

# **Record of Decision and Summary**

**for the**

## **Shore 'Nuf Timber Sale Environmental Impact Statement**

United States Department of Agriculture, Forest Service  
Pacific Northwest Region  
Willamette National Forest  
Detroit Ranger District  
Marion & Linn County, Oregon

**July 2002**

## Introduction

The Shore 'Nuf Timber Sale project area is located approximately 50 miles east of Salem, Oregon on the western slopes of the Cascade Mountains, near Detroit Lake and the City of Detroit, Oregon on the Detroit Ranger District of the Willamette National Forest. The majority of proposed harvest units are located along the Blowout Road (Forest Road 10) with units also located along the French Creek Road (Forest Road 2223), Kinney Creek Road (Forest Road 2212) and on Piety Island. This area was included in the Detroit Tributaries Watershed Analysis.

I determined that a need for action existed in the area. The proposed action and all alternatives considered in detail were to meet the following needs.

- ❑ There is a need for reducing stocking levels to enhance the growth and vigor of the remaining trees and to reduce future losses from fire, insects and disease.
- ❑ There is a need for accelerating the attainment of late-successional stand characteristics in the riparian reserves and to enhance the development of habitat diversity for wildlife on both matrix and riparian lands.
- ❑ There is a need for capturing competition-induced mortality for use as commercial wood products and to reduce long-term fuel buildup.
- ❑ There is a need for enhancing scenic quality by promoting stand diversity and landscape variety along major recreation travel corridors.
- ❑ There is a need for reducing the visual effects of past regeneration harvest from private lands.

## The Decision

It is my decision to select Alternative Three, an alternative that modifies the proposed action to address the issue of noise disturbance from logging operations to the residences of Detroit and the recreationists in the area. Alternative Three is described in the FEIS on pages 2-3 through 2-21 and pages 2-23 through 2-28. A complete description of Alternative Three, including the mitigation measures, is also included in Appendix A of the Record of Decision.

This decision will commercially thin approximately 1,136 acres using several harvest methods including helicopter, skyline, and ground-based systems such as a harvester-forwarder. Thinning will occur in selected riparian reserve areas and will also treat root-rot pockets infested with *Phellinus weirii* and other diseases. Approximately 1.4 miles of temporary roads will be constructed and approximately 5.9 miles of road will be reconstructed to access harvest units. All temporary roads (including the 5.9 miles of reconstruction) and landings will be decommissioned following harvest operations. My decision includes the operating restrictions for helicopter, timber harvest, and truck hauling to reduce the effects of noise on recreation visitors and local communities.

My decision includes slight modifications to the unit boundaries and silvicultural prescriptions for the units in the French Creek drainage (Units 14, 15, 16, 17, 19, 20, and 21). I believe that these modifications are necessary to respond to the heavy snowfall that occurred during the winter of 2001/2002. The heavy snowfall in the French Creek units caused severe snow breakage in several units and between units along French Creek. My decision allows for the removal of the down trees and the cutting of standing broken trees within the units and between the units. Surveys for Survey and Manage Species, for Threatened and Endangered Species, and for cultural resources were completed for the area between the units as part of the original surveys. The effects of removing the down and broken trees from between the units will not result in additional effects beyond what is already disclosed in the FEIS.

The decision includes all of the mitigation measures as described in Appendix A, Table R-13 and all post-harvest activities associated with Alternative Three, as described Appendix A of this Record of Decision. My decision also includes other projects that use funds collected under the Knutson-Vandenberg (KV) Act, as listed in Appendix C of the FEIS.

My decision includes the following monitoring requirements. We will contact the City of Salem, as they requested, to jointly monitor the results of the thinning in riparian habitat as the units become available to confirm that a 70% canopy closure allows a watershed to hydrologically sustain a rain-on-snow event. We will also contact the City of Salem, as they requested, to observe the road decommissioning process as an educational exercise. The District Hydrologist will be responsible for ensuring that this is accomplished.

It is also important that we monitor the project to ensure that we achieved our objectives, and that we accomplished all the treatments, mitigation, and post-harvest activities described in this decision. Therefore, we will develop and implement a monitoring plan that addresses the monitoring questions included in Appendix B of this Record of Decision.

### **Rational for the Decision Including Factors Other Than Environmental Consequences Considered in Making the Decision**

Alternative Three fully addresses the Purpose and Need for Action and moves the environment towards the desired condition as stated in the Forest Plan. I believe that the Shore 'Nuf FEIS provided enough information for me to make a reasoned choice among alternatives. Alternative Three addresses the need for managing the forested stands around Detroit Lake, and minimizes the effects of logging operations on recreation and tourism. I firmly believe that the second growth stands of Douglas-fir should be thinned periodically to promote stand growth and other desirable stand conditions as described in the **Purpose and Need for Action**. This is especially important around Detroit Lake where the aesthetic value of the forest is important to the recreating public. At the same time, the recreating public does not want to be disturbed by logging operations. The restrictions identified in the FEIS (Alternative Three, page 2-23 through 2-28 and in Appendix A of this document) reduce the effects of noise on the recreating public and the citizens of Detroit.

Alternative Three also considers the impacts to implementing contracts from seasonal restrictions. We frequently impose seasonal restrictions from January to mid-summer on timber harvesting and other contracts to mitigate the effects of the project on various threatened and endangered species, and other species of interest. Seasonal restrictions for big game winter range come into affect in December. This leaves about 3.5 months for the contract to operate.

However, the Forest Service often imposes restrictions on using equipment on National Forest lands during high fire danger, which usually occurs from mid-July through mid-September. So in years when we impose fire restrictions, the operating season can be as short as 2.5 months. Adding the time-of-day and day-of-week restrictions identified in Alternative Three to reduce the effects of noise, would limit the operating season to a point where we could not effectively implement a contract within a reasonable time period (3 to 5 years). In essence, it would not be feasible to implement the project. Alternative Three modifies the seasonal restrictions for big game, osprey, and harlequin duck to allow for harvest operations to be extended an additional two weeks in some units during the summer months, and an additional six weeks during winter months. These modifications will not have adverse impacts to species habitat or population survivability, and will allow for successful implementation of the project over a reasonable timeframe.

Alternative Three allows for approximately 1.4 miles of temporary road construction and approximately 6.0 miles of road reconstruction to access harvest units and landings. The construction and reconstruction of roads was an issue for several individuals and organizations that submitted comments on the project. Specifically, these individuals and organizations were opposed to road construction and reconstruction in the Shore 'Nuf Timber Sale area because the roads would result in detrimental soil effects, increase sedimentation, increase dispersed camping opportunities in an already over-used area, and degrade water quality in nearby streams and Detroit Reservoir. Several members of the public also stated that there should be no increase in the road density for the area.

In reading the Shore 'Nuf Timber Sale FEIS, I found no documentation that road construction or reconstruction would result in soil erosion or damage to water quality. The findings of no impact to water quality is based on implementing Best Management Practices and on the professional judgment of the specialists on the interdisciplinary team who have first hand knowledge and experience with road construction on this type of terrain and soils.

All temporary roads will be decommissioned following harvest operations resulting in no net increase in road density to the area. Approximately one-half of the temporary road construction will be distributed over several small spurs (approximately 1/10<sup>th</sup> mile each) to access new landings in four units. The remaining temporary road (0.8 miles) will be within Unit 23 to access several skyline and tractor landings along the road route. I have decided to allow this road to be constructed because of the general flat topography, the lack of riparian areas within the unit boundaries, and the lack of impacts to water quality. There is no evidence that constructing 1.4 miles of temporary road, that will be decommissioned following harvesting, will result in an increase in dispersed camping in the area.

I have decided to implement riparian thinning in the selected units because it meets project and watershed analysis objectives, and riparian thinning can be accomplished without detrimental effects to the water resources. Riparian thinning will encourage growth of conifer species in riparian reserves: a) by encouraging faster attainment of late-successional stand characteristics outlined in the Aquatic Conservation Strategy Objectives; and b) eventually providing large woody material to streams to improve stream habitat complexity. I believe that establishing late-successional stand conditions within riparian reserves, through proven silvicultural techniques, will create better habitat conditions for species expected to benefit by the reserves and will help meet the functional goals of the riparian reserves as outlined in the Northwest Forest Plan (NWFP). In addition, riparian thinning is a practice that is supported in the NWFP to meet these objectives

Alternative Three provides for a mix of logging operations including helicopter, skyline, and ground-based operations as compared to Alternative Four. A mix of logging operations, especially skyline and ground based, will facilitate the potential for local employment in the surrounding communities.

## **Public Involvement**

This project, identified as the **Shore 'Nuf Timber Sale**, first appeared in the Spring 1997 edition of the Willamette National Forest planning newsletter, *FOREST FOCUS*, and has been described in subsequent newsletters. A Notice of Intent (NOI) to prepare the Shore 'Nuf Timber Sale EIS was published in the Federal Register on September 15, 2000 (Vol. 65, No. 180). A scoping document providing information on the purpose and need, and the proposed action was sent to a list various individuals, organizations, agencies, and local communities that might have an interest in the Shore 'Nuf Timber Sale. A total of 26 letters were received. Several meetings and field visits were also held with special interest groups and individuals to discuss public issues. Chapter One of the FEIS lists the issues that I determined to be significant for analysis of the Shore 'Nuf Timber Sale.

The Draft Environmental Impact Statement (DEIS) was mailed to everyone who commented during scoping, plus others who might have an interest in the Shore 'Nuf Timber Sale in August 2001. The 45-day public comment period ended on October 25, 2001. A total of 9 comment letters were received. Responses to these comments are addressed in Appendix E of the Shore 'Nuf Final EIS. Copies of the comment letters are available in the project record located at the Detroit Ranger District office.

## **Alternatives Considered but Not Selected**

The Final Environmental Impact Statement analyzed a total for four (4) alternatives (FEIS, Chapter 2). I have stated my rational for selecting Alternative Three. The following is my rational for not selecting the other alternatives.

### **Alternative One – No Action**

This alternative proposed to do nothing; therefore, resulting in no changes to the current condition at this time. This alternative would not have allowed the area to be commercially thinned and would not meet the purpose and need as described in the FEIS (FEIS, Chapter 1).

### **Alternative Two – Proposed Action**

My decision not to select Alternative Two is based on the key issues identified in the FEIS. Much of the Shore 'Nuf Timber Sale area is located near the community of Detroit, and near three of the highest used campgrounds on the Detroit Ranger District. Detroit Lake is a major recreation destination point. Noise from helicopter and logging operations is an issue for the local residences, the local tourism industry, and recreationists visiting the area. Alternative Two does not include any restrictions to minimize noise impacts to these areas. Noise impacts from helicopters and other harvest activities were raised as a key issue for this, and other past projects, in and around Detroit Lake.

### **Alternative Four – No New Roads**

This alternative was developed to address the issues raised by the public regarding road construction. Alternative Four eliminates the 1.4 miles of temporary road construction, and approximately 1.6 miles of non-system road reconstruction. The remaining 4.4 miles of system road proposed for reconstruction would still occur. This alternative was favored by some groups and individuals who commented on the DEIS, since it would decrease the amount of disturbance to soil and water from temporary roads. However, the environmental analysis concluded that no adverse effects would result from using ground-based logging systems or from road construction within the sale. This alternative would have changed the logging systems on approximately 195 acres from skyline or ground based systems to helicopter operations resulting in an increase in noise from helicopters in the area. Although mitigation measures would be implemented to reduce noise impacts from helicopter logging, it may take longer to log the sale thus prolonging the noise to another season.

### **Findings Required by Other Laws & Regulations**

I used the following Laws, Regulations and Policies as a basis for my decision:

1. My decision is consistent with the goals and objectives established in the Willamette National Forest Land and Resource Management Plan (Forest Plan) as amended by the Record of Decision and Standards and Guidelines for Management of Habitat for Late Successional Species and Old Growth Dependent Species Within the Range of the Northern Spotted Owl (NWFP 1994).
2. My decision is consistent with the standards and guidelines established in the Forest Plan as amended, except for the Forest-wide Standards and Guidelines FW-133 and FW-143. These guidelines are found on pages IV-66 and IV-68 respectively in the Forest Plan, and address seasonal restrictions for timber harvesting and road building during nesting season for raptors and colonial nesting birds, and during the winter in big game winter range. Not complying with these two Standards and Guidelines does not require a Forest Plan amendment. I believe that justifiable reason exists in the form of unacceptable hardship or expense to not require the full seasonal restrictions for Harlequin Ducks, Osprey, and big game. Full compliance with the seasonal restrictions would limit the operating season to such an extent that the project would no longer be feasible.
3. My decision is consistent with the National Environmental Policy Act (1969). The Shore 'Nuf Timber Sale Environmental Impact Statement was completed under the guidelines outlined in 40 CFR Part 1500, and the USDA Forest Service NEPA Policy and Procedures in Forest Service Manual 1950 and Forest Service Handbook 1909.15. I believe that the range of alternatives was adequate and that sufficient information was projected in the DEIS for me to make a reasoned and informed decision.
4. I find that my decision to approve the temporary road construction and road reconstruction activities for this project are adequately informed by the Willamette National Forest Pilot Roads Analysis (1998) and are consistent with current USDA Forest Service transportation system policies. These activities result in a zero net increase to the road system in the project area.

5. This project is consistent with the Clean Water Act (1982). Mitigation measures for this project will meet the requirements outlined in *General Water Quality Best Management Practices (PNW Region Nov. 1988)*. Detroit District personnel used this report as a source of management direction for establishing recommendations for this project in relation to water quality issues.
6. My decision is consistent with the New Management Guidelines for Water Quality from the State of Oregon. No streams in the Shore 'Nuf Timber Sale project area appeared on Oregon's water quality limited streams - 303(d) list released by The Oregon State Department of Environmental Quality (DEQ); 7/17/96 pg. 51.
7. My decision is consistent with the National Historic Preservation Act (October 1966). A cultural resource inventory has been completed for the Shore 'Nuf Timber Sale Area. All field surveys, certified by the District Archaeologist, were completed during the summer of 1998 and in the fall of 1999, and all known heritage resource sites will be avoided for the duration of the project. A heritage resource report has been completed and forwarded to the State Historic Preservation Officer (SHPO) in accordance with 36 CFR 800.5 (B). The Forest Archaeologist has reviewed the finding of No Effect to heritage resources and has concurred with this finding.
8. My decision is consistent with the Endangered Species Act (December 1973)) The Detroit District biologist completed a biological evaluation (BE) for the Shore 'Nuf Timber Sale project area. The findings were that the project would not adversely affect threatened or endangered species or their habitat. This project may impact some sensitive species and their habitat listed on the Regional Forester's Sensitive Animal list for the Willamette National Forest (2001) (FEIS page 3-11). Surveys have been completed for Protection Buffer and Survey and Manage wildlife species and no species were found in the project area (FEIS, Appendix E).

### **Identification of the Environmentally Preferable Alternative**

Alternative Four is the environmentally preferable alternative. However, I believe that the effects of Alternative Four are very similar to the effects of Alternative Three. The only difference in the effects between the two alternatives is that the new road construction will leave a "mark" on the landscape for some period of time. How long the remnants of a decommissioned temporary road are evident depends on a variety of factors such the soil type, the topography, the climate, and how quickly vegetation can be re-established.

## Implementation Date

If an appeal is filed, the USDA Forest Service will not implement the Shore 'Nuf Timber Sale project until 5 days after final resolution of the appeal by the Appeal Deciding Officer.

If the project is not appealed, the USDA Forest Service will implement the Shore 'Nuf Timber Sale five days after the close of the forty-five day appeal period, which starts on the date a notice of this decision appears in the Federal Register.

## Administrative Review or Appeal Opportunities

This decision is subject to appeal by people or organizations who have provided comments or otherwise expressed interest in this proposed action pursuant to 36 CFR 215. Any written appeal of this decision must be fully consistent with 36 CFR 215.9 and must include content for an appeal pursuant to 36 CFR 215.14. A written appeal must be postmarked and submitted to the Appeals Deciding Officer at the following address within 45 days of the date that the legal public notice of this decision appears in the Federal Register.

Regional Forester  
Attn: 1570 Appeals  
P.O. Box 3623  
Portland, OR 97208-3623

### For additional information about this project, please contact:

Jim Romero, Resource Planner  
Detroit Ranger District  
HC73 Box 320  
Mill City, Oregon 97360  
503-854-4212

Responsible Official: \_\_\_\_\_



**STEPHANIE PHILLIPS**  
District Ranger

Date: July 18, 2002



# Shore 'Nuf Timber Sale Final Environmental Impact Statement

## Summary

The Shore 'Nuf Timber Sale project area is located approximately 50 miles east of Salem, Oregon on the western slopes of the Cascade Mountains, near Detroit Lake and the City of Detroit, Oregon on the Detroit Ranger District of the Willamette National Forest. The majority of proposed harvest units are located along the Blowout Road (Forest Road 10) with units also located along the French Creek Road (Forest Road 2223), Kinney Creek Road (Forest Road 2212) and on Piety Island. The legal description for this project is:

T. 9S., R. 5E., Sections 26, 27, 28, 35 and 36;

T.10S., R. 5E., Sections 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 28 and 29; and

T.10S., R. 6E., Sections 7, 17, and 18, Willamette Meridian.

The District Ranger of the Detroit Ranger District, Willamette National Forest is proposing the Shore 'Nuf Timber Sale to be offered in fiscal years 2003-2005 with approximately three separate sales resulting from this analysis.

The project area consists of several management areas as described in the *Willamette National Forest and Land Resource Management Plan* (Forest Plan) as amended by the *Record of Decision (ROD) and Standards and Guidelines on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (April 1994). Management recommendations for this project are also described in the *Detroit Tributaries Watershed Analysis* completed in November 1997.

## Need for Action

It has been determined that a need exists to manage forested stands within the Detroit Tributaries Watershed Analysis area for the purpose of:

- 1) Reducing current stocking levels to enhance the growth and vigor of the remaining trees and to reduce future losses from fire, insects and disease;
- 2) Accelerating the attainment of late-successional stand characteristics in the riparian reserves and to enhance the development of habitat diversity for wildlife on both matrix and riparian lands;
- 3) Capturing competition - induced mortality for use as commercial wood products and to reduce long term fuel buildup;
- 4) Enhancing scenic quality by promoting stand diversity and landscape variety along major recreation travel corridors; and
- 5) Reducing the visual effects of past regeneration harvest from private lands.

## Issues Considered in Detail

**Noise Disturbance from Harvest Operations:** Noise during harvest operations from helicopters, harvest equipment, log trucks and increased truck traffic could be disturbing to local residents and recreation users, potentially impacting local tourism and the related tourist economy. This noise disturbance is generally less accepted during the early morning, early evening, and nighttime hours, and on weekends in the vicinity of high use recreation areas and residences. No quantitative information

exists in terms of noise levels or disturbance; therefore, the noise issue is addressed qualitatively.

**Noxious Weeds:** There is concern that noxious weeds could spread to areas where additional acres of mineral soil would be exposed due to new temporary road construction, existing road reconstruction, and landing construction.

**Roads:** There is concern that the 1.4 miles of new temporary road construction and 5.9 miles of existing road reconstruction would cause detrimental soil effects, increase sedimentation, and degrade water quality in nearby streams and Detroit Reservoir.

#### **Other Issues Identified but Determined to be Non-Significant**

- Water Quality
- Scenic Quality
- Air Quality
- Riparian Reserves
- Economic Cost / Benefit Analysis
- Wildlife
- Old Growth

#### **Alternative Descriptions**

##### **Alternative 1 – No Action**

The no action alternative proposes no changes to the current condition at this time.

##### **Alternative 2 – Proposed Action**

Alternative 2 is proposed as timber harvest activities designed to commercial thin second growth timber on 1136 acres while achieving other project objectives identified in the purpose and need statement. Stands will be thinned to reduce stocking levels and maintain an average 70% canopy closure. Thinning will occur in selected portions of riparian reserves. In stands where *Phellinus weirii* root rot is occurring, this project will

remove all of the affected trees within the infection site and/or within a buffer around the infection site, to prevent the spread of the root rot and other diseases. Finally, this project will create small visual units by thinning along the Blowout Road and Stahlman Point trail to provide for scenic views of Detroit Reservoir and the surrounding area. This alternative includes approximately 1.4 miles of temporary road construction and 5.9 miles of road reconstruction to access thinning units and landings.

##### **Alternative 3 – Reduce Timber Sale Noise (Selected Alternative)**

Alternative 3 is a modification of Alternative 2 that specifically addresses the issue of noise disturbance. This alternative includes the same actions as Alternative 2, plus provides for seasonal operational restrictions to minimize noise disturbance on recreation visitors and local communities in the general area from harvest & logging operations. In addition, this alternative extends the operating season for harvest activities by eliminating the seasonal restrictions for Osprey and Big Game, and modifying the seasonal restriction for Harlequin Duck.

##### **Alternative 4 – No New Roads**

Alternative 4 is a modification of Alternative 2 that specifically addresses the roads issue. This alternative includes the same actions as Alternative 2, but would eliminate approximately 1.4 miles of proposed new temporary road construction, and approximately 1.6 miles of non-system road reconstruction, necessary to access harvest units and proposed landings. This alternative would not affect the 4.3 miles of reconstruction/maintenance of existing system roads. Modifications would be made to the logging methods of several units, plus the relocation of proposed landings and haul routes.

**Table S-1: Comparison of Effects on Issues by Alternatives – Noise Disturbance**

<b>Action</b>	<b>Alternative 1 No Action</b>	<b>Alternative 2 Proposed Action</b>	<b>Alternative 3 Reduce Timber Sale Noise</b>	<b>Alternative 4 No New Roads</b>
Helicopter Operations	No noise would be generated from helicopter operations	<ul style="list-style-type: none"> <li>Helicopter operations would be unrestricted and allowed to operate 7 days per week during all daylight hours.</li> </ul>	<ul style="list-style-type: none"> <li>Depending on time of year and proximity to High Use Public Use Areas, helicopter operations would be restricted limiting hours of use.</li> <li>Helicopter operations would generally be restricted to only operate from 8:00 a.m. to 7:00 p.m. Monday – Thursday, and 8:00 a.m. to 5:00 p.m. on Friday.</li> <li>Only in units distant from high public use areas, and during the non-peak season, are helicopter operations unrestricted.</li> <li>No helicopter operations are allowed on weekends during Peak Season, during holidays, or adjacent to High Public Use Areas.</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 195 additional acres of harvest would be done with helicopter instead of skyline, tractor, or processor / forwarder.</li> </ul>
Harvest Operations	No noise would be generated from harvest operations	<ul style="list-style-type: none"> <li>Harvest operations would be unrestricted and allowed to operate 7 days per week, during all hours of the day.</li> </ul>	<ul style="list-style-type: none"> <li>Depending on time of year and proximity to High Use Public Use Areas, harvest operations would be restricted limiting hours of use.</li> </ul>	<ul style="list-style-type: none"> <li>Noise generated from road construction equipment would be reduced and limited to maintenance operations on system roads.</li> </ul>
Hauling	No noise would be generated by log hauling	<ul style="list-style-type: none"> <li>Log hauling would only be allowed to operate Monday through Friday.</li> </ul>	<ul style="list-style-type: none"> <li>Log hauling would only be allowed to operate Monday through Friday.</li> </ul>	<ul style="list-style-type: none"> <li>Log hauling would only be allowed to operate Monday through Friday.</li> </ul>

**Table S-2: Comparison of Effects on Issues by Alternatives – Noxious Weeds**

<b>Action</b>	<b>Alternative 1 No Action</b>	<b>Alternative 2 Proposed Action</b>	<b>Alternative 3 Reduce Timber Sale Noise</b>	<b>Alternative 4 No New Roads</b>
<ul style="list-style-type: none"> <li>Activities occurring within the timber sale project area.</li> </ul>	<ul style="list-style-type: none"> <li>Existing non-system roads with bare soil would continue to be habitat for noxious weed establishment and spread.</li> <li>No new areas would be opened up to the spread of noxious weeds.</li> <li>Mitigation and monitoring would not be accomplished.</li> </ul>	<ul style="list-style-type: none"> <li>Existing non-system roads with bare soil would not continue to be habitat for noxious weed establishment and spread.</li> <li>New areas would be opened up to the spread of noxious weeds along new and reconstructed roads (approximately 17.5 acres total) and landings (15 acres total), but the risk would be mitigated.</li> <li>Mitigation and monitoring, as called for in this alternative, would be accomplished.</li> </ul>	<ul style="list-style-type: none"> <li>Existing non-system roads with bare soil would not continue to be habitat for noxious weed establishment and spread.</li> <li>New areas would be opened up to the spread of noxious weeds along new and reconstructed roads (approximately 17.5 acres total) and landings (15 acres total), but the risk would be mitigated.</li> <li>Mitigation and monitoring, as called for in this alternative, would be accomplished.</li> </ul>	<ul style="list-style-type: none"> <li>Existing non-system roads with bare soil would continue to be habitat for noxious weed establishment and spread.</li> <li>New areas would be opened up to the spread of noxious weeds along reconstructed system roads (approximately 10.5 acres total) and landings (15 acres total), but the risk would be mitigated.</li> <li>Approximately 1.4 miles of temporary road construction, and 1.6 miles of non-system road reconstruction would not occur, thus reducing the soil disturbance by approximately 7 acres.</li> <li>Mitigation and monitoring, as called for in this alternative, would be accomplished.</li> </ul>

<b>Table S-3: Comparison of Effects by Alternatives – Roads</b>				
<b>Action</b>	<b>Alternative 1 No Action</b>	<b>Alternative 2 Proposed Action</b>	<b>Alternative 3 Reduce Timber Sale Noise</b>	<b>Alternative 4 No New Roads</b>
Temporary Construction	N/A	1.4 Miles	1.4 Miles	0 Miles
System Road Reconstruction & Maintenance	N/A	4.3 Miles	4.3 Miles	4.3 Miles
Non-System Reconstruction	N/A	1.6 Miles	1.6 Miles	0 Miles

<b>Table S-4: Comparison of Effects by Alternatives - Operational Periods due to Wildlife Restrictions</b>				
<b>Action</b>	<b>Alternative 1 No Action</b>	<b>Alternative 2 Proposed Action</b>	<b>Alternative 3 Reduce Timber Sale Noise</b>	<b>Alternative 4 No New Roads</b>
Units 1, 2, 3, 4, 23, 30, 31	N/A	Operations are allowed from Sept. 1st to Nov. 30th.	Operations are allowed from Sept. 1st to Dec. 31st.	Same as Alternative 3
Units 5, 6, 7, 8, 9, 22, 24, 25, 26, 27, 28, 29, 32, 33	N/A	Operations are allowed from Aug. 1st to Nov. 30th.	Operations are allowed from Aug. 1st to Jan 15th.	Same as Alternative 3
Units 14, 15, 16, 17, 19, 20, 21	N/A	Operations are allowed from Aug. 15th to Nov. 30th.	Operations are allowed from Aug. 1st to Jan 15th.	Same as Alternative 3
Units 10, 11	N/A	Operations are allowed from Sept. 1st to Nov. 30th.	Operations are allowed from Sept. 1st to Dec. 30th.	Same as Alternative 3
Units 12, 13	N/A	Operations are allowed from Sept. 1st to Nov. 30th.	Operations are allowed from Aug. 1st to Jan 15th.	Same as Alternative 3

<b>Table S-5: Cost Comparison by Alternative – Logging Costs, Temporary Road Construction, and Road Reconstruction</b>				
<b>Action</b>	<b>Alternative 1 No Action</b>	<b>Alternative 2 Proposed Action</b>	<b>Alternative 3 Reduce Timber Sale Noise</b>	<b>Alternative 4 No New Roads</b>
Helicopter		\$2,387,463	\$2,387,463	\$3,035,343
Skyline		\$ 441,276	\$ 441,276	\$ 145,429
Tractor		\$ 123,462	\$ 123,462	\$ 115,017
Processor	N/A	\$ 47,998	\$ 47,998	\$ 50,244
Road Construction	N/A	\$ 14,000	\$ 14,000	0 Miles
Road Reconstruction	N/A	\$ 88,500	\$ 88,500	\$ 64,500
Total Costs	N/A	\$3,102,699 Approx. \$ 310 / mbf	\$3,102,699 Approx. \$ 310 / mbf	\$3,410,533 Approx. \$ 341 / mbf

## Shore 'Nuf Record of Decision – Appendix A Selected Alternative – Alternative 3 Description

The District Ranger for the Detroit Ranger District of the Willamette National Forest has selected Alternative 3 to implement. Alternative 3 will commercially thin approximately 1136 acres of second growth timber; construct approximately 1.4 miles of temporary road to access harvest units & landings; reconstruct approximately 5.9 miles of existing roads; remove affected trees within approximately 20 acres of root rot pockets; provide recreational improvements as a result of thinning around campgrounds, summer homes and dispersed camping areas; complete approximately 313 acres of fuel treatment by underburning and hand-piling and burning slash; and, remove several small trees that block the view around the Stahlman Point and Kinney Ridge Lookout sites. See the selected action maps (Fig. 2.1 – 2.5) for unit locations, roads and proposed landings and Table R-3 for additional details for each unit in the timber sale.

### **Commercial Thinning**

Second growth stands will be commercially thinned to reduce stocking levels while maintaining an average 70% canopy closure. The best dominant and co-dominant trees of all species would be retained within each unit subject to meeting the stocking requirements of the prescriptions. No old-growth trees would be harvested with this action. The intent of the thinning is to encourage growth of the remaining trees, improve stand vigor and health, and improve visual quality. Maintaining the specified canopy closure average of 70% helps protect the stands from windthrow, and retains sufficient canopy cover to maintain stream temperatures. Silviculturally the 70% cover balances increased tree growth, full occupation of the stands with trees, and the need to maintain a 10-year or greater reentry period for future thinning. Implementation of this action would result in the sale of approximately 10 mmbf of commercial wood products. Table R-1 describes a percentage breakdown of the timber sale by logging system.

<b>Table R-1: Summary of Logging Systems</b>			
<b>Logging System</b>	<b># of Landings *</b>	<b>Estimated Acres</b>	<b>% of Total Sale</b>
Helicopter	26	804	70%
Skyline	12+	160	15%
Tractor	15+	142	12%
Processor/Forwarder	6+	30	3%

\* Estimated number of landings based on field reconnaissance. Logs in several units would be yarded to existing roads along the entire length of the unit

### **Thinning Within Riparian Reserves**

Portions of selected riparian reserves that are within, or adjacent to the stands that will be thinned will also be thinned to maintain a 70% canopy closure. Table R-2 describes the streams within each unit and thinning prescription within the riparian reserve for each stream unit. Within these riparian reserves:

- No thinning will take place within the wet area of the riparian reserve and the portion of the reserve contributing to channel bank stability.
- In units adjacent to Detroit Reservoir and on Piety Island, no trees contributing to shoreline stability will be removed.
- Falling will be directed away from streams.

Table R-2: Thinning within Riparian Reserves						
Unit	Streams <sup>1</sup>	Stream Class	Riparian Reserve Total Width <sup>2</sup>	No-Cut Buffer Total Width <sup>3</sup>	Notes	
1	1 & 2	III	344	250	#2 – Reserve in SE corner – Thinning OK at the headwaters.	
	3	IV	344	0		
	4	III	344	250		
2	1	III	344	See Notes	#1 – Lower 2/3 no thinning required, upper 1/3 yes (see marking for #5). #3 = Domestic water supply to Hoover C.G. on lower portion of the stream. #5 – Thin to leave best dominant and co-dominant trees to 160 square feet of basal area.	
	2	III	344	344		
	3	I/III	688/344	344		
	4	III/IV	344	344		
	5	III/IV	344	0		
3	1	III/IV	172	75	The stream is the unit boundary. Maintain a 75 ft. no-cut buffer along unit boundary.	
4	1 & 2	IV	344	344	#3 – Fish bearing stream.	
	3	II	688	688		
	4	III	344	344		
5	1	III	344	172		
	2	III	344	0		
	3	III	344	0		
6	1	III	172	172	The stream is the unit boundary. Maintain a 172 ft. no-cut buffer along unit boundary.	For the entire unit, if a root rot pocket is identified within a riparian reserve, allow removal within the reserve and re-plant with hardwood species.
	2	III	344	0		
	3	III	172	172	The stream is the unit boundary. Maintain a 172 ft. no-cut buffer along unit boundary.	
7	1	III	172	172	The stream is the unit boundary. Maintain a 172 ft. no-cut buffer along unit boundary.	
8	1 & 2	III	344	150		
	3	III	344	150		
	4	III	344	150		
	5 & 6	III	344	150		
	7	III	344	0		
9	1	III	172	172	Both streams form the unit boundaries. Maintain a 172 ft. no-cut buffer along unit boundaries.	
	2	III	172	172		
10	All	III/IV	344	0		
11	All	III/IV	344	0		
12	All	III	344	0		
13	1	III	344	250	Main channel maintain full buffer.	
	2	III	344	0	Eastern channel, OK to thin.	
14	None	N/A	N/A	N/A		
15	All	III	344	0		

<b>Table R-2: Thinning within Riparian Reserves (continued)</b>					
<b>Unit</b>	<b>Streams <sup>1</sup></b>	<b>Stream Class</b>	<b>Riparian Reserve Total Width <sup>2</sup></b>	<b>No-Cut Buffer Total Width <sup>3</sup></b>	<b>Notes</b>
16	All	III	344	0	
17	All	III	344	0	
19	All	III	344	0	
20	All	III	344	0	
21	All	II	688	See Notes	French Creek: Consult with Hydrologist during unit layout.
22	All	Lakeshore	100	100	Piety Island. No riparian reserves on island except lakeshore.
23	1	III	344	344	#1 – Forms the boundary between units 23a and 23b.
	2	III	344	344	#2 – Forms the boundary between units 23b and 23c.
	3	Lakeshore	100	0	#3 - along northern lakeshore
	4	Lakeshore	100	100	#4 – along western lakeshore
24	1	Lakeshore	344	0	#1 – along lakeshore
	2	III	344	344	#2 - No thinning along tributary riparian reserves.
25	All	Lakeshore	100	0	OK to thin along lakeshore
26	All	Lakeshore	100	0	OK to thin along lakeshore
27	All	Lakeshore & III	100/344	0	Avoid wet area in southern portion of unit.
28	All	III	344	75	Consult with Hydrologist during unit layout. No thinning along west edge of stream.
29	None	N/A	N/A	N/A	
30	1	III	344	344	
	2	III	344	344	
	3	III	344	344	
	4	III	344	344	
	5	III	344	344	
31	All	Lakeshore	100	0	OK to thin along lakeshore
32	None	N/A	N/A	N/A	
33	1	II	344	344	Tom Creek. Exclude from unit boundary.

- Streams** are identified and numbered from east to west as shown on the proposed action maps (Figures 2.2, 2.3, 2.4 and 2.5).
- Riparian Reserve Width** is the total width of the riparian reserve as defined in the Northwest Forest Plan. This is two standard tree heights for Class I and II streams (344 feet), and one standard tree height for Class III and IV streams (172 feet) on either side of the stream.
- No-Cut Buffer Width** is the area within the Riparian Reserve Width where thinning is prohibited. **A zero (0) indicates that thinning is allowed throughout the entire riparian reserve.** If the No-cut buffer width is less than the total Riparian Reserve Width, some thinning is allowed in the riparian area.



### **Thinning Near Stahlman Summer Home Tracts (Unit #30)**

Unit #30 encompasses the Stahlman summer home tracts and surrounding area. Except for the area within 1½-tree lengths of the structures within the tracts, and within all riparian areas, all of Unit #30 will be thinned where the stand is in need of density management. To avoid liability problems for timber purchasers, no thinning will take place within 1½-tree lengths from any of the structures in the summer home tracts. (This area would be excluded from the unit as designated on the ground). If any homeowners are interested in thinning adjacent to their structures, arrangements can be made with the Special Use Coordinator to review and approve individual trees to be removed near the structures. It would be the responsibility of the individual homeowner to have the trees felled. The homeowner then has the option to purchase the downed trees for firewood. In areas where riparian reserves cross the unit adjacent to structures, the District Hydrologist will evaluate individual trees identified by homeowners as to whether the trees contribute to the stability of the riparian reserve and can be removed.

### **Temporary Road Construction, Reconstruction & Landings**

Approximately 1.4 miles of temporary roads will be constructed to access thinning units and landings. These roads will be decommissioned after implementation of the thinning, by ripping, seeding, and re-establishing natural drainage patterns.

Approximately 5.9 miles of existing roads will be reconstructed that are currently overgrown with vegetation or are inaccessible due to slides, water damage, and downed trees. Reconstruction includes 4.3 miles of system roads and 1.6 miles of non-system roads. Activities may include brushing, culvert replacement, surface rock replacement, reconditioning the existing road surface, and hazard tree removal, where necessary. Reconstructing 0.7 miles of non-system road to Unit #10 would allow the private landowner to close a portion of very steep existing road. The selected alternative will construct new landings or reconstruct existing landings to accommodate helicopters, skylines, and ground based yarding systems. All landings for ground based logging systems will be located along designated skid trails. In addition, several skyline landings will be located at wide pullouts along the Blowout (Forest Road 10) and French Creek (Forest Road 2223) roads.

Table R-3 provides a detailed summary of the acres, estimated volume, logging systems, landings and roads for this project.

**Table R-3: Logging System, Proposed Landings & Roads**

Unit #	Acres	Acres Available After Riparian Exclusion	Estimated Volume (mbf)	Logging System	Proposed Landings	Road Access, Temporary Road Construction and Road Reconstruction
1	102	73	730	Helicopter	H1 & H2	<ul style="list-style-type: none"> <li>Use existing road 1003</li> </ul>
2	108	82	820	Helicopter	H3*	<ul style="list-style-type: none"> <li>Use existing roads 10 &amp; 1003.</li> </ul>
3	7	7	50	Helicopter	H3*	<ul style="list-style-type: none"> <li>See Unit #2.</li> </ul>
4	56	40	400	Helicopter	H5*	<ul style="list-style-type: none"> <li>Construct 0.10 miles of temporary road to H5.</li> </ul>
5	29	24	240	Helicopter	H25	<ul style="list-style-type: none"> <li>Use existing road 10-050</li> </ul>
6	9	6	50	Helicopter	H25	<ul style="list-style-type: none"> <li>See Unit #5</li> </ul>
7	6	1	10	Tractor	H6* (Tractor)	<ul style="list-style-type: none"> <li>Construct landing H6 off of the Blowout Road.</li> </ul>
8	86	67	670	Helicopter & Skyline	H7, H8 (Helicopter) H9 (Skyline)	<ul style="list-style-type: none"> <li>Reconstruct 0.60 miles of 10-081.</li> </ul>
9	31	29	300	Helicopter	H10 & H11	<ul style="list-style-type: none"> <li>Reconstruct 0.20 miles of 10-084.</li> </ul>
10	49	45	400	Helicopter	H12* (on private)	<ul style="list-style-type: none"> <li>Construct 0.10 miles of temporary road to H12.</li> <li>Reconstruct 0.70 miles of non-system road to H12.</li> </ul>
11	119	119	1190	Helicopter & Skyline	H13* & H14* Small skyline landings along Rd.	<ul style="list-style-type: none"> <li>Construct 0.30 miles of temporary road to H13.</li> <li>Reconstruct 0.70 miles of non-system road to H14.</li> </ul>
12	13	9	90	Skyline	H27 & H28	<ul style="list-style-type: none"> <li>Use existing road 2212.</li> <li>Reconstruct approx. 3.0 miles at various locations along 2212 road.</li> </ul>
13	76	60	400	Processor & Skyline	Processor landings along existing road. Approx. 6 small skyline landings along 2212-530.	<ul style="list-style-type: none"> <li>See Unit #10.</li> </ul>
14	32	32	320	Helicopter	H15	<ul style="list-style-type: none"> <li>None</li> </ul>
15	51	51	400	Helicopter	H16	<ul style="list-style-type: none"> <li>None</li> </ul>
16 <sup>1</sup>	15	15	150	Helicopter	H17*	<ul style="list-style-type: none"> <li>Construct 0.10 miles of temporary road to H17.</li> </ul>
17	4	2	15	Helicopter	H16	<ul style="list-style-type: none"> <li>None</li> </ul>
19	104	104	750	Helicopter	H18, H19, H20 & H21. Sm. Landings located at wide pullouts in road.	<ul style="list-style-type: none"> <li>Use existing road 2223</li> </ul>
20	13	13	100	Helicopter	H22. See U #19.	<ul style="list-style-type: none"> <li>Use existing road 2223</li> </ul>
21	97	5	40	Skyline	Several small skyline landings along road 2223.	<ul style="list-style-type: none"> <li>Use existing road 2223</li> </ul>
22	94	94	940	Helicopter	H26	<ul style="list-style-type: none"> <li>Reconstruct 0.5 miles of 1000-021.</li> </ul>

<b>Table R-3: Logging System, Proposed Landings &amp; Roads</b>						
<b>Unit #</b>	<b>Acres</b>	<b>Acres Available After Riparian Exclusion</b>	<b>Estimated Volume (mbf)</b>	<b>Logging System</b>	<b>Proposed Landings</b>	<b>Road Access, Temporary Road Construction and Road Reconstruction</b>
23	125	119	1425	Tractor & Skyline	23a – One tractor landing.  23b – Tractor landings along the road plus other small processor & skyline landings.	<ul style="list-style-type: none"> <li>• 23a – Construct tractor landing T1 off of the Blowout Road.</li> <li>• 23b – Construct 0.8 miles of temporary road to access landings.</li> <li>• 23b – Reconstruct 0.2 miles of non-system road to access unit.</li> </ul>
24	12	12	60	Skyline	Small skyline landings along road.	<ul style="list-style-type: none"> <li>• Use existing road 10</li> </ul>
25	3	3	15	Tractor	One landing in parking area at dispersed site.	<ul style="list-style-type: none"> <li>• Use existing road 10</li> </ul>
26	6	6	30	Skyline	Small skyline landings along road.	<ul style="list-style-type: none"> <li>• Use existing road 10</li> </ul>
27	28	28	100	Tractor	Landings on roads within Southshore Campground & along road 10.	<ul style="list-style-type: none"> <li>• Use existing roads within Southshore Campground</li> </ul>
28	3	2	10	Skyline	Small skyline landings along road.	<ul style="list-style-type: none"> <li>• Use existing road 10</li> </ul>
29	4	3	15	Skyline	Small skyline landings along road.	<ul style="list-style-type: none"> <li>• Use existing road 10</li> </ul>
30	89	63	125	Tractor & Helicopter	H5 & H25. Small tractor landings on existing roads in summer home tracts.	<ul style="list-style-type: none"> <li>• Use existing roads in summer home tracts.</li> </ul>
31	2	2	10	Skyline	One small skyline landing along road.	<ul style="list-style-type: none"> <li>• Use existing road 10</li> </ul>
32	1	1	5	Helicopter	H3*	<ul style="list-style-type: none"> <li>• See Unit #3</li> </ul>
33	19	19	190	Helicopter	H23 & H24	<ul style="list-style-type: none"> <li>• Use existing road 10-017</li> </ul>
<b>Total</b>	<b>1390</b>	<b>1136</b>	<b>10 mmbf</b>		<b>Helicopter = 24 ** Skyline = 12+ ** Ground = 15+</b>	<b>Temporary Road Construction = 1.4 miles Road Reconstruction = 5.9 miles</b>

\* Indicates new landings to be constructed. All other landings currently exist and only require minor modifications and/or reconstruction.

\*\* Several units would only require logs to be skyline or tractor yarded to existing roads. No new major landings are required for these units. Small, minor landing areas would be placed where existing wide portions of the road or pullouts exist.

### **Treatment of Root Rot Pockets**

Pockets of *Phellinus weirii* occurring in the proposed thinning stands will be treated by removing all of the affected trees within the infection site and/or creating a buffer around the infection site, to prevent the spread of the *Phellinus weirii*. After harvest, the area will be reforested with non-susceptible species such as hardwoods and western redcedar. Native fruit bearing trees will be planted to increase diversity for bird species that require open-habitat. Table R-4 identifies the following units with root rot pockets:

<b>Table R-4: Units with Root Rot</b>		
<b>Unit</b>	<b>Size of Affected Area *</b>	<b>Comments</b>
2	6 acres 3 acres 2 acres	Three pockets located along the west portion of the unit.
5	3 acres or less	
6	3 acres	Located along the west boundary.
10	3 acres or less	
15	3 acres or less	

- Actual size & location of the root rot pockets will be determined during final layout and marking.

### **Scenic Quality Improvements**

Small visual units (Units 24, 25, 26, 28, 29 and 31), will be created by thinning along the Blowout Road and Stahlman Point trail to provide for scenic views of Detroit Reservoir and the surrounding area. Stands will be thinned to variable densities or by removing individually selected trees. The Recreation specialist in cooperation with the pre-sale marking crew will identify individual trees for removal to enhance views of Detroit Reservoir from the road and trail. The resulting canopy closure may be as low as 30% in small-localized areas of less than ½ acre; however, overall canopy closure would average 70% to meet other resource objectives.

Unit #3 would be thinned along the boundary with the private land to lesson the undesirable straight-edge visual impact created by the clearcut. A variable density thinning would soften the existing sharp contrast existing between the clearcut and timbered forest. The resulting canopy could be as low as 30% adjacent to the clearcut and gradually increase in density towards the interior of the unit.

In Unit #32, at the Stahlman Point Lookout site, up to 12 small diameter trees (less than 20" dbh) would be removed from the existing stand to recover the view of Detroit Reservoir from the lookout site. Figure 2.8 shows existing facilities and recreation areas.

## **Recreation Improvements**

### **□ Parking Lot Improvement for Dispersed Recreation Use:**

At the conclusion of its use as helicopter landing H26, the graveled area would be converted to a public parking area. This would allow the public to park their vehicles when they use dispersed recreation sites around the peninsula. Vehicular access beyond the parking area would be blocked using boulders and other barriers.

### **□ Hoover Campground Parking Improvements:**

The parking area for the boat launch at Hoover Campground would serve as helicopter landing H3 for logs removed during the thinning of Unit 2 and 3. To facilitate that use, the small median strip between the two halves of the parking area would be removed. After its use as helicopter landing, the median strip would be paved and the parking lot re-stripped, to allow the parking of longer vehicles and trailers than can currently park there.

### **□ Dispersed Recreation Site Improvement & Repair:**

During thinning, the small parking area within Unit 25, just below the road, would be used as a landing for logs skidded out of the unit. The landing would be leveled and graveled to allow for continued use as a parking area following the thinning. After thinning, the road leading to the shoreline would be decommissioned and blocked at the edge of the parking area.

### **□ Kinney Ridge Lookout Improvements:**

Thinning activities would remove and prune small diameter trees (saplings to pole-size) around the lookout site in Unit 11. Slash generated from thinning activities would be hand-piled and burned adjacent to the trail within the unit.

## **Safety Considerations:**

Timber harvest activities would be restricted in Unit #22 (Piety Island) and Unit #14 that require logs to be flown over Detroit Reservoir during high water levels to provide for safety of recreational users on the island and boaters on the lake. No operations would occur from May 1st through October 1st. For all units that require helicopter operations to fly over Forest Roads, flaggers would be required as described in the timber sale contract.

## **Prescribed Fire**

Slash created by the thinning activities, will be treated by hand piling and burning on approximately 191 acres where there is a high risk of fire starts. In units with gentler slopes, approximately 6 acres would be machine piled using a tracked-type grapppler; and 125 acres would be underburned in units where trees have developed thick enough bark to withstand heat and flames. In units adjacent to the Blowout Road and recreation facilities, stumps would be flush cut and hand piles would be placed away from residual trees to avoid scarring. Additional fuel treatments may occur as a result of post-harvest fuel evaluations. Table R-5 describes the prescribed burning activities in each unit.

<b>Table R-5: Prescribed Fuels Treatment</b>		
<b>Unit</b>	<b>Acres</b>	<b>Description of Fuel Treatment – See additional notes for ( )</b>
1	¼	Hand pile 2 chains in along south side road 1000-017 and both sides Rd. 1003. (A)
2	½	Hand pile 2 chains both sides of road 1003 and south side road 10. (A), (B), (C)
3	7	Hand pile entire unit. Option may be to PUM unit.
4	1	Operator whole tree yard along approximately 200 ft. strip on lower portion of unit (designate on map). Hand pile NW portion of unit along Unit 30.
5	29	Hand pile entire unit. Clear out trail. (B), (C)
6	¼	Hand pile 2 chains in unit boundary adjacent to private boundary.
7	¼	Hand pile 2 chains along road 10. Unit could be grapple piled – final determination to be made after harvest. (B), (C), (E)
8	¼	Hand pile 2 chains in both sides 1000-080 road and private boundary.
9	0	No treatment
10	¼	Hand pile 2 chains in unit boundary adjacent to private boundary.
11	½	Hand pile slash along both sides lookout trail and 2 chains along private property boundary. (B), (C)
12	¼	Hand pile 2 chains in unit along side road 2212 and along private boundary to the south. (B), (C)
13	¼	Hand pile 2 chains in unit along both sides Rd 2212 and 2212-530 where road runs thru unit and unit side of 530 road. Hand pile 2 chains in on all unit borders adjacent to private boundaries. (B), (C), (E)
14	¼	Hand pile 2 chains in unit along boundary adjacent to powerline right away. (D)
15	¼	Hand pile 2 chains in unit along boundary adjacent to powerline right away. (D)
16	¼	Hand pile 2 chains in unit along boundary adjacent to road 2225. (B), (C)
17	¼	No Treatment
19	½	Hand pile 2 chains in unit along road 2223 and along unit boundary adjacent to powerline right away. (B), (C)
20	¼	Hand pile 2 chains in unit along road 2223. (B), (C)
21	¼	Hand pile 2 chains in unit along road 2223. (B), (C)
22	¾	Hand pile 2 chains in unit where sale boundary borders campground and from trail. (B), (C)
23	125	Under burn for Big Game forage improvement and for hazard reduction.
24	12	Hand pile entire unit. (B), (C)
25	3	Hand pile entire unit. (B), (C), (E)
26	6	Hand pile entire unit. (B), (C)
27	28	Hand pile within the campground. (B), (C)
28	3	Hand pile entire unit. (B), (C)
29	4	Hand pile entire unit. (B), (C)
30	89	Hand pile entire unit. (B), (C), (E)
31	2	Hand pile entire unit. (B), (C)
32	½	Hand pile entire unit. (B)
33	0	No Treatment
	<b>316</b>	<b>= Total Acres of Fuels Treatment</b>

Additional Notes:

- A) Possible underburn upon post harvest evaluation.
- B) Hand pile in a manner to protect understory vegetation and foreground screen to avoid fire damage or scarring.
- C) Chunk and completely burn piles. Scatter unburned debris that would be visible from roads, campgrounds, trails, or other improvements.
- D) Purchaser whole tree yard.
- E) Possible Grapple Pile upon post harvest evaluation.

## **Wildlife – Seasonal Restrictions**

Seasonal restrictions for wildlife species would comply with existing laws, regulations and policies as established in the Endangered Species Act and Forest Plan Standards & Guidelines. See Table R-6 for a summary of wildlife seasonal restrictions.

## **Threatened, Endangered, and Sensitive (T, E, & S) Species**

For all T, E, and S species, seasonal restrictions may be lifted and operations may begin as early as May 1st if annual occupancy surveys determine that the species is not nesting in the area (See Table R-7).

**Bald Eagle** – Restrictions for Bald Eagles are dependent on the unit proximity to a Bald Eagle Management Area (BEMA) or whether the unit is within a Bald Eagle Habitat Reserve (BEHR). (See the Biological Evaluation and Detroit Lake Bald Eagle Management Plan for a description of these areas). For the following units, helicopter operations, all ground based operations, and road building are only allowed from September 1st through December 31st. This applies to units 2-15, 23-30, and 32. Seasonal restrictions for Bald Eagle are not required within units 1, 16, 17, 19, 20, 21, and 22.

**Spotted Owls** – Seasonal restrictions applied to units to avoid disturbance of potentially nesting owls is dependent on the proximity to known nest sites within  $\frac{1}{4}$  mile for ground-based operations and  $\frac{1}{2}$  mile for helicopter operations. For the following units, operations would only be allowed from July 1st through March 1st. Helicopter operations would be restricted in units 1, 6, 8, 10, 11, 16, 19, and 20. Ground based operations (includes felling and road building) would be restricted in units 1, 12, 13, 16, 19, and 20.

**Harlequin Duck** – To avoid disturbance of potentially nesting Harlequin ducks adjacent to units 19, 20, and 21, all operations would only be allowed from August 1 – March 15th. Operations may be prohibited until August 15th if nesting is confirmed. There are no restrictions for ducks in all other units.

**Peregrine Falcon** – To avoid disturbance of potentially nesting falcons, seasonal restrictions are dependent on the type of operation and distance (2 miles for ground-based and 3 miles for helicopter operations) from a known nest site. Helicopter operations are only allowed from August 1st to January 15th in all units except 12 and 33. Ground based logging and road construction operations within two miles of a known nest site are also allowed during this period in units 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, 19, 24, 25, 26, 27, 28 & 29. There are no restrictions for peregrine falcon in units 12 and 33.

**Other Species of Concern -- Osprey, Big Game/Winter Range**– The selected Alternative extends the operating season for harvest activities by eliminating the seasonal restrictions for Osprey and Big Game as described in the Forest Plan (FW-133 and FW-143). Nest sites for Osprey would be protected. See Table R-5 and Table R-6 for a summary of the seasonal restriction for wildlife.

Table R-6: Operational Periods due to Wildlife Restrictions *												
Alternative 3 – Reduce Timber Sale Noise												
Unit #'s	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1, 2, 3, 4, 23, 30, 31	X	X	X	X	X	X	X	X	X	X	X	X
5, 6, 7, 8, 9, 22, 24, 25, 26, 27, 28, 29, 32, 33		X	X	X	X	X	X	X	X	X	X	X
14, 15, 16, 17, 19, 20, 21,		X	X	X	X	X	X	X	X	X	X	X
10,11(BEHR)	X	X	X	X	X	X	X	X	X	X	X	X
12,13(BEMA)		X	X	X	X	X	X	X	X	X	X	X

Table R-7: Operational Periods due to Wildlife Restrictions if Non-Nesting is Determined by Occupation Surveys *												
Alternative 3 – Reduce Timber Sale Noise												
Unit #'s	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1, 2, 3, 4, 23, 30, 31	X	X	X	X	X	X	X					
5, 6, 7, 8, 9, 22, 24, 25, 26, 27, 28, 29, 32, 33		X	X	X	X	X	X					
14, 15, 16, 17, 19, 20, 21,		X	X	X	X	X	X					
10,11(BEHR)	X	X	X	X	X	X	X					
12,13(BEMA)		X	X	X	X	X	X					

\* Refer to the description by species above for specific activities that are restricted.

**Shaded area indicates times when operations are allowed**

X indicates times when operations are prohibited

Each block represents approximately 15 days (example Jan. 1-15, Jan. 15-31)

**Recreation Operating Restrictions:**

The selected alternative minimizes noise disturbance on recreation visitors and local communities from harvest & logging operations adjacent to High Public Use Areas such as campgrounds, Stahlman summer homes, and in the vicinity of Detroit and Idanha). Tables R-8, R-9, R-10, R-11, and R-12 list the schedules of operating times for timber harvest and logging activities to reduce the effects of noise during the peak (May 1<sup>st</sup> through September 30<sup>th</sup>) and non-peak recreation seasons (October 1<sup>st</sup> through April 30<sup>th</sup>).



- **Helicopter operations--Peak Season (May 1<sup>st</sup> through September 30<sup>th</sup>)**
  - **Units Adjacent to High Public Use Areas:** Helicopter operations would be allowed from 8:00 a.m. to 7:00 p.m. on Monday through Thursday; and 8:00 a.m. to 5:00 p.m. on Fridays (Table R-8). Operations are prohibited all other times.
  - **Units Distant From High Public Use:** Helicopter operations are unrestricted Monday through Thursday and Friday until 5:00 p.m. Operations are prohibited all other times. (Table R-9).
- **Helicopter operations--Non-Peak Season (October 1<sup>st</sup> through April 30<sup>th</sup>)**
  - **Units Adjacent To High Public Use Areas:** Helicopter operations are allowed from 8:00 a.m. to 7:00 p.m. on Monday through Thursday; and 8:00 a.m. to 5:00 p.m. on Fridays (Table R-11). Operations are prohibited all other times.
  - **Units Distant From High Public Use:** Helicopter operations would be unrestricted (Table R-12).

### **Timber harvest operations**

Timber harvest operations include, but are not limited to, felling activities using chainsaw or processor/forwarder, yarding activities using tractor & skidder or skyline yarding systems, and loading at landings.

- **Timber harvest operations--Peak Season (May 1<sup>st</sup> through September 30<sup>th</sup>)**
  - **Units Adjacent To High Public Use Areas:** Timber harvest operations would be allowed from 8:00 a.m. to 7:00 p.m. on Monday through Thursday; and 8:00 a.m. to 5:00 p.m. on Fridays. Operations are prohibited all other times (Table R-8)
  - **Units Distant From High Public Use:** Timber harvest operations are unrestricted Monday through Thursday, and Friday until 5:00 p.m. Operations are prohibited all other times. (Table R-9).
- **Timber harvest operations--Non-Peak Season (October 1<sup>st</sup> through April 30<sup>th</sup>)**
  - **Units Adjacent To High Public Use Areas:** Timber harvest operations are unrestricted Monday through Thursday, and Friday until 5:00 p.m. Operations are prohibited all other times. (Table R-11)
  - **Units Distant From High Public Use:** Timber harvest operations would be unrestricted (Table R-12).

### **Truck hauling:**

- **Peak and Non-Peak Seasons:** For all units truck hauling is unrestricted Monday through Thursday, and Friday until 5:00 p.m. Operations are prohibited all other times.
- **Legal Holidays During Peak Season (Table R-10)**
  - No operations would be permitted beginning 5:00 p.m. the previous Friday through 8:00 a.m. Tuesday.
  - No operations would be allowed during the entire week in which the Fourth of July falls on a Tuesday, Wednesday, or Thursday.

The tables on the next two pages illustrate the restrictions necessary to reduce the impacts of noise disturbance on recreation visitors and local communities in the vicinity of the project area. Units have been identified on each table based on their proximity to High Public Use Areas.

**PEAK SEASON**  
**May 1<sup>st</sup> to September 30<sup>th</sup>**

**Table R-8: Activity Schedule for Units Adjacent to High Public Use Area – Alternative 3**  
**Units 2, 3, 4, 5, 6, 7, 8, 9, 14, 15, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32**

	Sun.	Monday			Tuesday			Wednesday			Thursday			Friday			Sat.
	All Day	Midnight To 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 5:00 p.m.	5:00 p.m. to Midnight	All Day
Helicopter	X	X		X	X		X	X		X		X		X		X	X
Harvest Operations	X	X		X	X		X	X		X		X		X		X	X
Hauling	X															X	X

**Table R-9: Activity Schedule for Units Distant to High Public Use Area – Alternative 3**  
**Units 1, 10, 11, 12, 13, 16, 17, 20, 21, 33**

	Sun.	Monday			Tuesday			Wednesday			Thursday			Friday			Sat.
	All Day	Midnight To 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 5:00 p.m.	5:00 p.m. to Midnight	All Day
Helicopter	X															X	X
Harvest Operations	X															X	X
Hauling	X															X	X

Shaded areas indicate allowable times of operation. X indicates prohibited activities. Refer to the description above for details.

	Sun.	Monday			Tuesday			Wednesday			Thursday			Friday			Sat.
	All Day	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 5:00 p.m.	5:00 p.m. to Midnight	All Day
Holidays	X	X	X	X	X											X	X
Week of 4 <sup>th</sup> of July	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

**NON - PEAK SEASON  
October 1<sup>st</sup> to April 30<sup>th</sup>**

**Table R-11: Activity Schedule for Units Adjacent to High Public Use Area – Alternative 3  
Units 2, 3, 4, 5, 6, 7, 8, 9, 14, 15, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32**

	Sun.	Monday			Tuesday			Wednesday			Thursday			Friday			Sat.
	All Day	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 5:00 p.m.	5:00 p.m. to Midnight	All Day
<b>Helicopter</b>	X	X		X	X		X	X		X		X		X		X	X
<b>Harvest Operations</b>	X															X	X
<b>Hauling</b>	X															X	X

**Table R-12: Activity Schedule for Units Distant to High Public Use Area – Alternative 3  
Units 1, 10, 11, 12, 13, 16, 17, 20, 21, 33**

	Sun.	Monday			Tuesday			Wednesday			Thursday			Friday			Sat.
	All Day	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 7:00 p.m.	7:00 p.m. to Midnight	Midnight to 8:00 a.m.	8:00 a.m. to 5:00 p.m.	5:00 p.m. to Midnight	All Day
<b>Helicopter</b>																	
<b>Harvest Operations</b>																	
<b>Hauling</b>	X															X	X

**Shaded areas indicate allowable times of operation. X indicates prohibited activities. Refer to the description above for details.**

**Table R-13: Mitigation Measures for the Selected Alternative**

<b>Resource</b>	<b>Objective</b>	<b>Location</b>	<b>How</b>
<b>Water Quality</b>	<ul style="list-style-type: none"> <li>Minimize sediment and increased turbidity in streams.</li> </ul>	<ul style="list-style-type: none"> <li>All Units</li> </ul>	<ul style="list-style-type: none"> <li>Implement Best Management Practices (BMP's)</li> </ul>
<b>Soils</b>	<ul style="list-style-type: none"> <li>Minimize compaction from ground based logging systems</li> </ul>	<ul style="list-style-type: none"> <li>All Units</li> </ul>	<ul style="list-style-type: none"> <li>Implement BMP's.</li> <li>Decommission and sub-soil all temporary roads following timber sale activities.</li> <li>Sub-soil and install water bars on all landings and skid trails, unless otherwise specified in the selected alternative.</li> </ul>
<b>Noxious Weeds</b>	<ul style="list-style-type: none"> <li>Prevent the spread of noxious weeds on disturbed soils.</li> </ul>	<ul style="list-style-type: none"> <li>All Units</li> </ul>	<ul style="list-style-type: none"> <li>Re-vegetate landings and temporary road disturbance at the first appropriate opportunity following project work with competitive seeding and plantings.</li> <li>Use weed-free rock sources for any additional gravel needed for temporary road construction and reconstruction</li> <li>Use only certified weed-free seed and straw for erosion and forage seeding.</li> <li>All road construction and logging equipment would be pressure washed prior to working in the area in accordance with C Clause C6.343 (Option 2) Cleaning of Equipment.</li> <li>Prior to beginning harvest operations, locate and control noxious weeds on all harvest units and associated roads and landings in the planning area to avoid spreading seeds to other areas.</li> <li> <ul style="list-style-type: none"> <li>project area by keeping new landings and skid trails to a minimum.</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>Ensure successful mitigation during project activities</li> </ul>	<ul style="list-style-type: none"> <li>All Units</li> </ul>	<ul style="list-style-type: none"> <li>Monitor and treat infestations following post-harvest activities.</li> </ul>

**Table R-13: Mitigation Measures (Continued)**

<b>Resource</b>	<b>Objective</b>	<b>Location</b>	<b>How</b>
<b>Heritage Resources</b>	<ul style="list-style-type: none"> <li>• Protect known and undiscovered cultural resource sites.</li> </ul>	<ul style="list-style-type: none"> <li>• All units.</li> </ul>	<ul style="list-style-type: none"> <li>• In the event cultural resources are discovered during harvest operations, cease all operations and consult with the District Archaeologist prior to resuming operations.</li> </ul>
<b>Wildlife</b>	<ul style="list-style-type: none"> <li>• Maintain habitat for snag utilizing species.</li> </ul>	<ul style="list-style-type: none"> <li>• All units</li> </ul>	<ul style="list-style-type: none"> <li>• Retain all existing snags, where safety permits</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>• Minimize conflicts with recreation vehicles on haul routes.</li> </ul>	<ul style="list-style-type: none"> <li>• All units.</li> </ul>	<ul style="list-style-type: none"> <li>• Restrict haul from 5:00 pm Friday through midnight Sunday, Memorial Day to Labor Day(C5.12).</li> </ul>
	<ul style="list-style-type: none"> <li>• Avoid hazards associated with helicopter operations over roads and Detroit Lake.</li> </ul>	<ul style="list-style-type: none"> <li>• Units 1, 2, 3, 14, 19, 20, and 22.</li> </ul>	<ul style="list-style-type: none"> <li>• Include contract requirements for flaggers during periods when helicopter operations fly directly over major roads.</li> <li>• Limit helicopter operations for units 14 and 22 from Oct. 1<sup>st</sup> to April 15<sup>th</sup>.</li> </ul>

## Shore 'Nuf Record of Decision – Appendix B Monitoring Plan for Shore Nuf Timber Sale

The questions in the following tables are designed to determine whether or not implementation of the Shore 'Nuf Timber Sale will accomplish the desired objectives and answers the basic question “Did we do what we said we were going to do?”.

Question	Responsible Person	Timeline/Comments
Did treating the root rot pockets adequately control the spread of <i>Phellinus weirii</i> ?	Silviculturist	Following treatment. Full determination may not be known for several years due to the life cycle of the disease.
Is there evidence that <i>Phellinus weirii</i> has spread to other trees after treatment?	Silviculturist	Continue to monitor trees at the perimeter of the treatment to determine if <i>Phellinus</i> has infected remaining trees.
Did thinning around Stahlman Recreation residences provide vegetative screening by stimulating the growth of low growing plants within 5 years?	Silviculturist	Within 5 years of treatment.
Did the small visual units along the Blowout Road and Stahlman Point trail provide for scenic views of Detroit Reservoir and surrounding area but still provide for desirable landscape aesthetics?	Recreation Planner	Following treatment
Did the treatment soften the sharp edge between the existing private clearcuts and timbered forests?	Recreation Planner	In Units 3, 4, 5, and other units adjacent to private clearcuts.
Did the treatment for Unit 32 improve the view of Detroit Lake from Stahlman Point lookout?	Recreation Planner	Following treatment
Did we convert landing H26 into a dispersed recreation parking area, and did the public use it?  Were we successful at blocking vehicular access beyond the parking area?	Public Services & Planning Supervisor	Following treatment
Did we successfully utilize landing H3 in the Hoover Campground Parking lot and did we improve the parking for longer vehicles and trailers after the harvesting was completed.	Public Services & Planning Supervisor	Timing is critical for this landing. Were there any impacts to the concessionaire?

### Shore 'Nuf Timber Sale – Monitoring Questions (Continued)

Question	Responsible Person	Timeline/Comments
Did we create the recreation parking area in Unit 25, and did we successfully obliterate and block the road leading to the shoreline?	Public Services & Planning Supervisor	Following treatment
Did our treatment around the Kinney Ridge Lookout site clear the trail and improve the view?	Heritage Specialist	Following treatment
Did we adhere to the safety considerations for flying logs over Detroit Reservoir?	Timber Sale Officer	During harvest operations.
Did we carryout the fuels treatments are prescribed?	Fire Management Officer	Following treatment
Were the restrictions on harvesting activities successful at reducing the impacts from noise?	Recreation Planner	Measurements should be based on the number of complaints received from the public during harvest operations.
Did we locate and control noxious weeds on all harvest units and associated roads and landing in the planning area prior to beginning harvest operations?	Botanist	Prior to the start of harvest operations
Did we follow all of the mitigation regarding noxious weeds?	Botanist	During harvest operations
Where we successful in controlling the spread of noxious weeds resulting from the Shore 'Nuf Timber Sale?	Botanist	Following treatment
Did we successfully decommission all landings and temporary roads? Was decommission activities done in a timely manner?	Geologist & Hydrologist	Decommissioning activities need to occur immediately after harvest operations so that the public does not use these roads to create additional dispersed sites and users roads.
Did we successfully meet prescribed stand density objectives?	Silviculturist	Do stands meet a 70% average canopy closure, or other visual objectives as described in the FEIS, Appendix A.
In treated riparian reserves, was the treatment successful in accelerating late successional characteristics.	Hydrologist, Fisheries & Wildlife Biologist, Silviculturist	Units of measure include diameter growth, understory vegetation development, and retaining existing riparian vegetation (hardwoods, cedar, and pacific yew).
Did the changes in seasonal restrictions affect Osprey? Measurements include nesting retention and site occupancy.	Wildlife Biologist	During harvest operations and following treatment.