DRAFT Northern Spotted Owl Management (OESF)

Cancels: ---Northern Spotted Owl Management (Westside), October 2007
--Westside applications of PR 14-004-120 Management Activities within Spotted Owl Nest Patches, Circles, Designated Nesting, Roosting, and Foraging and Dispersal Management Areas, September 2004
--HCP Implementation Memorandum #1, dated Jan 20, 1998
--Standard Practices Memorandum SPM 03-06 and SPM 03-07

Date:

Application: All forested state trust within the Olympic Experimental State Forest (OESF) HCP Planning Unit

DISCUSSION

DNR's HCP for state trust lands is a multi-species conservation strategy that covers the range of the northern spotted owl (NSO) within the state of Washington. The intent of the HCP NSO strategy is to provide habitat that makes a significant contribution to the demographic support, maintenance of species distribution, and facilitation of dispersal. For the OESF, the strategy is to restore a level of habitat capable of supporting reproducing northern spotted owls on DNR-managed lands in the OESF.

The 1997 *Habitat Conservation Plan* northern spotted owl strategy in the OESF is an "unzoned" approach to habitat conservation. Under this unzoned approach, all DNR-managed lands within the OESF have the potential to contribute to the northern spotted owl habitat conservation strategy. This approach is distinct from the strategies employed in other western Washington HCP planning units, where spotted owl habitat management units (SOMUs) have been delineated.

Under the OESF northern spotted owl strategy, DNR restores, then maintains, minimum thresholds of northern spotted owl habitat on all DNR-managed land in each of the 11 landscapes in the OESF. The location of habitat is expected to shift over time: areas in a landscape that develop into habitat in one decade may be harvested in a later decade as other areas in that landscape mature into habitat. This approach assumes that

there will be continued forest management while northern spotted owl habitat is restored and then maintained and enhanced.

The unzoned approach is experimental when compared to the zoned approach used in other HCP Planning Units because of the higher level of uncertainty in meeting habitat conservation and revenue production objectives. The 1997 HCP recognized that current scientific knowledge could not answer all of the questions about how to achieve integration of habitat conservation and revenue production effectively and economically. It was assumed that over time, research and monitoring would help answer those questions.

DNR uses innovative silvicultural techniques, such as variable density thinning, to expedite the attainment of the northern spotted owl conservation objectives. Harvests of available Young and Old Forest Habitat can provide opportunities to learn new silvicultural techniques for retaining old forest ecosystem functions, including functions associated with northern spotted owl habitat.

The current assumption is that forest stands receiving early treatments will develop the habitat elements necessary for northern spotted owls. These management practices are relatively new and studies are being done on their effectiveness (Harrington and others 2005, Carey and others 1999).

Landscape planning, using a forest estate model, is used to integrate DNR's objectives of revenue generation and ecosystem values on DNR-managed lands in the OESF. The forest estate model produces several outputs that are integral to the implementation of the OESF northern spotted owl strategy, including maps of northern spotted owl habitat and a harvest schedule. These products are used to guide where to place timber harvest activities, as well as where future habitat is predicted to develop.

The objective of the northern spotted owl Conservation Strategy is to have each landscape planning unit maintain or restore a minimum threshold proportion of potential habitat. Those minimum proportions are:

1. At least 20 percent Old Forest Habitat, and,
2. At least 40 percent Young Forest or better Habitat

In other words, each landscape planning unit should have at least a minimum of 20 percent Old Forest Habitat and 20 percent Young Forest Habitat, adding up to 40 percent of each landscape in functional northern spotted owl habitat. The restoration phase of the strategy is recognized as the time period between current conditions and when a landscape has 40

percent Young Forest or better habitat. The maintenance and enhancement phase of the strategy is defined as when a landscape maintains 40 percent Young Forest or better habitat and the percent of Old Forest increases to 20 percent or higher.

Habitat Definitions

Young Forest Habitat Definitions

Table 1. Sub-mature Habitat Description and Forest Estate Model Inventory Attributes

Sub-mature	
Description	**Forest Estate Model Inventory Attributes**
• Forest community dominated by conifers, or in mixed conifer/hardwood forest, the community is composed of at least 30 percent conifers. • At least 70 percent canopy closure • Tree density of between 115 and 280 trees greater than 4 inches • Trees over 85 feet tall • At least three snags per acre that are at least 20 inches in diameter	• 30 and or more percent conifer trees per acre • 115 to 280 trees per acre >4 inches DBH class • Minimum top height of 40 largest trees >85 feet tall • Curtis's Relative Density >= 48 • At least 3 snags per acre >20 inches DBH and 16 feet tall • At least 2,400 cubic feet per acre down wood

Table 2. Young Forest Marginal Habitat Description and Forest Estate Model Inventory Attribute

Young Forest Marginal	
Description	**Forest Estate Model Inventory Attributes**
• Forest community dominated by conifers, or in mixed conifer/hardwood forest, the community is composed of at least 30 percent conifers. • At least 70 percent canopy closure • Tree density of between 115 and 280 trees greater than 4 inches • Trees over 85 feet tall • At least two snags per acre that are at least 20 inches in diameter or equal to 10 percent of the ground covered with 4 inch diameter or larger wood with 25 to 60 percent shrub cover.	• 30 percent or more conifer trees per acre • 115 to 280 tree per acre >4" DBH class • Minimum top height of 40 largest trees >85 feet tall • Curtis's Relative Density >= 48 • At least 2 snags per acre >20 inches DBH and 16 feet tall or at least 4,800 cubic feet per acre down wood

Old Forest Habitat Definitions

Table 3. High Quality Nesting Habitat Description and Forest Estate Model Inventory Attribute

High Quality Nesting	
Description	**Forest Estate Model Inventory Attributes**
• At least 31 trees per acre are greater than or equal to 21 inches dbh with at least 15 trees, of those 31 trees, per acre greater than or equal to 31 inches DBH • At least three trees have broken tops • Canopy closure at least 70%. • A minimum of 5 percent ground cover of large woody debris.	• At least 3 live trees per acre >21inches DBH with broken tops • At least 16 trees per acre > 21 inches DBH • At least an additional 15 trees per acre >31 inches DBH • Minimum top height of 40 largest trees >85 feet tall • Curtis's Relative Density >= 48 • At least 2,400 cu feet per acre down wood

Table 4. Type A Habitat Description and Forest Estate Model Inventory Attribute

Type A Habitat	
Description	**Forest Estate Model Inventory Attributes**
• A multi-layered, multispecies canopy dominated by large (30 inches diameter or greater) overstory trees (• At least 70 percent canopy closure • A high incidence of large trees with various deformities such as large cavities, broken tops, and dwarf mistletoe infection. • At least two snags per acre that are at least 30 inches in diameter or larger. • Large accumulation of fallen trees and other woody debris on the ground.	• At least 2 canopy layers with at least 2 species • At least 20% of trees per acre in minor species • Canopy typically dominated by 75 to 100 trees per acre >20 inch DBH • At least 2 live trees per acre >21inches DBH with broken tops • Two or more snags per acre >30 inches DBH and 16 feet tall • At least 2,400 cubic feet per acre down wood • Curtis's Relative Density >= 48

Table 5. Type B Habitat Description and Forest Estate Model Inventory Attribute

Type B Habitat	
Description	**Forest Estate Model Inventory Attributes**
• Few canopy layers, multispecies canopy dominated by large (greater than 20 inches diameter) overstory trees (typically 75 to 100 trees) per acre, but can be fewer if large trees are present. • At least 70 percent canopy closure • Some trees with various deformities • Large (greater than 20 inches diameter) snags present • Large accumulation of fallen trees and other woody debris on the ground.	• At least 2 canopy layers with at least 2 species • At least 20% of trees per acre in minor species • Canopy typically dominated by 15 to 75 trees per acre >30 inches DBH • Large trees with various deformities • At least 1 live trees per acre > 21 inches with broken top • At least 1 snag/ac >20" DBH and 16 feet tall • One or more snags per acre >20 inches DBH and 16 feet tall • At least 2,400 cubic feet per acre down wood • Curtis's Relative Density >= 48

Old Forest Habitat was also mapped by DNR Olympic Region biologists (pers. com. Scott Horton) from aerial photographs and field survey related to marbled murrelet surveys. The areas are also included as Old Forest Habitat, although they do not meet the inventory conditions listed above for High Quality, Type A and B habitat. The Mapped Old Forest Habitat layer is anticipated to be updated in the future to take advantage of higher quality aerial photographs and newer technology and tools.

Action

1. Determine the NSO habitat type using the DNR cooperate GIS data provided by the Forest Estate Model:
    a. If Young Forest Habitat go to #1.A.
    b. If Old Forest Habitat go to #1.B.

c. If the area is non-habitat go to #1.C.

A. Young Forest Habitat is only available for timber harvest activity when one of the following conditions are met:
   a. 40 percent of the landscape is in Young Forest or better habitat and will remain so after harvest *or*;
   b. If landscape is below 40 percent Young Forest or better habitat the activity will maintain and improve structural components of forest stands through creation of elements such as down woody debris, snags, and larger diameter trees; or
   c. It has been demonstrated, through forest estate modeling, that the proposed harvest activity will not change the decade the landscape meets the minimum habitat thresholds. Refer to Table A-5.
   d. Roads can be built through Young Forest Habitat as long as the number of acres of habitat modified to build the road does not change the decade the landscape meets the minimum northern spotted owl habitat thresholds (refer to Table 6 for the projected decades minimum thresholds are met) or,

   e. If road building in Young Forest Habitat changes the decade the landscape meets the minimum northern spotted owl habitat thresholds (refer to Table 6 for the projected decades minimum thresholds are met), then the amount of harvest between Forest Estate Model runs must not exceed one percent of the Young Forest Habitat (refer to Table 7). Because road building is a site-specific action it is evaluated separately through SEPA when it is proposed.

Table 6. Number of Decades Projected Until Northern Spotted Owl Habitat Threshold Are Met

Landscape	Decades to reach 20 percent Old Forest Habitat threshold	Decades to reach 40 percent Young Forest Habitat and better threshold
Clallam	5	1
Clearwater	0	5
Coppermine	7	6
Dickodochtedar	4	2
Goodman	0	3
Kalaloch	5	4
Queets	0	4
Reade Hill	0	1
Sekiu	6	5

Sol Duc	8	2
Willy Huel	0	6

Table 7. Road Construction Thresholds in Young Forest Habitat by Landscape Based on One Percent of the Young Forest Habitat Identified within the Forest Estate Model (The amount in this table will change with each Forest Estate Model run)

Landscape	Acres of Young Forest Habitat	One Percent of Young Forest (Rounded, so totals may not match)
Clallam	5,662	57
Clearwater	3,106	31
Coppermine	708	7
Dickodochtedar	5,059	51
Goodman	2,392	24
Kalaloch	1,957	20
Queets	1,579	16
Reade Hill	2,038	20
Sekiu	1,424	14
Sol Duc	4,683	47
Willy Huel	993	10

B. Old Forest habitat is only available for timber harvest activities when the following conditions are met:
    a. The 2006 Sustainable Harvest Settlement Agreement has expired *and*,
    b. At least 20 percent of the landscape is in Old Forest Habitat *and*,
    c. At least 20 percent of the landscape is also in Young Forest habitat, adding up to the 40 percent habitat landscape threshold *and*,
    d. The proposed activity does not bring the landscape below the 20 percent old forest threshold and the total habitat threshold of 40 percent Young Forest Habitat or better *and* ,
    e. Not an old-growth stand as defined by Procedure 14-004-045 (Old-Growth Deferral and Protection (Westside)) *and*,
    f. Not a marbled murrelet deferral based on current marbled murrelet strategies,
    g. Building of new roads through Old Forest habitat is not permitted until habitat thresholds are met and maintained *or*,
    h. New road construction, reconstruction or maintenance will be reviewed by the HCP and Scientific Consultation Section

of Forest Resources Division prior to commencing these activities. Provided no tree (i.e. tree>6" dbh) felling occurs (including day-lighting), road maintenance may occur within Division review as long as all other aspects of this procedure are adhered to.

C. Non-habitat areas are available for timber harvest activities. When a non-habitat area selected for harvest is forecast in the latest forest estate model projections as contributing towards the Old Forest and/or Young Forest Habitat landscape threshold targets during the restoration phase (see Table A-5 above), an effort will be made, when available, to pre-assess if the proposed harvest changes the length of the restoration phase.

2. For "Known nest sites", retain the restriction that timber harvest and road construction activities are prohibited within the best 70 acres (that may or may not be habitat) around the "known nest site" from March 1 through August 31 of each year.

3. Develop and record an appropriate silvicultural prescription in Planning and Tracking.

4. An annual report of the acres harvested by landscape planning unit, activity type, and northern spotted owl habitat type (see *Draft* OESF Forest land Plan) will be generated as part of the HCP Implementation Monitoring.

5. All variances from this procedure will be approved by the Region Manager and the Division Manager for Forest Resources.

Approved by: signed:_____ **Date:** _____

Manager, Land Management Division

SEE ALSO

- PR 14-001-030 The Settlement Agreement
- OESF Forest Land Plan
- Management Area decision trees (attached):

- Olympic Experimental State Forest Northern Spotted Owl Habitat: HCP + Settlement Agreement

Olympic Experimental State Forest Northern Spotted Owl Habitat: HCP + Settlement Agreement

Landscape Planning Unit Objective: Attain and sustain at least 40 percent of DNR-managed lands in each landscape planning unit in a Structural or Old Forest habitat condition, such that at least 20 percent of each landscape planning unit becomes sustained as Old Forest habitat.

START➔

Does the LPU exceed the 40 percent landscape objective?

Yes → **No NSO habitat restrictions on timber harvest, except:**

--Review most recent forest estate modeling outputs for information on future habitat contribution
--Maintain the LPU at or above the 40 percent objective
--Activities restricted 3/1-8/31 within 0.7 miles of Status 1 and 2 site centers

No → Is the stand at hand currently in young forest marginal or better habitat?

Yes → **No NSO habitat restrictions on timber harvest, except:**

--Review most recent forest estate modeling outputs for information on future habitat contribution
--Maintain the LPU on the restoration trajectory to reach the 40 percent objective
--Activities restricted 3/1-8/31 within 0.7 miles of Status 1 and 2 site centers

No → What type of habitat is the stand currently in?

OLD FOREST

Field Verified Old Forest

Type A
-- At least 2 canopy layers with at least 2 species
--At least 20% of TPA in minor species
--Canopy typically dominated by 15 to 75 TPA ≥30" DBH
--Curtis' RD≥48 for trees≥4" DBH class
--At least 2 live trees/ac ≥21" DBH with broken tops
--Two or more snags/ac ≥30" DBH and 16' tall
--At least 2,400 cu ft/ac down wood

Type B
--At least 2 canopy layers with at least 2 species
--At least 20% of TPA in minor species
--Canopy typically dominated by 75 to 100 TPA ≥20" DBH
--Curtis' RD ≥48 for trees ≥4" DBH class
--Large trees with various deformities
--At least 1 live tree/ac ≥21" DBH with broken top
--At least 1 snag/ac ≥20" DBH and 16' tall
--At least 2,400 cu ft/ac down wood

YOUNG FOREST

Sub-mature
--Dominants/ codominants at least 30 percent TPA conifer
--Curtis' RD≥ 48 for trees≥4" DBH class
--115 to 280 TPA≥4" DBH class
--Dominants/ codominants ≥85' tall
--At least 3 snags/ac ≥ 20" DBH and 16' tall
--At least 2,400 cu ft/ac down wood

Young Forest Marginal
Same as sub-mature, except:
--At least 2 snags/ac ≥20" DBH and 16' tall
OR
--At least 4,800 cu ft/ac down wood

All timber harvest deferred until after June 30, 2014. Beyond this date, timber harvest is permissible consistent with forest land planning strategies

Sustain or improve current habitat AND Retain or shorten trajectory toward Field Verified Old Forest AND
--Activities restricted 3/1-8/31 in best 70 acres of Status 1 and 2 site centers

Develop forest management unit silvicultural prescription, considering including the following:
--At least 10 percent of pre-harvest SBA retained as (potentially) unique trees, scattered or in clumps
--At least 3 snags/ac ≥20" DBH and 16' tall recruited/sustained towards various decay stages
--At least 2,400 cu ft/ac down wood
--At least 5 percent of the proposed activity area in an undisturbed state
--Reforested cohorts' growth/vigor largely unrestricted

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