion and in some cases, the rules may be barriers to accomplishing invasive species policies.

State Forests Management

OAR 629-035 contains the rules for management of state forests. The rules require that state forests must be managed to achieve the greatest permanent value to the state, but do not specifically mention invasive species. The Board and Department have developed management plans for each regional state forest. The plans describe strategies for management of invasive species. The State Forests Program is developing and implementing an invasive plant management program.

Fire Protection of Forests and Vegetation

ORS 477 and OAR 629-041 through 629-045, 629-47, 629-48, 629-60, and 629-61 address fire management, but do not directly mention invasive species.

Forest Insect and Disease Control

ORS 527.310 to 527.370 and OAR 629-51 establish an integrated pest management process, which includes survey and management of forest insect and disease pests. The statutes and rules do not mention invasive species, but does use the older terminology of “exotic” meaning any pest that has been accidentally or deliberately introduced into an area where it does not naturally occur. The rules direct the department to conduct surveys and evaluations on nonfederal forestlands to determine the presence, extent, trend and impact of native and exotic pests. The department and other cooperators have established procedures and funding sources to implement the insect and disease management program, although more funding and resources are needed.

Oregon Plan for Salmon and Watersheds Voluntary Measures

The mission of the Oregon Plan for Salmon and Watersheds (Oregon Plan) is as follows:

Restoring our native fish populations and the aquatic systems that support them to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits.³

As participants in the Oregon Plan, the Board, Department, and stakeholders have developed a set of voluntary measures designed to improve salmonid habitat. Voluntary measures that would address invasive species in the context of the Oregon Plan for Salmon and Watersheds are under development.

Board Products

1. The Board will be asked to review current statutes, rules, and Oregon Plan voluntary measures related to invasive species and forest practices for congruence with Board policies.
2. Based on the review in item 1 above, the Board will be asked to determine what changes, if any, are needed in the relevant rules and statutes.

Note: The Board's review of Oregon Plan voluntary measures will take place in the ongoing process, rather than as part of this work plan. The topic is included as a reference in this work plan because voluntary actions are a critical element in managing invasive species.

Research and Information Gathering

The Department will gather information on invasive species-related statutes, rules, and voluntary measures related to forestland invasive species developed by other western states, federal land management agencies in Oregon, local governments, and nongovernmental organizations. The Department will present a review of this information to the Board.

Stakeholder/Public Involvement

The Department will gather input from the following organizations:

- Oregon Forest Industries Council
- Oregon Small Woodlands Association
- Committee for Family Forestlands
- Representatives of the conservation community
- Oregon Invasive Species Council
- Other state and federal agencies involved in invasive species management

The Department will use individual review requests and existing vehicles such as scheduled meetings of the Committee for Family Forestlands to gather input.

Timeframe with Milestones

July 24, 2008 (from Objective 1 of this work plan): The Board will review its own strategies and actions related to invasive species affecting Oregon's forests. The Board will review forest

³ From http://www.oregon-plan.org/OPSW/about_us.shtml#Key_Elements_of_the_Plan

invasive species-related regulations, responsibilities, and programs of other agencies and organizations.

August 2008 through November 2008: Staff will develop a list of guiding principles for review of Department-administered statutes, rules, and other measures that could be related to invasive species that affect Oregon's forests. Based on the draft guiding principles, staff will develop a draft determination of whether the statutes, rules, and other measures are aligned with the strategies and actions developed from Objective 1 of this work plan, and whether any changes are needed to make that alignment.

November 2008: Staff will provide a draft list of guiding principles for review of Department-administered statutes, rules, and other measures that could be related to invasive species that affect Oregon's forests. Based on the draft guiding principles, staff will provide the Board a draft determination of whether the statutes, rules, and other measures are aligned with the strategies and actions developed from Objective 1 of this work plan, and whether any changes are needed to make that alignment.

December 2008 and January 2009: Staff will revise draft recommendations based on Board direction.

March 2009: The Board will review staff recommendations for possible statute, rule, or voluntary measure changes and decide on a course of future action.

Resources Required

The Department will support achievement of Objective 2 with existing resources.

Monitoring Achievements of this Objective

The Department will report to the Board periodically on progress toward achieving this objective.

OBJECTIVE 3: Review and approve an agency strategic plan for invasive species affecting forestland in Oregon.

Historical Context

See the Background section at the beginning of this work plan.

Current Issues

A strategic plan provides the direction for effective management of invasive species. While the strategic planning on invasive species is just beginning at the Board and agency level, the State Forests program has a longer history in developing and implementing an invasive species plan for state forestlands. Table 1 describes the elements that are typically included in strategic plans for invasive species. Note that the basic structure is very similar to what is needed for wildfire management, i.e., prevention (including outreach and education), suppression of existing incidents, and post-incident restoration. It is critical to note that the purposes of the strategic plan will be (1) to clearly outline Department and subsidiary program strategies for dealing with

invasive species that affect Oregon's forests, and (2) to integrate with and complement plans and programs of other agencies involved in invasive species management.

The Department has started developing a charter work plan for managing invasive species that affect forest resources. The charter will outline the process the Department will use to develop the strategic plan. Periodically, the Department will report to the Board on the progress toward completing the strategic plan.

Board Products

The Board will be asked to review interim drafts of the strategic plan for effective management of invasive species that affect forest resources in Oregon and to approve the final plan. An outcome of this strategic plan may be products that need board approval, such as legislative concepts, agency administrative rules, and agency budget request (e.g., program option packages).

Research and Information Gathering

The Department has reviewed representative invasive species strategic plans produced by other entities and will continue to do so. The Department has also gained information from interactions with the Oregon Invasive Species Council.

Stakeholder/Public Involvement

The Department will gather input from the following organizations:

- Internal Department review
- Oregon Forest Industries Council
- Oregon Small Woodlands Association
- Committee for Family Forestlands
- Representatives of the conservation community
- Oregon Invasive Species Council
- Other state and federal agencies involved in invasive species management

The Department will use individual review requests and existing vehicles such as scheduled meetings of the Committee for Family Forestlands to gather input.

Timeframe with Milestones

June 2008: Staff will complete the final draft of the charter work plan for the strategic plan for management of invasive species that affect Oregon's forests.

June 2008 through February 2009: Staff will develop a draft strategic plan. Some of this work can be done before the Board determines if policy revisions are needed (see Objective 1 of this work plan).

March 2009 (from Objective 1 of this work plan): The Board will consider the strategic plan for approval.

Resources Required

The Department will support achievement of Objective 3 with existing resources.

Monitoring Achievements of this Objective

The Department will report to the Board periodically on progress toward achieving this objective.

Table 1: Elements of an Strategic Plan for Management of Invasive Species affecting Oregon's Forests* (adapted from Oregon Department of Fish and Wildlife 2006 and discussions with the Oregon Invasive Species Council)

Plan Element	Description
Leadership and Policy	Leadership and policy-setting are needed for coordinated, effective measures.
Collaboration	Invasive species cross land uses, ownerships, and jurisdictions. Collaboration and coordination are needed for success.
Reliable, continuous funding	A base level of continuous funding is needed for a given level of performance. Grants and other, similar sources of funding can help enhance programs or fill in gaps. Legislative funding requests may be developed for invasive species.
Education and Outreach	For effective programs, including public support, there must be broad understanding of the seriousness of the problem, potential invasion pathways, and invasive species identification.
Prevention	Preventing new introductions is a top priority and the most cost-effective approach.
Assessment/Risk Analysis	Assessing the level of concern and risk associated with new introductions helps identify the worst invaders and the management priorities.
Survey and Monitoring	Surveying and monitoring are needed to identify new infestations, track trends, and evaluate control efforts.
Early detection	Early discovery of new infestations is critical to controlling spread and achieving eradication.
Rapid Response	Immediate treatment of new, isolated infestations maximizes eradication success and decreases the likelihood of expansion.
Containment	Prevention and control are needed to keep invasive species from moving through vector pathways to new areas.
Restoration	Helping native species and ecosystems, or cultivated areas, recover is an important step following the removal of invasive species.
Adaptive Management	Managers should use survey and monitoring data in the feedback loop to review and, if necessary, revise management prescriptions.
<i>Note: The invasive species strategic plan for Oregon's forests will function in an integrated and complementary fashion with other invasive species plans and programs, e.g., the Oregon Department of Agriculture strategic plan for noxious weed control.</i>	

REFERENCES

Oregon Department of Agriculture. 2000. Economic Analysis of Containment Programs, Damages, and Production Losses from Noxious Weeds in Oregon. Oregon Department of Agriculture. Salem, Oregon.

Oregon Department of Fish and Wildlife. 2006. The Oregon Conservation Strategy. Oregon Department of Fish and Wildlife. Salem, Oregon. 44 p.
<http://www.dfw.state.or.us/conservationstrategy/>

Oregon Department of Forestry. 2006. Designing the Future of Oregon's Private Forestry Assistance. Private and Community Forests Development Team. Oregon Department of Forestry. Salem, Oregon.

Oregon Department of Forestry. 2006a. Staff Report and Invasive Species Background Paper. Oregon Department of Forestry. Salem, Oregon. Presented to the Oregon Board of Forestry as Agenda Item 6 for the November 2, 2006 Board meeting in Salem, Oregon.

Oregon Department of Forestry. 2007. Federal Forestland Advisory Committee – Potential Solutions. Draft version 4.5. Oregon Department of Forestry. Salem, Oregon.
http://egov.oregon.gov/ODF/BOARD/docs/FFAC_Potential_Solutions_v4_5.pdf

Oregon Department of Forestry. 2007a. Oregon Indicators of Sustainable Forest Management. Oregon Department of Forestry. Salem, Oregon.
http://egov.oregon.gov/ODF/RESOURCE_PLANNING/docs/Oregon_Indicators_of_SFM_FIN_AL.pdf

Oregon Department of Forestry. 2007b. Review of Oregon Department of Forestry Invasive Species Activities. Oregon Department of Forestry. Salem, Oregon.