

APPENDIX I

Site Evaluation Requirements and Effect Determination Criteria – Northern Spotted Owl

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Appendix I1

Washington State Department of Transportation (WSDOT) 2014 Programmatic Biological Opinion – Supplemental Analysis

Effects Analysis for Spotted Owl in the Western Washington Lowlands Province

Prepared by:

Vince Harke, Fish and Wildlife Biologist,
Technical lead for Northern Spotted Owl ESA Section 7 Consultation
U.S. Fish and Wildlife Service, Lacey, WA.
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For analysis and conservation planning purposes, the range of the northern spotted owl (spotted owl) is divided into 12 physiographic provinces that reflect the physical, biological, and environmental factors that shape broad-scale landscape features and natural plant communities (Thomas et al. 1990, p. 61). In the 2011 revised recovery plan for the spotted owl, the FWS identified the physiographic provinces as individual recovery units essential for the survival and recovery of spotted owls (USFWS 2011, p. III-1). In Washington, there are four physiographic provinces, including the Olympic Peninsula, the Western Washington Lowlands, the Western Washington Cascades, and the Eastern Washington Cascades.

Status of Spotted Owls and Spotted Owl Habitat in the Western Washington Lowlands Province

The Western Washington Lowlands province covers the low-elevation lands adjacent to Puget Sound and encompasses the Interstate-5 corridor south to the Columbia River and the southwestern Washington timber-production lands (Figure 1). Land ownership in the province is primarily non-federal and includes major urban, industrial, and agricultural areas. Most forest land in the province is privately owned and has been managed intensively for timber production for the past century. Under the Washington Forest Practices rules, spotted owl habitat on private timber lands is only protected in Spotted Owl Special Emphasis Areas (SOSEAs) (WAC-222-10-041). There are no designated SOSEAs in the province, and there are no Habitat Conservation Plans that provide for the long-term protection of spotted owl habitat in the province. From 1994 to 2006, there was over 230,000 acres of potential spotted owl habitat removed on non-federal lands due to commercial timber harvest in Washington (Davis et al. 2011, p. 124). Most of the habitat loss documented on non-federal lands in Washington has occurred in the Western Washington Lowlands province (USFWS 2006, p. 393).

Federal ownership in the province is limited primarily to Department of Defense lands at Joint-Base Fort Lewis-McChord. No spotted owls have ever been documented at Fort Lewis, despite extensive surveys in the early 1990's and mid-2000's. Designated critical habitat for the spotted owl does not include any locations within the Western Washington Lowlands province. Although the province contained an estimated 297,000 acres of potential spotted owl habitat in 2006 (Davis et al. 2011, p. 44), relatively few spotted owls have ever been documented in the Washington Lowlands province. The database of spotted owl activity centers in Washington contains 1,044 sites classified as known pair sites or resident singles, but only 21 spotted owl sites were documented in the province during the late 1980's and early 1990's (Figure 1).

Monitoring for spotted owls in southwest Washington and the south Cascades conducted by the Washington Department of Natural Resource (WDNR) in 2005 and 2006 indicated that only 6 of 29 historic spotted owl sites on WDNR lands were occupied by spotted owls in 2006, and only 2 of these occupied sites were located in the Western Lowlands province (WDNR 2007, p. 24). Further monitoring of the Western Lowlands spotted owl sites documented territory abandonment and death of the last remaining known spotted owls in southwest Washington in 2009 (Irwin et al. 2010, p. 4). Both studies documented high numbers of barred owls in these landscapes. The high density of barred owls, coupled with relatively low amounts of suitable habitat has led to the virtual abandonment of this landscape by spotted owls (WDNR 2007, pp. 24-25; Irwin et al. 2010, p. 4). The likelihood of resident, territorial spotted owls being present in the Western Lowlands province is now extremely low. However, there may still be a few non-resident spotted owls persisting in southwest Washington as transient, dispersing individuals, or as non-territorial “floaters” (Forsman et al. 2002, p. 4).

WSDOT Programmatic Activities in the Western Washington Lowlands Province

WSDOT manages over 7,200 miles of highways in Washington, including approximately 2,160 miles of roads in the Western Washington Lowlands province. This represents about 30 percent of the road network managed by WSDOT. Management activities covered under the programmatic include a broad range of road maintenance and reconstruction activities, and stream crossing structures. For analysis purposes, WSDOT mapped a half-mile buffer adjacent to State Routes to represent the programmatic project action area. In the Western Lowlands province, there are approximately 24,040 acres of potential spotted owl habitat located within the WSDOT action area, including about 2,230 acres located directly adjacent to roads (within a distance of 100 m) (Table 1). None of the mapped historic spotted owl activity centers in the province occur within the half-mile zone adjacent to WSDOT roads, although several of the potential 2.7 mile-radius analysis circles do overlap WSDOT roads (Figure 1).

Table 1. Summary of spotted owl habitat in the Western Washington Lowlands province, including habitat adjacent to WSDOT-managed roads.

Total land acres in province	Acres of designated spotted owl critical habitat	Total acres of potential spotted owl nesting/roosting habitat	Acres of spotted owl nesting/roosting habitat within 0.5 mile of WSDOT roads	Acres of spotted owl nesting/roosting habitat within 0.25 mile of WSDOT roads	Acres of spotted owl nesting/roosting habitat within 100 meters of WSDOT roads
6,482,400	0	297,650	24,040	10,400	2,230

Note: Due to rounding errors associated with GIS, the acreage values reported here may differ slightly from values reported elsewhere. Spotted owl habitat estimates are approximate values derived from 2006 habitat maps developed for the Northwest Forest Plan 15-year monitoring report (Davis et al. 2011).

It is anticipated that WSDOT actions may remove up to 55 acres of upland vegetation per year distributed across an average of 51 projects per year within the range of the spotted owl in Washington, indicating an average of 1.1 acres of vegetation removal per project. Estimates of areas exposed to noise and visual disturbance associated with WSDOT activities range from 10

to 100 acres per project, depending on the activity type (USFWS 2013, pp. 82-83). All WSDOT activities are essentially confined to the existing road prism and adjacent right-of-ways. Vegetation removal for any given project is limited and, where necessary, is generally removed in narrow, linear strips along existing highway rights-of-way.

Although there are some small patches of older forest along the WSDOT-managed roads that would be classified as suitable spotted owl nesting, roosting, and foraging habitat, there is generally an insufficient amount of suitable habitat in this landscape to support resident, territorial pairs. Spotted owls in western Washington occupy large territories that encompass thousands of acres of suitable habitat. Small patches of older forest, like those within the WSDOT action area in the Western Washington Lowlands province, currently only function as potential foraging or dispersal habitat for transient spotted owls dispersing across the landscape. This condition is likely to persist for the foreseeable future, as barred owl populations continue to increase in this landscape, and the amount of suitable habitat continues to decline from non-federal timber harvest.

Considering the current status of the spotted owl in the Western Washington Lowlands province, and the effects of the activities covered by the WSDOT programmatic consultation, we consider the potential for adverse effects to spotted owls to be discountable. Potential adverse effects to spotted owls typically associated with road construction or vegetation removal (e.g., disruption of nesting behavior or loss of suitable habitat within an occupied territory) are not anticipated; therefore, effects to spotted owls associated with the proposed action are considered to be insignificant and discountable. The effects to potential spotted owl habitat associated with WSDOT projects are considered to be insignificant because the limited scope of habitat impacts will not reduce the capacity of this landscape to support dispersing spotted owls. Effects to nesting spotted owls are considered to be discountable, because current data indicates there is an extremely low likelihood that resident, territorial spotted owls would be present within the WSDOT action area. Short-term disturbance or temporary displacement of non-nesting owls that may be dispersing through a WSDOT project area may occur. Such flush responses that occur away from an active nest site are considered to be insignificant, because the owls are simply moving away from a source of disturbance, rather than being forced to flush away from an active nest site.

Recommendation

Considering the full range of the effects associated with WSDOT programmatic road management activities and the current status of the spotted owl and spotted owl habitat in the Western Lowlands province, it is my recommendation that the entire province can be used as a “project screen” for projects covered under the WSDOT programmatic. That is, if a WSDOT programmatic project is located in the Western Washington Lowlands province, that project can be considered a “may affect, not likely to adversely affect” project regarding spotted owls, regardless of project timing or vegetation impacts.

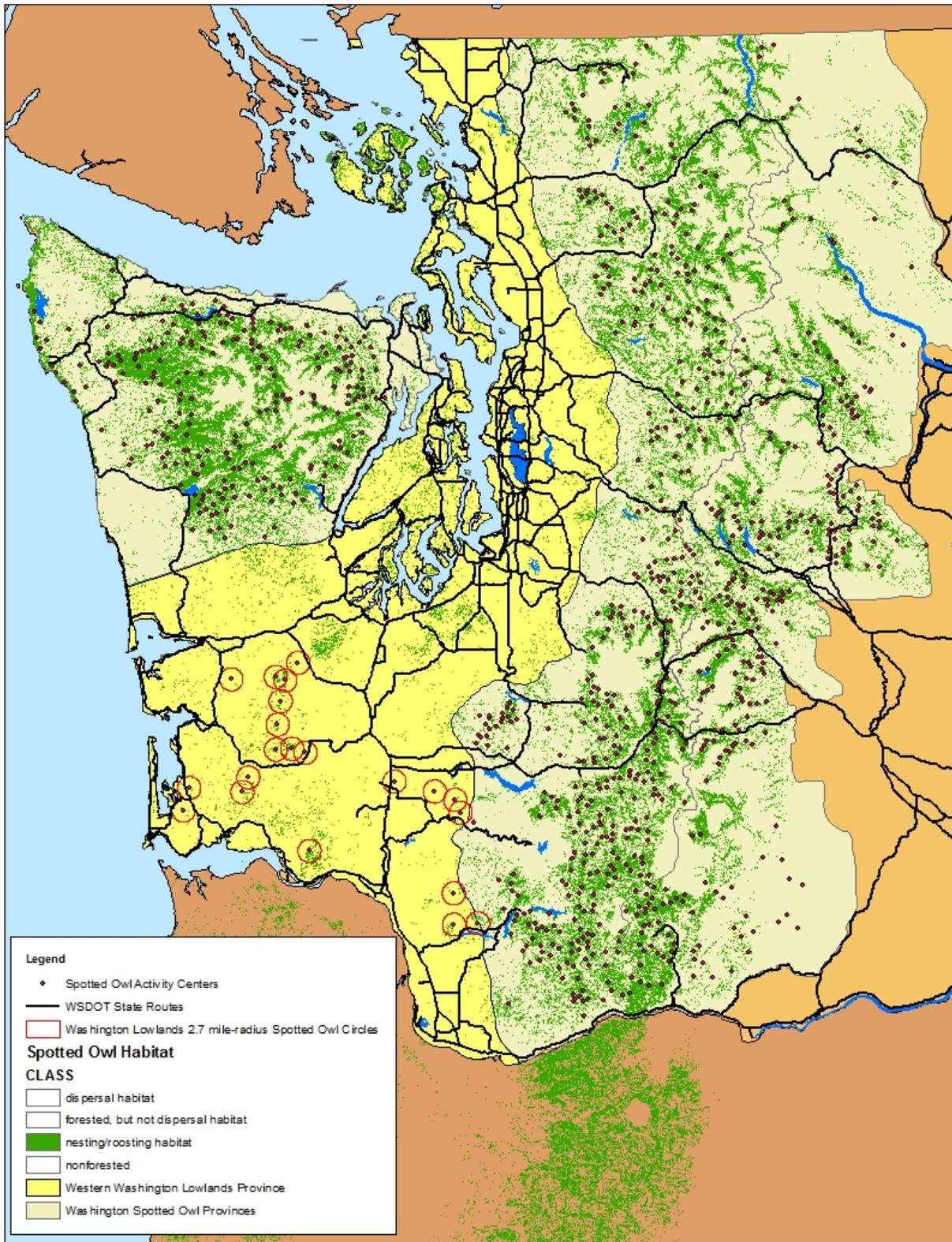


Figure 1. Distribution of potential spotted owl habitat and historic spotted owl territories in the Western Washington Lowlands province.

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Appendix I2

Northern Spotted Owl Site Specific Evaluation, Impacts, and Effect Determinations

WSDOT biologists will use a two-step approach when determining potential project effects to northern spotted owls.

The first step will be to determine if there is one or more suitable nest trees within 0.25 mile of activities other than blasting, and within 1 mile of blasting (project analysis area). The biologist will use GIS screening tools in combination with a site visit to evaluate the presence of suitable nest trees. If a suitable nest tree is present, the tree will be treated as if it were occupied during the defined nesting season (March 1-September 30). Note that in the following section on effect determinations, threshold guidance distances are from specific **suitable nest trees**, not the edge of an occupied stand.

If the suitable nest tree search results are negative, the biologist will determine if the stand is Foraging/Roosting, or Dispersal habitat.

If potential Nesting/Roosting/Foraging (NRF) habitat cannot be searched for suitable nest trees due to access restrictions, topography, or large stand size, the presence of a nest tree will be assumed and the threshold guidance distances will be measured from the edge of the stand.

In the second step, the biologist will use accepted threshold guidance that is directly applicable to WSDOT projects and make a project effect determination with supporting rationale. Details on both steps are provided below.

Site Specific Evaluation

The purpose of the site specific evaluation is to determine if a suitable nest tree is present within the project analysis area. This can be a complex process since northern spotted owls nest within a wide range of forest stands: there is variation in tree species, tree diameters, stand size, and stand composition.

Pre-Site Specific Evaluation Activities

GIS data and other materials can initially aid this analysis in the following ways:

- Some sites may be excluded immediately from further consideration based on lack of forest cover. Counties that do not have northern spotted owl on the USFWS county list will also be excluded;
- If the project is located within the Western Washington Lowlands, as mapped in *Effects Analysis for Spotted Owl in the Western Washington Lowlands Province* (USFWS 2014), the activity will qualify for informal coverage if suitable habitat is present.
- The biologist will evaluate the following data layers to help with the evaluation: potential owl habitat (Davis et al. 2011), northern spotted owl critical habitat and known northern

spotted owl territory sites¹. If critical habitat/known sites are within the project action area, a site evaluation will automatically be conducted;

- If there is no critical habitat/known site within the project action area, but there is a minimum of 5 contiguous acres of coniferous forest² cover that meet minimum criteria for Dispersal habitat or better within the project analysis area, the biologist will conduct the site evaluation. The project analysis area for spotted owls is either the project action area or the threshold distance areas, whichever is smaller. For example if the project action area extends out ½ mile due to noise, but the threshold distance of effects to spotted owls is ¼ mile due to the type of activity, only the habitat within the ¼ mile area should be evaluated rather than all of the habitat within the action area
- These stands may be outside the WSDOT right-of-way and property boundaries may need to be reviewed. WSDOT will not be able to obtain right-of-entry for adjacent private properties.
- If the biologist determines that any portion of the minimum 5-acre contiguous forested coniferous stand constitutes suitable nesting, roosting or foraging habitat within the project analysis area, the biologist will conduct the site visit. A site is considered to have suitable nesting habitat if a suitable nest tree or trees are within a minimum 5-acre contiguous patch with > 60 percent canopy closure and a multi-layered canopy. Trees within the conifer stand may be various diameters, but suitable nest trees are a minimum of 20 inches dbh, as explained below.
- Orthophotos of the project action area should be used to validate or check the validity of the GIS screening exercise.

Criteria for the Site Specific Evaluation

The pre-site specific evaluation activities may identify the need for the site evaluation. Alternatively, the biologist may identify the need for the site evaluation during the site visit. See **Figure 1** for a flowchart of the site specific disturbance evaluation process.

The site evaluation will characterize the following habitat conditions:

- Verify habitat typing from GIS analysis to determine if Nesting, Roosting, Foraging and/or Dispersal habitat is present in the project analysis area.
- If none of these habitat types are present, the project is NE for spotted owl.
- If one or more of these habitat types are present see guidance below for projects with noise and/or visual disturbance or for projects that will have habitat impacts or remove vegetation.

¹ Only spotted owl sites identified as WDFW Status 1 (reproductive pair), 2 (pair), or 3 (territorial resident) need to be considered.

² Contiguous coniferous-dominated forested area greater than five acres = A forested area dominated by conifers that is greater than or equal to 328 ft (100 m) from any other similar forested area(s), or is otherwise surrounded by non-habitat (i.e., rock, impervious surface, pasture, lake, etc.), and containing trees that are at least ½ the site potential tree height

For projects that will result in noise or visual disturbance:

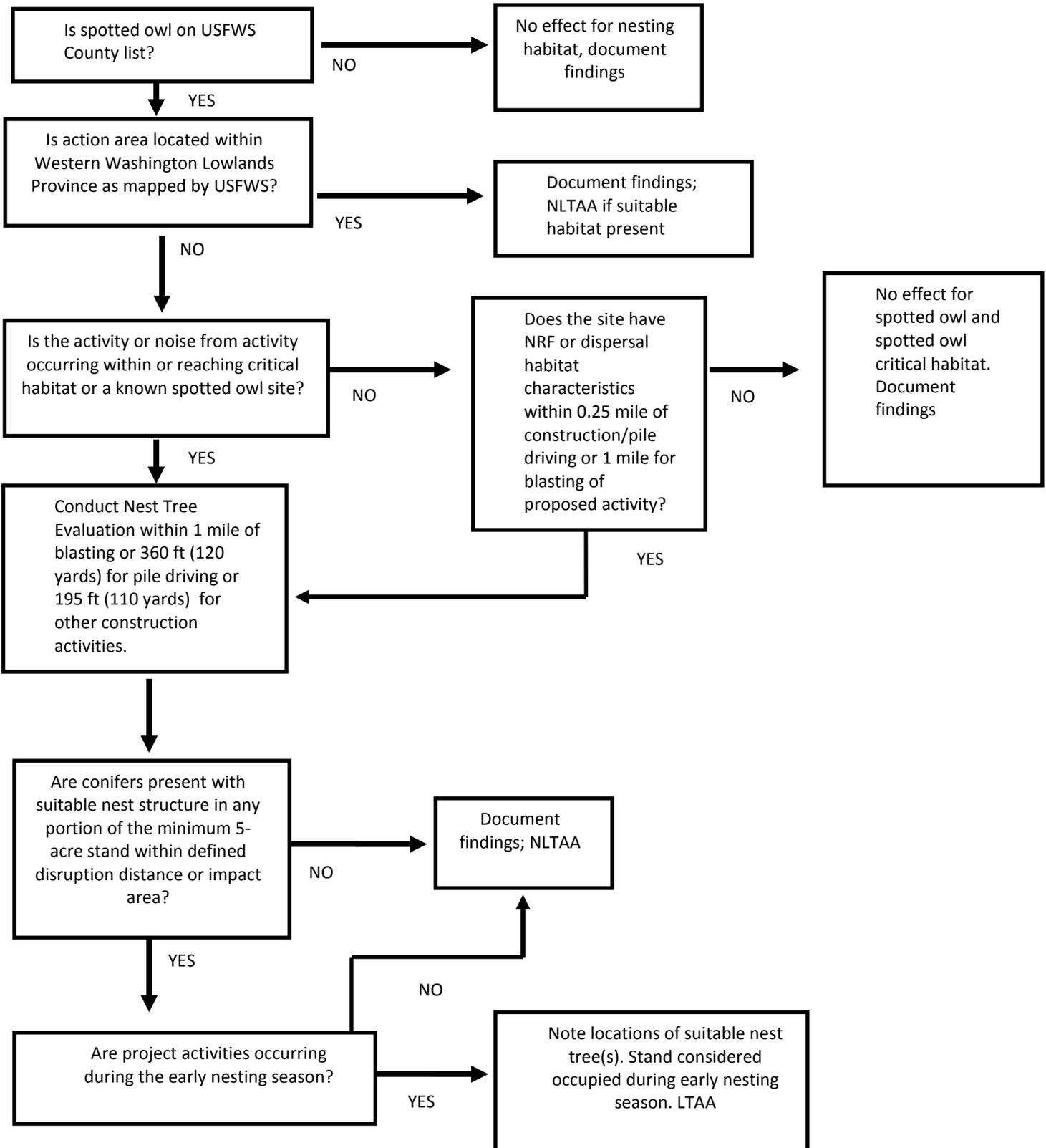
- If NRF habitat is present, the biologist will examine the minimum 5-acre conifer stand with a multi-level canopy and determine if there are suitable nest trees (individual trees \geq 20 inches dbh with potential nesting structure) within the project analysis area (0.25 mile for all activities except for blasting, and 1 mile for blasting).
- If the project timing coincides with spotted owl early³ nesting season and suitable nest trees are present within the defined disturbance distances for your activity, the project is LTAA spotted owl.
- If the project timing coincides with spotted owl early nesting season and suitable nest trees are not present within the defined disturbance distance for your activity, or if only Dispersal habitat occurs within the defined disturbance distances, the project is NLTAA for spotted owls.
- If the project timing is outside the spotted owl early nesting season, regardless of the presence of NRF and/or Dispersal habitat, the project is NLTAA spotted owls.

For projects that will result in habitat impacts or vegetation removal:

- For projects on non-federal lands that impact less than or equal to 0.25 acre of NRF habitat, and/or less than or equal to 0.50 acre of Dispersal habitat would warrant a NLTAA effect determination.
- For projects on non-federal lands that impact more than 0.25 acre of NRF habitat, and/or more than 0.50 acre of Dispersal habitat may warrant a NLTAA effect determination if habitat functions are not reduced and the habitat portion of the effect determination is approved by USFWS during early coordination.
- For projects with impacts on Federal lands, if NRF habitat impact is greater than 0.25 acre, and impact reduces habitat functions; and/or Dispersal habitat impact is greater than 0.50 acre, and dispersal function is reduced, a LTAA effect determination may be warranted. Projects creating canopy gaps (in suitable habitat) greater than 0.25 acre are generally excluded from coverage under this Opinion, unless coordinated with and approved by USFWS prior to submittal of the project notification form.
- For projects with impacts on non-Federal lands within both an owl circle and a Spotted Owl Special Emphasis Area (SOSEA), if NRF habitat impact is greater than 0.25 acre, and impact reduces habitat functions, a LTAA effect determination may be warranted. Projects creating canopy gaps (in suitable habitat) greater than 0.25 acre are generally excluded from coverage under this Opinion, unless coordinated with and approved by USFWS prior to submittal of the project notification form.
- For projects with impacts on non-Federal lands within both an owl circle and a SOSEA, if NRF habitat is present and habitat impact is less than or equal to 1 acre, a NLTAA may be warranted.
- For projects with impacts on non-Federal lands located outside of an owl circle, removal of Dispersal habitat, regardless of size, will warrant a NLTAA effect determination.

³ Early nesting is from March 1-July 15

Figure 1. Northern Spotted Owl Disturbance Evaluation Flowchart



Effect Determination Guidance

Northern spotted owl effect determination must take into account both disturbance and habitat effects. The **disturbance** portion of the effect determination guidance is provided below.

Northern Spotted Owl **Disturbance** Effect Determination Guidance is for NRF habitat*

Project Activity	No Effect Mar 1– Sep 30	NLTAA “may affect” disturbance distance Mar 1-Sep 30	LTAA early nesting season disruption distance Mar 1–Jul 15	LTAA late nesting season disruption distance Jul 16–Sep 30	LTAA direct injury and/or mortality Mar 1-Sep 30
Installing and Repairing Signs, Monitoring Devices, and Utilities	>0.25 mile	≤ 0.25 mile	NA	NA***	NA
Heavy Equipment Operation (including chain saws)	>0.25 mile	>195 ft (110 yards) to 0.25 mile	≤ 195 ft (110 yards)	NA***	NA
Pile Driving	>0.25 mile	360 ft (120 yards) to 0.25 mile	≤ 360 ft (120 yards)	NA***	≤ 15 feet (5 yards) (injury)
Blasting	>1 mile	0.25 mile to 1 mile	≤ 0.25 mile	NA***	≤ 300 ft (100 yards) (injury)
Short duration activities		Certain activities** that are within or adjacent to suitable spotted owl habitat may qualify for informal effects regardless of distance to activity from suitable habitat			

* On the Westside, this disturbance guidance applies to NRF habitat, disturbance to dispersal habitat is a NLTAA. Follow the table for the Eastside as there may be legacy habitat left in Dispersal habitat that is used for NRF.

**The following activities may qualify for informal coverage if they take less than 3 days from start to finish, and if approved by USFWS during Early Coordination

- Geotechnical investigations
- Sign/guardrail installation with no pile driving
- Vegetation maintenance, non-chainsaw, non-habitat removal
- Striping/delineation
- Oil distribution truck or trailer

***During the late nesting season, disturbance effects are considered discountable; therefore, they qualify for informal coverage.

Effect Determination Guidance for Habitat Impacts

Removal of upland, riparian, and wetland vegetation may affect NRF habitat, and/or Dispersal habitat. The guidance and flowchart (Figure 2) will help the biologist in making the **habitat** portion of effect determinations, but final overall determinations will be made based on both disturbance and habitat effects, project specific factors and specific minimization measures. Note that for habitat effects, you must determine if the project is on federal or non-federal land, and if non-federal, if the activity is within an owl circle located within an owl special emphasis area (SOSEA*). All project activities must be considered to make the correct effect determination.

* Spotted Owl Special Emphasis Areas: From 1992-1996, the [State Forest Practices Board](#) entered into a stakeholder process with tribes, environmentalists, and landowners to develop a cooperative strategy for non-federal forestland to protect the spotted owl. In order to complement the federal recovery and conservation strategy, the Board identified more than 2 million acres of forest called SOSEAs. Most of this land, about 1.2 million acres, overlaps with state, private, and federal lands already managed under habitat conservation or federal management plans. Of the remaining 825,000 acres, the Board identified the primary function of these forests as dispersal, nesting or roosting habitat for the owl. The State finalized its owl rule in 1996, which identified ten SOSEAs to complement the protection provided by the Northwest Forest Plan.

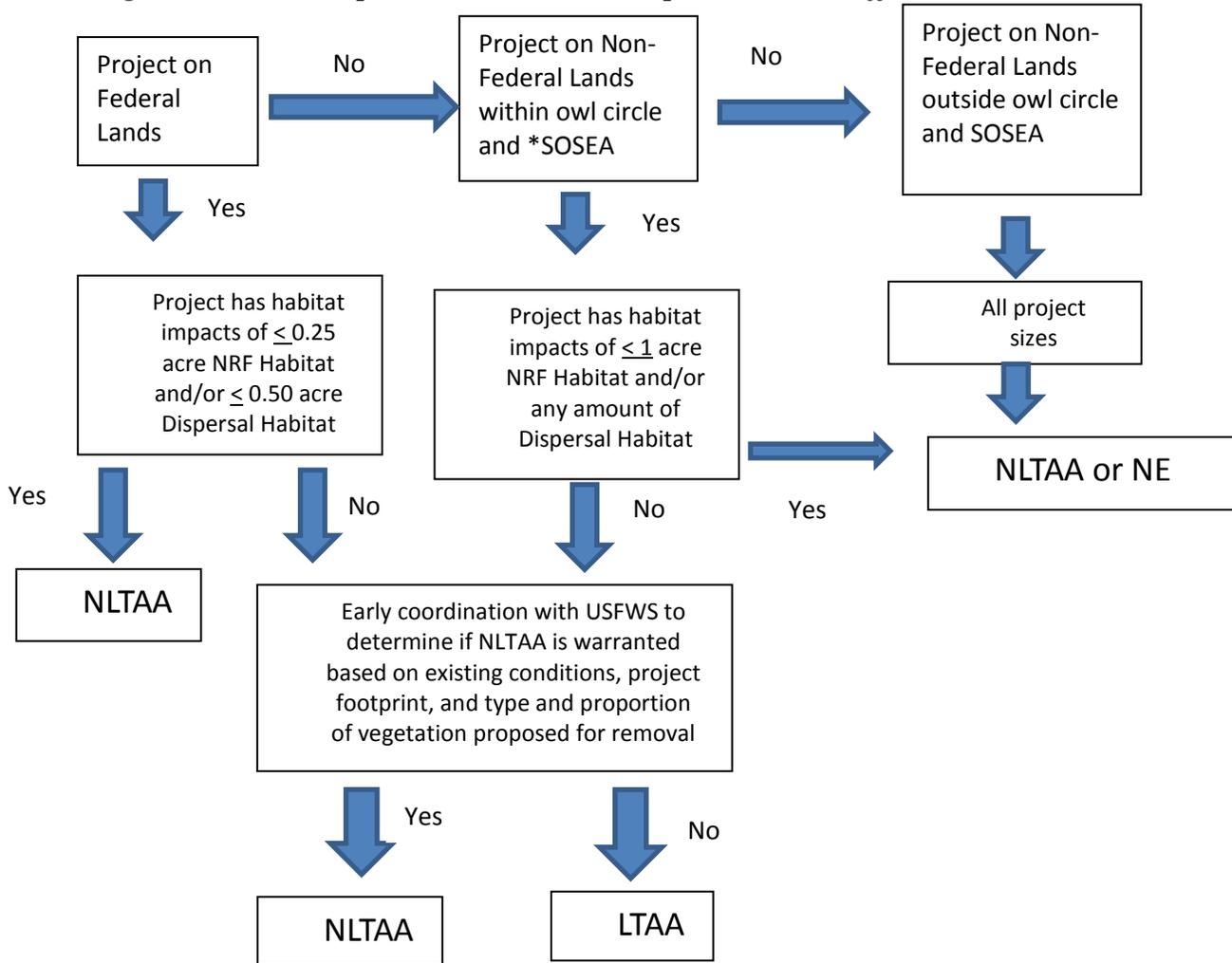
Northern Spotted Owl **Habitat** Effect Determination Guidance

Location	Project Activity	No Effect	May Affect, Not Likely to Adversely Affect	Likely to Adversely Affect
Federal Lands	<p>Upland Vegetation Removal and Management</p> <p>Riparian and Wetland Vegetation Removal and Management</p>	<p>Spotted owl is not on County list; or</p> <p>Spotted owl is on County list and NRF and Dispersal habitat are not impacted.</p>	<p>NRF habitat is present and habitat impact is ≤ 0.25 acre; or</p> <p>NRF habitat impact is > 0.25 acre but does not reduce habitat functions and is approved by USFWS during early coordination*; and/or</p> <p>Dispersal habitat is present and habitat impact is ≤ 0.50 acre; or</p> <p>Dispersal habitat impact is > 0.50 acre but does not reduce habitat function and is approved by USFWS during early coordination.</p>	<p>NRF habitat impact is > 0.25 acre, and impact reduces habitat functions; or</p> <p>Dispersal habitat impact is > 0.50 acre, and dispersal function is reduced.</p>

Location	Project Activity	No Effect	May Affect, Not Likely to Adversely Affect	Likely to Adversely Affect
Non-Federal Lands within Owl Circle and within SOSEA	Upland Vegetation Removal and Management Riparian and Wetland Vegetation Removal and Management	Spotted owl is not on County list; or Spotted owl is on County list and NRF and Dispersal habitat are not impacted.	NRF habitat is present and habitat impact is ≤ 1 acre; or NRF habitat impact is > 1 acre but does not reduce habitat functions and is approved by USFWS during early coordination*; and/or Removal of Dispersal habitat regardless of size.	NRF habitat impact is > 0.25 acre, and impact reduces habitat functions
Non-Federal Lands outside Owl Circle and/or SOSEA	Upland Vegetation Removal and Management Riparian and Wetland Vegetation Removal and Management	Spotted owl is not on County list; or Spotted owl is on County list and NRF and Dispersal habitat are not impacted.	Removal of NRF or Dispersal habitat is NLAA, regardless of project size	NA

*Note: Examples of vegetation removal that exceed the acreage amounts that may qualify as a NLTAA include removal of non-native riparian invasive species (blackberry, reed canary grass, Japanese knotweed, etc.); narrow, linear vegetation removal along existing state highways that exceed guidance acreage may also warrant a NLTAA for the effects to habitat portion of the effect determination. Removal of coniferous trees 11" DBH or greater that exceed the acreage amounts may warrant a LTAA.

Figure 2. Northern Spotted Owl NRF and Dispersal Habitat Effect Determination Flowchart



*SOSEA is spotted owl special emphasis area

Effect Determination Guidance for Designated Critical Habitat

Proposed projects that occur within or adjacent to designated critical habitat and result in removal of vegetation may affect a critical habitat unit. However, most projects involve removal (clearing and/or grubbing) of vegetation located adjacent to an existing transportation corridor and will not likely alter the PCEs. Projects that do not alter the PCEs will not adversely affect the critical habitat unit.

Presence of NRF or Dispersal habitat within a critical habitat unit will be evaluated by a biologist. A biologist will also evaluate trees 20 inches dbh and greater that are identified as removals to determine if they are potential nesting trees. Projects that cannot meet one or more of the conditions described below will either prepare an individual BA or use the PBA as a reference document for informal consultation.

The regions contain all or part of 13 designated critical habitat subunits in four units. A total of 2,918,267 acres of critical habitat have been designated in Washington. Portions of US 2, SR 12, SR 14, SR 20, I-90, US 97, US 101, SR 113, SR 119, SR 123, SR 131, SR 141, SR 207, SR 410, SR 508, SR 542, SR 903, and SR 906, are located within or near designated critical habitat for northern spotted owls. Northern spotted owl critical habitat is not designated in the WSDOT Eastern Region, or the counties of Benton, Franklin, Walla Walla, Columbia, Garfield, Asotin, Douglas, Pacific, Clark, Wahkiakum, Island, Kitsap, and San Juan.

Northern Spotted Owl **Critical Habitat** Effect Determination Guidance

Project Activity	No Effect	May Affect, Not Likely to Adversely Affect	Likely to Adversely Affect
<p>Upland Vegetation Removal and Management</p> <p>Riparian and Wetland Vegetation Removal and Management</p>	<p>Activities that do not remove vegetation within critical habitat or trees > 14 inches dbh adjacent to critical habitat if suitable nesting habitat (PCE 2) is present. Adjacent is defined as ½ the height of the maximum site potential tree</p>	<p>NRF habitat (PCEs 2 and 3) is present and habitat impact ≤ 0.25 acre within critical habitat; or</p> <p>NRF habitat (PCEs 2 and 3) impact is > 0.25 acre within critical habitat but does not reduce habitat functions and is approved by USFWS during early coordination*; and/or</p> <p>Dispersal habitat (PCE 4) is present within critical habitat and habitat impact is ≤ 0.50 acre; or</p> <p>Dispersal habitat (PCE 4) impact is > 0.50 acre within critical habitat but does not reduce habitat function and is approved by USFWS during early coordination.</p> <p>Removal of non-NRF or dispersal habitat.</p> <p>Single hazard tree removal of non-potential nest trees 19 inches dbh and greater from critical habitat.</p>	<p>NRF habitat (PCEs 2 and 3) impact is > 0.25 acre within critical habitat, and impact reduces habitat functions; or</p> <p>Dispersal habitat (PCE 4) impact is > 0.50 acre within critical habitat, and dispersal function is reduced.</p> <p>Removal and permanent conversion of non-NRF or dispersal habitat to non-habitat – e.g. pavement.</p>

Table 1. State and Federal Roads that are within 0.25 mile of Spotted Owl Critical Habitat

State Route	Mile Post Begin	Mile Post End
002	82.25	84.95
002	55.45	61.96
002	63.07	71.51
002	48.36	48.42
002	85.49	85.88
002	71.85	80.16
002	87.36	99.14
002	80.60	81.16
002	39.85	41.03
002	47.89	48.13
002	43.11	44.52
002	86.76	87.35
012	177.12	178.06
012	123.80	126.00
012	115.22	116.44
012	126.21	126.41
012	173.41	176.39
012	119.56	122.23
012	134.89	151.35
012	126.81	127.25
012	133.59	134.83
012	127.48	127.65
012	132.58	132.91
012	128.08	129.34
012	154.35	172.91
014	36.11	37.14
014	50.62	56.81
020	139.00	153.29
020	101.13	102.66
020	166.71	179.59
020	182.92	183.30
020	182.49	182.92
090	69.41	69.73
090	73.97	74.15
090	60.37	68.21
090	51.09	51.23
090	52.27	53.41
090	47.63	48.91

State Route	Mile Post Begin	Mile Post End
090	55.28	59.67
097	178.21	179.25
097	179.64	179.88
097	150.70	171.74
097	171.75	176.68
097	180.26	181.01
097	177.80	178.09
097	182.58	182.85
101	234.39	237.95
101	123.00	125.90
101	303.65	305.62
101	216.02	219.93
101	117.82	119.35
101	128.61	131.09
101	301.58	302.69
101	209.46	215.90
101	119.98	122.05
101	297.64	301.06
113	3.51	5.30
113	5.39	6.34
113	1.80	3.10
119	8.95	10.93
123	0.00	2.86
131	0.00	0.27
141	28.95	29.30
207	0.00	1.61
207	1.63	4.38
410	101.74	101.97
410	76.87	100.38
410	47.17	57.85
508	22.47	23.29
542	54.60	54.65
542	33.83	54.68
542	54.69	54.97
903	9.22	10.06
906	2.55	2.59
906	0.07	1.07
906	1.62	2.64