Lewis River Hydroelectric Projects

FERC Project Nos. 935, 2071, 2111, 2213

Wildlife Habitat Management Plan

Annual Report 2012

Annual Progress Report for Operation Phase 2012

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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ACRONYMS & ABBREVIATIONS

To enhance readability the acronyms and abbreviations use has been minimized in this document. However, for longer terms that are frequently used throughout, as well as certain units of measurement, the following acronyms and abbreviations have been used.

ac	acre
BPA	Bonneville Power Administration
cm	centimeter
dbh	diameter at breast height
FERC	Federal Energy Regulatory Commission
ft	foot or feet
GIS	Geographic Information System
ha	hectare
in.	inch
km	kilometer
m	meter
mi.	mile
PCT	Pre-Commercial Thinning
ROW	Right-of-way
TCC	Terrestrial Coordination Committee
THA	timber harvest area
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WHMP	Wildlife Habitat Management Plan

1.0 Introduction

Article 403 of the Merwin, Yale, and Swift No. 1 licenses and Section 14.2.6 of the Settlement Agreement directs PacifiCorp to prepare and file with the Federal Energy Regulatory Commission (FERC) a detailed Annual Report (FERC 2008a, 2008b, and 2008c, PacifiCorp et al. 2004). A summary of the terrestrial protection, mitigation, and enhancement measures that were implemented between January 1 and December 31, 2012 are included in this report and have been prepared in consultation with the Terrestrial Coordination Committee (TCC).

Figure 1. West Fork Swift Creek on PacifiCorp lands acquired in 2012

2.0 Administration

Management actions completed in accordance with Lewis River Wildlife Habitat Management Plan (WHMP) Chapter 3.0 Administration are described below (PacifiCorp 2008). Appendix A provides a Gantt chart that shows the schedule that compares the planned date the task was to occur to the actual date the task occurred and compares the proposed 2012 budget to the actual budget.

2.1 Terrestrial Coordination Committee

The TCC met monthly or bi-monthly by either teleconference or in person.

2.2 Annual Report

TCC members were provided a draft of this report on March 5, 2013 to review and provide comments by April 5, 2013. Either these comments were incorporated into this report or an explanation has been provided and included in the report Appendix B. In accordance with the Settlement Agreement 14.2.6, this report was submitted to the FERC no later than 30 days, on April 12, 2013 after the close of the TCC's comment period.

2.3 Annual Plan

The 2012 Annual Plan was submitted to the TCC for 30-day review on March 7, 2012. The TCC comments were addressed and the final copy of the 2012 Annual Plan was submitted to FERC on April 12, 2012. FERC acknowledged receiving these reports on April 16, 2012.

2.4 Restoration Plans

No WHMP lands were identified as being significantly damaged by anthropogenic processes in 2011; therefore no restoration plans were required in 2012.

3.0 Old-growth Habitat Management

Inspections and management actions completed in accordance with Lewis River WHMP Chapter 4.0 Old-Growth Habitat Management are described below and in Appendix A (PacifiCorp 2008).

3.1 Inspections

Old-growth aerial surveys were conducted concurrently with the aerial osprey (*Pandion haliaetus*) and bald eagle (*Haliaeetus leucocephalus*) nest surveys on April 18 and June 20, 2012 and no areas of blow-down, mass wasting, disease or insects were detected.

3.2 Management Actions

Old-growth connectivity evaluation began in 2012 by completing a Geographic Information System (GIS) model that provided a repeatable method that identified mature stands that are more critical to old-growth connectivity than other stands. The model is based on the stand size, proximity to old-growth, a the stands contribution to spotted owl and other raptor habitats, and the type and amount of riparian buffers within the stand. This model will be presented to the TCC for approval in 2013. This task was conducted later than expected, but since this portion of the task did not include field work it was not time sensitive.

Other old-growth management included removing and stump treating holly trees (*Ilex aquifolium*) in Old-growth stand 7-1 on September 13, 2012 (Appendix G) and creating 2 Douglas-fir (*Pseudotsuga menziesii*) snags >40 in. diameter at breast height (dbh) in Old-growth stand 21-1 on October 22, 2012.

4.0 Wetland Habitat Management

Inspections and management actions were completed in accordance with Lewis River WHMP Chapter 5.0 Wetland Habitat Management and are described below and in Appendix A.

4.1 Inspections

The annual wetland inspections were conducted between May 31 and June 1, 2012. The inspections noted the water depth, cover:water ratio, vegetation cover, wildlife, snags and down wood, water level, condition of the dike and outflow structure, and presence of invasive plant species. Overall the wetlands are in good condition, but invasive plant species were observed at almost every wetland. In particular, reed canarygrass (*Phalaris arundinacea*) is a large concern because it is established at many of the wetlands and is continuing to spread. The Frasier Pond rock crib dam had debris on top of it that was removed and will continue to be monitored in annual inspections. The surviving plants planted along Frasier Creek below the diversion are beginning to thrive and sprouting new plants this year.

Initial evaluations continued in 2012 and were completed for only a couple of the WHMP wetlands. This process is fairly time consuming, so not as many wetlands as expected were completed in 2012. Most of the Beaver Bay wetland was delineated by a consultant for a proposed recreational trail project and will be included in the analysis.

4.2 Management Actions

The following management actions were completed as scheduled at the wetland habitat management areas in 2012 (Appendix A):

- Stoplogs were removed and replaced as scheduled for bullfrog control and for high winter flows.
- The work completed in 2010 at Frasier Creek Diversion and the diversion channel between Cedar Grove and Chestnut Ponds has largely been successful and we had consistent flows to Chestnut Pond that remained through June.
- The Pumphouse Pond dike's erosion continued to be monitored in 2012 and it appears to have stopped.

5.0 Riparian Habitat Management

Inspections and management actions were completed in accordance with Lewis River WHMP Chapter 6.0 Riparian Habitat Management and are described below and in Appendix A.

5.1 Inspections

The Riparian Mixed Forest Stand Evaluations began in 2010. Of the 34 stands identified as Riparian Mixed Forest, 12 were omitted because they were less than one acre (0.4 ha) in size and two were omitted because they are located within a Secondary Management Area where creating snags may pose a potential hazard. To date 13 of the 20 stands have been evaluated and this should be completed in 2013 and will expand to include the newly acquired lands.

5.2 Management Actions

The following management actions were completed as necessary for riparian habitat management areas in 2012:

- The 2012 timber harvest areas (THAs) in Management Units 6, 15 and 25 had part of their boundary's adjacent to streams and were buffered accordingly.
- In Management Unit 15, the pre-existing gated access road paralleled a seasonal non fish-bearing stream and was inside the 100-foot (30.5 m) WHMP buffer. A new access road was built outside the buffer in association with a new logging area (THA 121547). The old road was torn out to recreate the appropriate buffer and then grass seeded. The area is scheduled for planting with conifer and alder in 2013. The old gate was left in place until the buffer matures enough to prevent access.
- The TCC reviewed 2012 forest management in Management Unit 25 and discussed a riparian buffer associated with an existing access road parallel a stream and the harvest boundary edge. In this situation, the road (within the buffer) is an important access for project operations and couldn't reasonably be moved. Over-story trees adjacent to the road consisted of decaying maple, alder and cottonwood and for several years were often falling across the road. These trees also formed part of the stream buffer. To accommodate safety and partially address stream buffer improvements, the TCC agreed to remove the cottonwoods and alders that represented the greatest hazard. During replanting of the harvest area in 2013, shade tolerant trees will be replanted.
- One Water Type Modification (removing or adding segments of streams) was submitted and approved by the Washington Department of Natural Resources (WDNR) in 2012 (Appendix C). This modification was based on physical characteristics observed by walking the stream adjacent THA 121547 and remapping it in terms of location and where the perennial water started.

6.0 Shrubland and Habitat Management

Inspections and management actions completed in accordance with Lewis River Wildlife Habitat Management Plan (WHMP) Chapter 7.0 Shrubland Habitat Management are described below and in Appendix A.

6.1 Inspections

Shrubland 3-2a and 3-2b were inspected on September 19, 2012. These shrublands look good but are

6.2 Management Actions

A report detailing the findings and recommendations from the 2009 initial inspections was finalized and approved by the TCC on May 9, 2012 and the vegetation cover typing was modified to be consistent with the report's findings.

Additional management actions that occurred were heavy pruning to reduce the density of shrubs in the southwest corner of the Shrubland 3-2a and southeast corner of Shrubland 3-2b in December. In addition one snag and two large Douglas-fir trees were pruned to increase light in Shrubland 3-2a, two large Douglas-firs were pruned in Shrubland 3-2b, and two snags were created in Shrubland 6-1d associated with adjacent logging to reduce hazard to the transmission ROW and increase light to the shrubland.

7.0 Farmland, Idle Fields and Meadow Habitat Management

Inspections and management actions completed in accordance with Lewis River WHMP Chapter 8.0 Farmland, Idle Fields, and Meadows Habitat Management are described below (Appendix A).

7.1 Inspections

7.1.1 Annual Inspections

The annual spring inspections for the farmland, idle fields and meadows were conducted between May 1 and May 10, 2012 and the annual fall inspections were conducted between October 2 and 13, 2012. The inspections were conducted only at farmlands, idle areas, and meadows that are actively managed, which currently included all of the Saddle Dam farm fields, idle areas, and the Reese, Hamm 1-5, Upper and Lower Winter Creek, Swift Warehouse, Pioneer, Rhododendron meadows and all meadows managed under the Merwin Wildlife Habitat Management Program (PacifiCorp 1998). The inspections evaluate forage quality, invasive plant species, visual screen and potential disturbance. Forage quality for the farmland fields is evaluated more thoroughly by using the Daubenmire method and the table below shows the 2012 results. Forms are available upon request.

Table 1. 2012 Percent cover for Saddle Dam Farm fields.

Field Number	Spring			Fall		
	Legumes	Grasses	Bare Ground/ Mosses	Legumes	Grasses	Bare Ground/ Mosses
Field 1	22.5	68.3	9.5	8.3	87.3	2.5
Field 2	12.7	64.5	3.7	15.0	82.0	2.8
Field 3	22.8	61.7	5.7	7.2	86.0	2.8
Field 4	28.7	53.0	5.5	10.0	84.7	2.8
Field 5	32.7	53.3	5.3	23.0	81.1	2.8

Between the spring and fall inspections there was an overall decline in legumes in the fields, except field 2, an increase in grass percent cover, and a decline in bare ground/mosses. In comparison to 2011 percent cover there was an overall increase in legumes in the spring and significant decrease in legumes in the fall. This may be contributed to the extremely dry weather that persisted the entire month of September and most of October.

The report summarizing the findings and recommendations from the 2010 initial inspection was not completed as scheduled in 2012 due to time constraints and is scheduled to be completed in 2013.

7.2 Management Actions

The following management actions were completed as scheduled at farmland, idle areas, and meadows in 2012 (Appendix A).

7.2.1 Mowing

The spring mowing was conducted between June 16 and June 20, 2012 at each of the farmland fields, This was delayed due to the wet conditions that persisted until late spring. Hamm meadows 1, 2, and 3 were scheduled to be mowed in the spring to reduce the thatch, however because of extensive elk grazing and the delayed growing conditions it was postpone.

Annual fall mowing was completed between August 15 to September 5 at each of the farmland fields and the actively managed meadows:

- Upper McKee
- Speelyai
- Upper Hanley-Curry
- Upper Winter Creek
- Lower Winter Creek
- Reese
- Lower McKee
- Bridge
- Lower Hanley-Curry
- Lower Winter Creek
- Hamm Meadows 1, 2 and 3

7.2.2 Soil Testing

Soil samples were collected between August 2 and 8, 2012 for analysis from farm fields 3, 4, and 5 and the following meadows:

- Buncombe Hollow
- Upper Winter Creek
- Lower Winter Creek
- Upper Hanley-Curry
- Lower Hanley-Curry
- Reese
- Swift Warehouse
- Rhododendron
- Pioneer
- Hamm Meadows 4 and 5.

The Lewis River WHMP soil standards and results of the soil analysis are presented below in Table 2 (PacifiCorp 2008). Some fields and meadows were not tested for nitrogen (N) this year due to a miscommunication between the contractor that submitted the soils and the laboratory. Although elements that are consistently below WHMP standards continue to be below, there were no significant changes in element values in the fields/meadows soil results.

Table 2. 2012 Farmland and Meadow Soil Sample Results

Area	pH	$N0_3$ (ppm)	P (ppm)	K (ppm)	Ca (meq/100g)	Mg (meq/100g)	B (ppm)
Lewis River WHMP Soil Standards	≥ 5.4 grasses ≥ 5.8 legumes	10-30	15-30	125-200	5-10	0.8-1.5	0.7-2.0
Farmland field 3	6.2	11	9	140	10.3	1.1	0.3
Farmland field 4	6.2	11	9	63	7.3	0.9	0.3
Farmland field 5	6.4		11	96	11.8	2.8	0.5
Buncombe Hollow	5.3		8.0	269.0	5.6	1.2	0.1
Upper Winter Creek	5.4		18.0	211.0	5.9	1.3	0.1
Lower Winter Creek	5.5	9.0	12.0	77.0	0.9	0.2	0.3
Pioneer	5.4		32.0	38.0	1.0	0.3	0.2
Reese	5.3		14.0	77.0	1.2	0.4	0.1
Hamm Meadow 5	5.4		8.0	219.00	4.1	0.9	0.1
Hamm Meadow 4	5.5		10.0	117.0	6.5	1.2	0.1
Upper Hanley-Curry	5.5	9.0	23.0	172.0	5.8	1.2	0.1
Lower Hanley-Curry	5.5	18.0	38.0	207.0	8.6	1.3	0.2
Swift Warehouse	5.7	12.0	60.0	74.0	2.7	0.6	0.3
Rhododendron (Swift Village)	5.4		41.0	105.0	2.0	0.5	0.2

7.2.3 Fertilization and Lime

The application rates of fertilizer and/or lime are based on soil sample results and were applied between September 15 and October 1, 2012. Because nitrogen levels have been declining in several of the fields and meadows, the fertilizer rate was increased to 2 gallons of Aggrand 4-3-3 liquid natural fertilizer mixed with 40 gallons of water per acre for every field and meadow. Only fields and meadows that soil samples showed decline in pH and imbalance in calcium: magnesium ratio receive a lime application. The following table provides fertilizer rates for 2012.

Table 3. 2012 Farmland and Meadow Fertilizer Application Rates

Field	Acres	Amount of 4-3-3 Aggrand applied at 2 gallons per acre	Amount of bone meal lime applied at 1 gallon per acre	Amount of water at 40 gallons per acre
Bridge	1.3	2.6	0.0	52
Buncombe Hollow	0.5	1.0	0.5	20
Hamm #1	0.5	1.0	0.5	20
Hamm #2	5.9	11.8	0.0	236
Hamm #3	6.4	12.8	0.0	256
Hamm #4	2.9	5.8	0.0	116
Hamm #5	2.9	5.8	0.0	116
Upper Hanley-Curry	8.0	16	0.0	320
Lower Hanley-Curry	6.0	12.0	0.0	480
Upper McKee	3.0	6.0	0.0	120
Lower McKee	3.0	6.0	0.0	120
Reese	3.9	7.8	3.9	156
Rhododendron	2.2	4.4	2.2	88

Speelyai	3.0	6.0	0.0	120

Table 3. 2012 Farmland and Meadow soil sample results (continued)

Field	Acres	Amount of 4-3-3 Aggrand applied at 2 gallons per acre	Amount of bone meal lime applied at 1 gallon per acre	Amount of water at 40 gallons per acre
Swift Warehouse	2.7	5.4	2.7	108
Unit 26	0.6	1.2	0.6	24
Upper Winter Creek	3.7	7.4	3.7	148
Lower Winter Creek	4.0	8.0	0.0	160
Saddle Dam Field 1	2.8	5.6	0.0	112
Saddle Dam Field 2	8.2	16.4	0.0	328
Saddle Dam Field 3	9.1	18.2	0.0	364
Saddle Dam Field 4	5.2	10.4	0.0	208
Saddle Dam Field 5	3.5	7.0	0.0	140
Total	**89.3**	**178.6**	**14.1**	**3812**

7.2.4 Forage Restoration

Several management actions occurred to increase or maintain forage quality in the existing fields and meadows, including invasive species control and top seeding. Invasive plant species were treated at the following meadows and fields and are shown in Appendix G.

- Saddle Dam Farmland fields 1, 2, and 5 were treated for Canada thistle (*Circium arvense*)
- Hamm meadows 1-3 were spot treated for scotch broom, Himalayan blackberry, and reed canarygrass.
- Hamm meadows 4 and 5 were treated for scotch broom and Himalayan blackberry.
- Reese meadow was treated with herbicide to control scotch broom and Himalayan blackberry in June.
- Swift warehouse meadow was treated with herbicide to control scotch broom, Himalayan blackberry, Japanese knotweed, and red alder saplings.
- Swift warehouse meadow had a hummocky topography that made mowing difficult. A small bulldozer was used to smooth the top soils. All bare ground spots were top seeded with the same seed mix used in Unit 25 timber harvest areas in October.
- Buncombe Hollow meadow was expanded from 0.5 to 2.0 acres in size. Several red alder trees were removed as part of the 2012 Unit 15 timber harvest activities. The stumps were removed and ground smoothed to the best of the equipment's abilities. In addition, the area was treated for snowberry, scotch broom, and Himalayan blackberry in August 20, 2012.

7.2.5 Access Control and Disturbance Reduction

Saddle Dam farm hedgerows had several management action to improve the condition and diversity. Shrubs that grown well beyond their exclosures had the wiring removed, non-native English hawthorn (*Crataegus monogyna*) were removed or reduced in height where possible while still retaining visual screen, and adjacent Douglas-fir were pruned to allow more light to the shrubs.

Some excess Douglas-fir trees seedlings were planted along the property line in the northeast corner of Hamm Meadow 2.

The Mole Terminator was contracted in 2012 to perform mole eradication services at Saddle Dam farm using a Rodenator®. The work was performed as weather permitted between April 4 and April 11. Although this appeared to reduce number of mole mounds, reducing bare soils and an invasive plant species in the fields, the moles persist in the fields.

Figure 2: Hamm Meadow 5 in 2010

Figure 3: Hamm Meadow 5 in 2012

8.0 Orchard Management

Inspections and management actions completed in accordance with Lewis River WHMP Chapter 9.0 Orchard Management are described below (Appendix A).

8.1 Inspections

The annual winter and summer inspections occurred as scheduled in the WHMP. The winter inspections occurred between January 31 and February 13 at the following locations:

- Buncombe Hollow
- Speelyai Bay
- Winter Creek
- ROW 2/19-3/19

The summer inspection occurred between September 5 and 18 at the same orchards that were inspected in the winter and at the orchards that are schedule to be pruned in 2013: Saddle Dam #1, Saddle Dam #3, and Saddle Dam Road. Every tree within the Buncombe hollow, Speelyai Bay, Saddle Dam #1, Saddle Dam #3, and Saddle Dam Road were GPS and marked during the inspections.

8.2 Management Actions

The following management actions were completed as scheduled at the orchard management areas in 2012 (Appendix A):

8.2.1 Pruning

Pruning activities occurred between March 7 and March 31 during which the following trees were pruned at each orchard:

- Buncombe Hollow 26 trees pruned
- Speelyai Bay had 7 trees pruned

8.2.2 Vegetation Control

Buncombe Hollow orchard had a large black walnut tree come down that crushed 3 orchard trees. This tree was bucked up, piled and removed so the orchard could be mowed. Upon inspecting the other walnut tree it was determined the tree was split to the base and also needed to be removed. Buncombe Hollow orchard was mowed between August 16 and September 5.

8.2.3 Plantings

Speelyai Bay was planted with three additional Sparten apple trees to replace trees that had died. Buncombe Hollow also had three additional Sparten and Winesap apple trees planted to replace trees that had died.

The 4 orchard trees that are on Washington Department of Natural Resources land between Speelyai Line 5/11-6/11 were replaced with a semi-dwarf red spy and liberty apple trees and 2 red Bartlett's pears in the area between Upper and Lower Winter Creek meadows. There are two existing homestead pear trees in Upper Winter Creek Meadow that receive considerable browse. Therefore it was believed this area would be an excellent area to expand the orchard. These trees were inspected in late summer and apples appear to be doing fine, but the pears did not survive.

8.2.3 Animal Damage Control

Several exclosures were repaired or had the weed matting replaced. Two trees in Buncombe Hollow and two trees in Speelyai Bay had their exclosures removed because the tree had grown in height 2 times the height of the exclosures

8.2.4 Supplemental Watering

Temperatures rarely were above 90 degrees during the summer, therefore there was no need for supplemental watering on new plantings.

Figure 4: Red-breasted sapsucker foraging on an orchard tree in February

9.0 Transmission Line Right-of-Way Habitat Management

Inspections and management actions completed in accordance with Lewis River Wildlife WHMP Chapter 10.0 Transmission Line Right-of-Way Management are described below (Appendix A).

9.1 Inspections

9.1.1 Annual Inspection

The annual inspections were completed at all transmission line Right-of-Way (ROW) spans on WHMP lands. These inspections were not completed within the scheduled dates, but were completed as soon as possible.

9.1.2 Post-Treatment Evaluation

Hazard tree work completed in 2012 was along the Speelyai line 1/11-3/11 and 6/12 and 1/13 structures. All red alders and conifer trees within 62.5 ft of the transmission line center line were removed as part of the 2012 timber harvest activities. PacifiCorp biologists coordinated the hazard tree removal with loggers in order to minimize any damage to the enhanced forage and shrubs in the ROW. Hazard tree work that was completed by Vegetation Management Services included removing the red alder growing beneath the line east of the HWY 503 (near PacifiCorp road 650). The tree screen immediately adjacent to the HWY 503 was retained and will be pruned as necessary to maintain the visual screen of the ROW corridor below the Highway (coordinated as necessary with Hydro).

9.2 Management Actions

The following management actions were completed as scheduled at the ROW management areas in 2012 (Appendix A).

9.2.1 Shrub Management

Revised transmission line vegetation clearing limits require all shrubs and trees that are a potential hazard and within 62.5 ft. distance from the center line to be cleared (PacifiCorp 2012). Any tree that poses a potential threat is dependent on vegetation type (tree, shrub), line sag, topography, and slope stability.

As a result, Vegetation Management Services were schedule to treat (remove or spray) several areas along the Speelyai Line where shrubs and small trees (e.g. cascara [*Frangula purshiana*]) that were previously not considered a hazard would now need to be removed. As a preemptive treatment, we directed our contractor to prune the height of several shrubs along the Lake and Speelyai transmission lines.

There was misdirection to the contractor that resulted in shrubs and trees being fell within a riparian area in a creek that parallels Studebaker Road and the creek that is east of ROW

structure 5/15. In both situations the trees and shrubs were potential hazards that were appropriately removed. All debris was cut and piled into small pieces to allow for the smaller existing shrubs and herbs to grow. Both these sites will be monitored in 2013 to determine if they will require additional plantings or invasive plant species treatment.

9.2.2 Invasive Plant Species Control

The following table compares the 2012 planned versus actual invasive plant species control work that was conducted on transmission line ROWs on WHMP lands. All invasive plant species control work was completed by applying herbicide and locations are identified in the maps provided in Appendix G.

Table 4. 2012 Invasive plant species treatment on the transmission line right-of-way

Towers	Planned	Actual	Target Species					
			Invasive Plant Species			Seedlings		
			Scotch Broom	Himalayan Blackberry	Other	Bigleaf Maple	Douglas-fir	Red Alder
Speelyai Line								
2/4-4/4	Yes	No		X	Butterfly Bush			
2/7-3/7	Yes	Yes	X	X	Reed Canary-grass			
1/14-8/14	Yes	Yes	X	X	Salmon-berry	X	X	X
6/17-2/18	Yes	No	X					
3/18-7/18	Yes	No	X					
Lake Line								
4/11-6/11	Yes	Yes	X	X			X	
Cougar Line								
4/1-6/1	Yes	No	X					

As the table shows, there are a total of 7 areas scheduled to be treated along the transmission line and only 3 of these were treated in 2012.

9.2.3 Vegetation Management

All vegetation management work has been captured in the 9.2.1 Shrub Management section.

9.2.4 Aquatic Management

All vegetation management work has been captured in the 9.2.1 Shrub Management section.

9.2.5 Forage Enhancement

Speelyai Bay, Woodland Park West, and Wilkinson ROW forage areas were mowed between September 5 and 12, 2012.

9.2.6 Access/Disturbance Reduction

Most public access controlled occurred on the newly acquired lands in 2012, so there was no public access control completed in 2012. All PacifiCorp roads were investigated for unauthorized access in 2012 and are reported in Section 14.0.

Figure 5: Lake Line 4/10-5/10 shows an example of smaller shrubs becoming a potential hazard because of topography.

10.0 Unique Area / Habitat Management

Inspections and management actions completed in accordance with Lewis River WHMP Chapter 11.0 Unique Area/Habitat Management are described below (Appendix A).

10.1 Inspections

The annual oak stand inspections occurred on September 28, 2012 at 1-12, 5-1, 5-2, 6-45, and 6-54. Each oak tree clump (i.e., oak trees that are visibly joined at the base, or, if separated, within 3.28 ft [1.00 m] of each other) was recorded. Data was recorded for every tree within the clump that was greater than 3 in. (8 cm) dbh. Oak site 1-12 was difficult to evaluate every tree because of the steep slope and slick conditions caused by thick cured grasses.

Overall, the oak stands were in good condition. These oak stands are typical of WHMP oak stands in that most trees have inverted vase shaped crowns, a reduced structural diversity, and low mast production, regardless of crown competition. Future oak sites management includes treating scotch broom at oak site 5-1 and removing/topping/pruning Douglas-firs at 6-23 and 6-26a, and pulling conifer seedlings at 6-26a and 6-26b. Both the 6-45 and 6-52 oak sites are adjacent to 2013 timber harvest areas and are likely to have more sun exposure following timber harvests. This will be assessed in 2013.

Table 5 provides a summary of the oak stand inspections. The current vegetation cover type appeared to be correct for these oak stands, therefore there is no change between WHMP and Inspection Vegetation Cover Type acres.

Table 5. Oak stand inspection summary and revisions to vegetation cover type.

Inspection Summary		Oak Stand				
		1-12	5-1	5-2	6-45	6-52
Number of Trees	WHMP	40	Unknown	Unknown	20	1
	Inspection	Unknown	13	33	16	2
Vegetation Cover Type	WHMP (ac)	0.45	1.23	1.08	0.47	0.37
	Inspection	0.59	0.87	1.08	0.49	0.24
Overall Mast Production		Low	Low	Low	Low	Low
Overall Pest or Disease		None	None	None	None	None
Contact Tree Management Needed		No	Yes	Yes	No	Yes
Invasive Plant Species		None	None	None	None	Yes-conifer seedling

10.2 Management Actions

The Oak Sites 5-1, 5-2, 6-22a, 6-23a, 6-26a, 6-26b, and 6-45a had several large Douglas-fir trees pruned and removed to decrease crown completion to oak trees and increase available sunlight, Douglas-fir seedlings pulled, and any broken oak tree limbs removed. Oak site 5-1, 5-2, 6-22, 6-22b, and 6-45 were treated for scotch broom.

THA 120685 was partially designed to remove conifer shade adjacent Oak Sites 6-61, 6-62 and 6-45A. This was completed in August 2012 and shown in the following figure.

Figure 6. Oak Site 6-45A.

11.0 Forestland Habitat Management

Inspections and management actions completed in accordance with Lewis River WHMP Chapter 12.0 Forestland Habitat Management are described below:

11.1 Inspections

The 2012 Timber Harvest Area Inspections included numerous informal inspections throughout the year and a full inspection of all THAs less than 15-years-old was completed in December (Appendix D).

Overall, spray treatments for all invasive species has been effective but requires annual vigilance. The amount of bracken fern continues to be a concern in some plantations where it is eliminating available grass/forb forage by the 7th or 10th year of a plantation. These will be prioritized on the basis of need, budget, and feasibility and included as proposed for management in 2012. The inspections continue to provide PacifiCorp and the TCC with needed information for planning, budgeting and overall success of the forestry program for wildlife. Results of the inspections and recommended actions can be seen throughout the remainder of Section 11. The most notable finding from THA inspections was tree mortality (needle cast fungus disease: (*Rhabdocline pseudotsugae*) and pitch canker (*Phomopsis*) that was discovered in Management Unit 5. It appears that approximately 150 Douglas-fir (*Pseudotsuga menziesii*) trees may be infected in two separate plantations. More research on cause and treatment will extend into 2013.

11.2 Forestland Planning

Forestland harvest planning in 2012 included the following activities:

- Annual evaluations of existing THA through pre-commercial thinning as necessary to maintain or enhance forage in older plantations,
- Evaluated the effectiveness of past forest management practices such as commercial thinning, stocking rates, pre-commercial thinning and invasive species management,
- Corrected vegetation cover type mapping in two existing management units;
- Investigated tree mortality from needle cast fungus disease and pitch canker in several plantations affecting several acres of 8-10 year-old plantations.
- Planned the 2012 and 2013 forestry activities,
- Evaluated forest plantations, roads, culverts and cover/forage for new lands at Swift,
- Evaluating potential impacts of a BPA (Bonneville Power Administration) transmission right-of-way on existing WHMP lands.

Several Management Units were evaluated for cover and forage distribution and age class diversity through ground surveys and aerial photography. Table 6 shows five management units where forest management to improve forage was part of the evaluation and planning effort in 2012. Additionally, many THA's are approaching an age and diameter where commercial thinning can be conducted to reestablish some of the understory forage that was lost as the stands grew in (Table 7). Management was completed in Units 6, 15 and 25 as proposed for 2012. Management planning continued in Units 4, 10, 15, 20 and 27 and consisted of verifying

vegetation cover-types (baseline) to account for succession and improving accuracy of typing. Verification of vegetation cover-types was not completed in 2012 and will be continued in 2013. Harvest areas were confirmed for management units 4 and 20 to be completed in 2013 pending final TCC inspection and raptor surveys. Further field work and discussion with the TCC will determine priorities with evaluations based on improved forage needs and land acquisitions.

Table 6. Summary of management units reviewed for improving elk forage.

Management Units	Percent Cover	Manageable Acres in Unit	Proposed Harvest Type	Potential Harvest Year	Harvest Acres Proposed
2	67%	259.0	Select cut / CC	2013 / 2014	20
4	57%	164.3	CC	2013	25
10	100%	400.0	CT	2012/13	140
20	37%	940	CC / add permanent forage	2013	30
27	53%	135.2	CT	2013/14	14

Table 7. Summary of timber harvest areas reviewed for commercial thinning.

Timber Harvest Area	Acres	Trees / Acre	Average Tree Diameter (in.)	Proposed Harvest Year
820511 CC	20.7	230	11	2014
830621CC	1.7	220	9	2014
830633CC	10.7	220	11	2014
840107 CC	9.2	220	11	2014
860520 CC	30.6	220	11	2014
860631CC	1.8	190	9	2014
860632CC	1.6	200	10	2014
860636CC	0.8	200	9	2014
860637CC	4.8	200	11	2014
860639CC	1.0	200	8	2014
860646CC	8.3	200	11	2014
861103CC	28.3	210	9	2014
861901CC	14.1	230	11	2014
861902CC	8.4	230	10	2014
861903CC	7.2	200	10	2014
862601CC	30.8	190	11	2014
862602CC	22.4	200	10	2014
TOTAL	202.4			

11.2.1 2012 Harvest Activities

Forest harvest management, conducted to improve big game forage in Units 6, 15 and 25 was completed as planned. Commercial thinning in Management Units 10 and 15 was not completed as planned due to priorities associated with new properties acquired at Swift. Road access and maintenance issues were determined to be a priority for these new lands. Additionally, the logging equipment the current contractor had was determined to be too large to use in the younger dense stands. A new contract for commercial thinning will be put out to bid in 2013. Appendix E provides maps of the completed 2012 timber harvest area in Units 6, 15 and 20.

Management Unit 6

Forest management was completed as proposed in 2012. Logging included management at Speelyai Park day use facility to remove hazard trees along the access road and above the parking area (Figure 7). These sites were reviewed with the TCC and approved. Only over-mature red alder (*alnus rubra*) were removed from the areas that represented a hazard to the public. Shrubs were retained as much as possible and the areas were seeded with the habitat forage mix. Above the parking area, hazard trees were fell but left to decay on site so as not to disturb the slope and numerous springs found on the hillside. The slope will be monitored to encourage shrub development and discourage alder or invasive plants from establishing.

Figure 7. Logging was conducted at Speelyai Park access road to remove hazard trees.

Logging began on August 1, 2012 and was completed September 24, 2012 with scarification of slash and seeding of the grass-legume mix. A new grass-legume forage mix was developed (Table 8) and applied as scheduled and logging slash was burned in December.

Table 8. Grass – legume seed mix used in 2012 timber harvest areas

Botanical Name	Common Name	% by weight
Lolium multiflorium tetraploid var tetrastar	Annual Ryegrass	25.00%
Lolium perenne tetraploid var Albion	Albion Perennial Ryegrass	15.00%
Dactylis glomerata var. Quick draw	Orchardgrass	22.00%
Trifolium incarnatum	Crimson clover	12.00%
Trifolium repens var Domino	Domino White Clover	10.00%
Trifolium repens var. Ladino	Ladino White Clover	10.00%
Sanguisorba minor	Small Burnet	5.00%
Epilobium angustifolium	Fireweed	1.00%

The varieties listed in Table 9 provide good winter hardiness and early spring green up. This mix is 38% legumes/forbs and 62% grasses. The seeding rate was approximately 25 pounds per acre (9.3 kg/0.4 ha). For all harvest areas, a total of 1,800 pounds (816.5 kg) of the forage mix was broadcast on 65.9 acres (26.7 ha).

There were three separate forest management sites in Management Unit 6 totaling 35.4 acres (14.3 ha). Reserve trees included some of the most dominant trees in the over-story as well as groups of trees located near rock outcrops (Figure 8). The reserve areas include native shrubs and additional logs were brought in and distributed through the harvest areas to enhance large woody debris.

Figure 8. Trees retained within harvest area at Management Unit 6 (THA 120685).

One of the forest management sites in Management Unit 6 was designed to remove Douglas-fir that shaded the adjacent oak sites (Figure 9). The oak sites and rock outcrops in and adjacent to THA 120685 were traversed to provide better mapping locations for the GIS.

Figure 9. Unit 6 harvest area removed conifer shade trees adjacent to Oak Site 6 – 45A

The cover/forage ratio was improved from 71% cover to 65% cover (Table 9). This table also describes the pre- and post-timber harvest vegetation cover types.The most significant changes in the vegetation cover typing is that 8.8 acres (3.6 ha) of old-growth were retyped to mature habitat (PacifiCorp 2011) whereas there were 154.9 acres of mature habitat retyped for Unit 6. Most of this increase in mature conifer habitat is from mid-successional stands maturing or being reclassified based on further inspection.

Table 9. Unit 6 pre- and post- timber harvest vegetation cover types with updated vegetation cover type mapping.

Cover vs. Forage	Vegetation Cover Types	Unit 6		
		2004[1] (Baseline) ac (ha)	2012	
			Pre-Harvest ac (ha)	After Harvest w/ Updated Cover Types ac (ha)
Cover	Old-growth Conifer	8.8 (3.6)	0.0[2]	0.0
	Mature Conifer	1.5 (0.6)	75.4 (30.5)	75.4 (30.5)
	Mature Conifer - Thinned	0.0	79.5 (32.2)	79.5 (32.2)
	Mid-Successional Conifer	345.9 (140.0)	208.5 (84.4)	203.1 (82.2)
	Mid-Successional Conifer -thinned	92.1 (37.3)	62.8 (25.4)	53.3 (21.6)
	Upland Mixed (thermal cover site specific)	118.6 (48.0)	122.4 (49.5)	122.4 (49.5)
	Upland Mixed - thinned (thermal cover site specific)	0.0	0.0	0.0
	Young Upland Mixed (thermal cover site specific)	46.0 (18.6)	0.0	0.0
	Pole Conifer	0.0	0.0	0.0
	Lodgepole Pine	0.0	0.0	0.0
	Riparian Mixed	13.8 (5.6)	12.4 (5.0)	12.4 (5.0)
Forage	Young Upland Deciduous	0.0	1.0 (0.4)	1.0 (0.4)
	Pole Conifer - thinned	0.0	72.5 (29.3)	72.5 (29.3)
	Riparian Deciduous Shrub	0.0	0.0	0.0
	Riparian Deciduous	11.7 (4.7)	11.0 (4.5)	11.0 (4.5)
	Upland Deciduous	35.3 (14.3)	42.2 (17.1)	38.1 (15.4)
	Oak Woodland	6.5 (2.6)	7.4 (3.0)	7.4 (3.0)
	Transmission Line ROW	25.2 (10.2)	33.3 (13.5)	33.3 (13.5)
	Recreational	0.0	0.0	0.0
	Dry Meadow/Grassland	0.8 (0.3)	0.9 (0.4)	0.9 (0.4)
	Shrubland	0.6 (0.2)	3.2 (1.3)	3.2 (1.3)
	Orchard	0.7 (0.3)	1.2 (0.5)	1.2 (0.5)
	Agriculture	0.0	0.0	0.0
	Seedling/Sapling Conifer	77.5 (31.4)	85.6 (34.6)	85.6 (34.6)
	New Clearcut	41.9 (17.0)	0.0	82.1 (33.2)
	Wetland (Palustrine Wetland)	0.0	0.0	0.0
Neither	Lacustrine Unconsolidated Bottom	0.8 (0.3)	0.0	0.0
	Riverine Unconsolidated Shore	0.0	0.0	0.0
	Sparse veg.; Disturbed; Developed	2.1 (0.8)	8.3 (3.4)	8.3 (3.4)
	Rock Outcropping and Talus	0.0	3.0 (1.2)	3.0 (1.2)
Total Acres (ha)		**829.8 (335.8)**	**830.8 (336.2)**	**830.2 (336.0)**
Cover:Forage Ratio		**76:24**	**71:29**	**65:35**

1. Vegetation Cover Types based on 2004 Final Technical Report for Vegetation Cover Type Mapping (PacifiCorp and Cowlitz PUD).
2. Initial Evaluations of Old-Growth on the Lewis River Wildlife Habitat Management Plan Lands (PacifiCorp 2011)

The following table demonstrates compliance with the Biological Opinion and compares the pre- and post-timber harvest acres of suitable and dispersal habitat for northern spotted owls (*Strix occidentalis*) in Unit 6 and the WHMP lands (per United States Fish and Wildlife Service 2006). This summary includes data that summarizes the result of updated vegetation cover typing but does not include new property acquisitions in 2012. Total suitable habitat shows a decrease of 60.0 acres (24.3 ha) for northern spotted owls as a result of harvesting mid-successional habitat as well as more accurate vegetation typing. The total amount of suitable habitat on PacifiCorp WHMP lands still exceeds the minimum requirement of 50% (currently 65.5%).

Table 10. Unit 6 and WHMP northern spotted owl suitable and dispersal habitat.

Vegetation Cover Type	Habitat Type	Unit 6		WHMP Lands[2]	
		2004 (Baseline)[1] ac (ha)	2012 After Harvest w/ updated cover types ac (ha)	2004 (Baseline)[1] ac (ha)	2012 After Harvest w/ New WHMP lands and updated cover types ac (ha)[3]
Old-growth Conifer	Nesting, Roosting Foraging, Dispersal	8.8 (3.6)	0.0	168.1 (68.0)	228.3 (92.4)
Mature Conifer	Nesting, Roosting Foraging, Dispersal	1.5 (0.6)	75.4 (30.5)	619.2 (250.6)	781.0 (316.0)
Mid-Successional Conifer	Roosting, Foraging, Dispersal	345.9 (140.0)	203.1 (82.2)	1900.8 (769.2)	1822.2 (737.4)
Mid-Successional Conifer -Thinned	Roosting, Foraging, Dispersal	92.1 (37.3)	53.3 (21.6)	225.5 (91.3)	168.9 (68.4)
Upland Mixed	Roosting, Foraging, Dispersal	118.6 (48.0)	122.4 (49.5)	2370.6 (959.4)	2220.5 (898.7)
Riparian Mixed	Roosting, Foraging, Dispersal	13.8 (5.6)	12.4 (5.0)	192.9 (78.1)	196.2 (79.4)
	Total Suitable Habitat (Nesting +Roosting + Foraging)	**580.7**	**466.6**	**5477.1 (2216.6)**	**5417.1 (2192.3)**
Pole Conifer	Dispersal	0.0	0.0	851.2 (344.5)	1162.0 (470.2)
	Total Dispersal Habitat (Suitable Habitat + Pole Conifer)	**580.7**	**466.6**	**6328.3**	**6579.1**
Young Upland Mixed	Non-habitat	46.0 (18.6)	0.0	140.7 (56.9)	151.9 (61.5)
Upland Deciduous	Non-habitat	35.3 (14.3)	38.1 (15.4)	1722.8 (697.2)	1583.1 (640.9)
Young Upland Deciduous	Non-habitat	0.0	1.0 (0.4)	31.7 (12.8)	105.7 (42.8)
Lodgepole Pine	Non-habitat	0.0	0.0	72.9 (29.5)	66.6 (26.9)
Riparian Deciduous	Non-habitat	11.7 (4.7)	11.0 (4.5)	204.8 (82.9)	186.1(75.3)
Seedling/Sapling Conifer	Non-habitat	77.5 (31.4)	85.6 (34.6)	819.7 (331.7)	945.1 (382.5)
New Clearcut	Non-habitat	41.9 (17.0)	82.1 (33.2)	78.0 (31.6)	422.2 (170.9)
	Forestland Non-Habitat	**212.4**	**217.8**	**3070.6**	**3460.7**
	Total Extent of Forestland Habitat (Dispersal + Non-habitat)			**9398.9**	**10039.8**
	Percent of Dispersal Habitat on WHMP lands ((Total Dispersal Habitat/ Total Forestland Habitat) *100)			**67.3%**	**65.5%**

1 Vegetation Cover Types based on 2004 Final Technical Report for Vegetation Cover Type Mapping (PacifiCorp and Cowlitz PUD)
2. Change represents a mapping correction, not loss of actual habitat.
3. Includes lands purchased in December 2010 but not the 2012 purchase.

Management Unit 15

Forest management was completed as proposed in 2012 except for commercial thinning. Approximately 17.0 acres (6.9 ha) of over mature red alder were harvested while retaining several islands of shrubs throughout the unit. Dominant shrubs included red huckleberry (*vaccinium parvifolium*) and vine maple (*Acer circinatum*). Where these shrubs were dense they were also retained along Buncombe Hollow Road to minimize visibility into the stand. The existing access road into management Unit 15 was adjacent an intermittent non-fish bearing stream. This road was decommissioned (ripped and replanted) to reestablish the stream buffer. The gate was temporarily left until the vegetation becomes established. A new road was built that is outside the 100-foot (30.5 m) stream buffer.

The amount of forage in Unit 15 was effectively changed by only 1% overall (Table 11) from 28% to 29% overall although an additional 1.9 acres (0.8 ha) was cleared to develop permanent forage. The vegetation re-mapping of the Management Unit included changing a previously mid-successional-thinned stand of conifer to a mature-thinned stand due solely to diameter growth.

Table 11. Unit 15 pre- and post- timber harvest vegetation cover types with updated vegetation cover type mapping.

Cover vs. Forage	Vegetation Cover Types	Unit 15		
		2004[1] (Baseline) ac (ha)[1]	2012	
			Pre-Harvest ac (ha)	After Harvest w/ Updated Cover Types ac (ha)
Cover	Old-growth Conifer	0.0	8.6 (3.5)[2]	8.6 (3.5)
	Mature Conifer	94.2 (38.1)	35.8 (14.5)[3]	36.6 (14.8)
	Mature Conifer - Thinned	0.0	21.4 (8.7)[3]	21.4 (8.7)
	Mid-Successional Conifer	67.8 (27.4)	62.4 (25.3)	62.4 (25.3)
	Mid-Successional Conifer -thinned	21.9 (8.9)	0.0	0.0
	Upland Mixed (thermal cover site specific)	130.0 (52.6)	122.4 (49.5)	117.9 (47.7)
	Upland Mixed - thinned (thermal cover site specific)	0.0	0.0	0.0
	Young Upland Mixed (thermal cover site specific)	0.0	0.0	0.0
	Pole Conifer	0.0	90.9 (36.8)	90.4 (36.6)
	Lodgepole Pine	0.0	0.0	0.0
	Riparian Mixed	38.8 (15.7)	40.0 (16.2)	40.0 (16.2)

Table 11. Unit 15 pre- and post- timber harvest vegetation cover types with updated vegetation cover type mapping (continued)

Cover vs. Forage	Vegetation Cover Types	Unit 15		
			2012	
		2004[1] (Baseline) ac (ha)[1]	Pre-Harvest ac (ha)	After Harvest w/ Updated Cover Types ac (ha)
Forage	Young Upland Deciduous	0.0	14.0 (5.7)	14.0 (5.7)
	Pole Conifer - thinned	26.5 (10.7	0.0	0.0
	Riparian Deciduous Shrub	0.0	0.0	0.0
	Riparian Deciduous	9.9 (4.0)	8.9 (3.6)	8.9 (3.6)
	Upland Deciduous	54.0 (21.9)	83.6 (33.8)	60.1 (24.3)
	Oak Woodland	0.0	0.0	0.0
	Transmission Line ROW	0.0	0.0	0.0
	Recreational	0.0	0.0	0.0
	Dry Meadow/Grassland	0.0	0.5 (0.2)	1.9 (0.8)
	Shrubland	2.2 (0.9)	0.0	0.0
	Orchard	1.7 (0.7)	2.9 (1.2)	2.9 (1.2)
	Agriculture	0.0	0.0	0.0
	Seedling/Sapling Conifer	77.6 (31.4)	46.6 (18.9)	46.6 (18.9)
	New Clearcut	0.0	0.0	17.4 (7.0)
	Wetland (Palustrine Wetland)	0.0	0.0	0.0
Neither	Lacustrine Unconsolidated Bottom	2.0 (0.8)	0.7 (0.3)	0.7 (0.3)
	Riverine Unconsolidated Shore	0.0	0.0	0.0
	Sparse veg.; Disturbed; Developed	2.3 (0.9)	0.0	0.0
	Rock Outcropping and Talus	0.5 (0.2)	0.5 (0.2)	0.5 (0.2)
	Total Acres (ha)	**537.5**	**530.3**	**530.3**
	Cover:Forage Ratio	**67:33**	**72:28**	**71:29**

1. Vegetation Cover Types based on 2004 Final Technical Report for Vegetation Cover Type Mapping (PacifiCorp and Cowlitz PUD).
2. Change represents a mapping correction, not a gain of actual habitat.
3. Change represents a mapping correction, not a loss of actual habitat.

The following table (Table 12) demonstrates compliance with the Biological Opinion and compares the pre- and post-timber harvest acres of suitable and dispersal habitat for northern spotted owls (*Strix occidentalis*) in Management Unit 15 and the WHMP lands (per United States Fish and Wildlife Service 2006). This summary includes data that summarizes updated vegetation cover typing but does not include new property acquisitions in 2012. No suitable northern spotted owl habitat was affected by 2012 forest management.

Table 12. Unit 15 and WHMP northern spotted owl suitable and dispersal habitat.

Vegetation Cover Type	Habitat Type	Unit 15		WHMP Lands[2]	
		2004 (Baseline)[1] ac (ha)	2012 After Harvest w/ updated cover types ac (ha)	2004 (Baseline)[1] ac (ha)	2012 After Harvest w/ New WHMP lands and updated cover types ac (ha)[3]
Old-growth Conifer	Nesting, Roosting Foraging, Dispersal	0.0	8.6 (3.5)[2]	168.1 (68.0)	228.3 (92.4)
Mature Conifer	Nesting, Roosting Foraging, Dispersal	94.2 (38.1)	58.0 (23.5)[3]	619.2 (250.6)	781.0 (316.0)
Mid-Successional Conifer	Roosting, Foraging, Dispersal	67.8 (27.4)	62.4 (25.3)[3]	1900.8 (769.2)	1822.2 (737.4)
Mid-Successional Conifer -Thinned	Roosting, Foraging, Dispersal	21.9 (8.9)	0.0	225.5 (91.3)	168.9 (68.4)
Upland Mixed	Roosting, Foraging, Dispersal	130.0 (52.6)	117.9 (47.7)[3]	2370.6 (959.4)	2220.5 (898.7)
Riparian Mixed	Roosting, Foraging, Dispersal	38.8 (15.7)	40.0 (16.2)	192.9 (78.1)	196.2 (79.4)
Total Suitable Habitat (Nesting +Roosting + Foraging)		**352.7 (142.7)**	**286.9 (116.2)[3]**	**5477.1 (2216.6)**	**5417.1 (2192.3)**
Pole Conifer	Dispersal	0.0	90.4 (36.6)	851.2 (344.5)	1162.0 (470.2)
Total Dispersal Habitat (Suitable Habitat + Pole Conifer)		**352.7 (142.7)**	**377.3 (152.8)**	**6328.3**	**6579.1**
Young Upland Mixed	Non-habitat	0.0	0.0	140.7 (56.9)	151.9 (61.5)
Upland Deciduous	Non-habitat	54.0 (21.9)	60.1 (24.3)	1722.8 (697.2)	1583.1 (640.9)
Young Upland Deciduous	Non-habitat	0.0	14.0 (5.7)	31.7 (12.8)	105.7 (42.8)
Lodgepole Pine	Non-habitat	0.0	0.0	72.9 (29.5)	66.6 (26.9)
Riparian Deciduous	Non-habitat	9.9 (4.0)	8.9 (3.6)	204.8 (82.9)	186.1(75.3)
Seedling/Sapling Conifer	Non-habitat	77.6 (31.4)	46.6 (18.9)	819.7 (331.7)	945.1 (382.5)
New Clearcut	Non-habitat	0.0	17.4 (7.0)	78.0 (31.6)	422.2 (170.9)
Forestland Non-Habitat		**141.5 (57.3)**	**147.0 (10.5)**	**3070.6**	**3460.7**
Total Extent of Forestland Habitat (Dispersal + Non-habitat)				**9398.9**	**10039.8**
Percent of Dispersal Habitat on WHMP lands ((Total Dispersal Habitat/ Total Forestland Habitat) *100)				**67.3%**	**65.5%**

1 Vegetation Cover Types based on 2004 Final Technical Report for Vegetation Cover Type Mapping (PacifiCorp and Cowlitz PUD)
2. Change represents a mapping correction, not a gain of actual habitat.
3. Includes lands purchased in December 2010 but not the 2012 purchase.
4. Change represents a mapping correction, not a loss of actual habitat.

A small half-acre meadow was created in 1984 when this Management Unit was last logged. Concurrent with the 2012 logging an additional 1.9 acres of red alder was removed from around and adjacent to the meadow. This area will be graded and reseeded in 2013 to establish an improved area of permanent forage.

Management Unit 25

Forest management was completed as proposed in 2012. A total of 16.8 acres (6.8 ha) of predominantly red alder and bigleaf maple (*Acer macrophyllum*) were harvested for the purpose of establishing conifer in an area designated to meet northern spotted owl (*Strix occidentalis* caurina) nesting criteria. The area was developed during the building of Swift Dam for construction barracks and was littered with debris that was hauled away during logging. Several large diameter bigleaf maple and black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) were retained throughout the harvest area. Seven of the black cottonwood trees were topped to create snags. Along with the residual Douglas-fir within the stand, eight trees per acre were retained for reserve trees.

Table 13. Unit 25 pre- and post- timber harvest vegetation cover types with updated vegetation cover type mapping.

Cover vs. Forage	Vegetation Cover Types	Unit 25		
		2004[1] (Baseline) ac (ha)	2012	
			Pre-Harvest ac (ha)	After Harvest w/ Updated Cover Types ac (ha)
Cover	Old-growth Conifer	0.0	0.0	0.0
	Mature Conifer	0.0	0.0	0.0
	Mature Conifer - Thinned	0.0	0.0	0.0
	Mid-Successional Conifer	0.0	1.4 (0.6)	1.4 (0.6)
	Mid-Successional Conifer - thinned	0.0	0.0	0.0
	Upland Mixed (thermal cover site specific)	0.0	0.0	0.0
	Upland Mixed - thinned (thermal cover site specific)	4.6 (1.9)	0.0	0.0
	Young Upland Mixed (thermal cover site specific)	0.0	0.0	0.0
	Pole Conifer	0.0	0.0	0.0
	Lodgepole Pine	0.0	0.0	0.0
	Riparian Mixed	0.0	0.0	0.0

Table 13. Unit 25 pre- and post- timber harvest vegetation cover types with updated vegetation cover type mapping (continued).

Cover vs. Forage	Vegetation Cover Types	Unit 25		
		2004[1] (Baseline) ac (ha)	2012	
			Pre-Harvest ac (ha)	After Harvest w/ Updated Cover Types ac (ha)
Forage	Young Upland Deciduous	0.0	0.0	0.0
	Pole Conifer - thinned	0.0	0.0	0.0
	Riparian Deciduous Shrub	0.0	0.0	0.0
	Riparian Deciduous	24.9 (10.1)	25.0 (10.1)	21.0 (8.5)
	Upland Deciduous	59.8 (24.2)	61.4 (24.8)	48.6 (19.7)
	Oak Woodland	0.0	0.0	0.0
	Transmission Line ROW	13.1 (5.3)	19.2 (7.8)	19.2 (7.8)
	Recreational	0.0	0.0	0.0
	Dry Meadow/Grassland	7.6 (3.1)	5.6 (2.3)	5.6 (2.3)
	Shrubland	0.0	0.0	0.0
	Orchard	0.0	0.0	0.0
	Agriculture	0.0	0.0	0.0
	Seedling/Sapling Conifer	0.0	0.0	0.0
	New Clearcut	0.0	0.0	16.8 (6.8)
	Wetland (Palustrine Wetland)	20.5 (8.3)	20.6 (8.3)	20.6 (8.3)
Neither	Lacustrine Unconsolidated Bottom	0.0	0.0	0.0
	Riverine Unconsolidated Shore	0.0	0.0	0.0
	Sparse veg.; Disturbed; Developed	11.5 (4.7)	8.8 (3.6)	8.8 (3.6)
	Rock Outcropping and Talus	0.0	0.0	0.0
Total Acres (ha)		**142.0 (57.5)**	**142.0 (57.5)**	**142.0 (57.5)**
Cover:Forage Ratio		**97:03**	**99:01**	**99:01**

1. Vegetation Cover Types based on 2004 Final Technical Report for Vegetation Cover Type Mapping (PacifiCorp and Cowlitz PUD).

The following table demonstrates compliance with the Biological Opinion and compares the pre- and post-timber harvest acres of suitable and dispersal habitat for northern spotted owls (*Strix occidentalis*) in Unit 25 and the WHMP lands (per United States Fish and Wildlife Service

2006). This summary includes data that summarizes the result of updated vegetation cover typing but does not include new property acquisitions in 2012.

Table 14. Unit 25 and WHMP northern spotted owl suitable and dispersal habitat.

Vegetation Cover Type	Habitat Type	Unit 25		WHMP Lands[2]	
		2004 (Baseline)[1] ac (ha)	2012 After Harvest w/ updated cover types ac (ha)	2004 (Baseline)[1] ac (ha)	2012 After Harvest w/ New WHMP lands and updated cover types ac (ha)[3]
Old-growth Conifer	Nesting, Roosting Foraging, Dispersal	0.0	0.0	170.7 (69.1)	222.9 (90.2)
Mature Conifer	Nesting, Roosting Foraging, Dispersal	0.0	0.0	628.3 (254.3)	808.1 (324.2)
Mid-Successional Conifer	Roosting, Foraging, Dispersal	0.0	1.4 (0.6)	1966.1 (795.7)	1885.1 (762.9)
Mid-Successional Conifer -Thinned	Roosting, Foraging, Dispersal	0.0	0.0	225.5 (91.3)	178.9 (72.4)
Upland Mixed	Roosting, Foraging, Dispersal	4.6	0.0	2379.0 (962.7)	2263.1 (915.8)
Riparian Mixed	Roosting, Foraging, Dispersal	0.0	0.0	195.8 (79.2)	197.3 (79.8)
Total Suitable Habitat (Nesting +Roosting + Foraging)		**0.0**	**82.8 (33.5)**	**5565.4 (2252.0)**	**5555.4 (2248.0)**
Pole Conifer	Dispersal	0.0	0.0	928.3 (375.7)	1442.3 (583.7)
Total Dispersal Habitat (Suitable Habitat + Pole Conifer)		**6328.3**	**6579.1**	**6493.7 (2628.0)**	**6997.7 (2831.9)**
Young Upland Mixed	Non-habitat	0.0	0.0	140.7 (56.9)	158.5 (64.1)
Upland Deciduous	Non-habitat	59.8 (24.2)	48.6 (19.7)	1729.9 (700.1)	1655.7 (670.0)
Young Upland Deciduous	Non-habitat	0.0	0.0	31.7 (12.8)	114.9 (46.5)
Transmission Line	Non-habitat	13.1 (5.3)	19.2 (7.8)	72.9 (29.5)	66.6 (27.0)
Riparian Deciduous	Non-habitat	24.9 (10.1)	21.0 (8.5)	204.2 (82.6)	117.2 (47.4)
Dry Meadow	Non-habitat	7.6 (3.1)	5.6 (2.3)	64.5 (26.1)	81.7 (33.1)
Seedling/Sapling Conifer	Non-habitat	0.0	0.0	819.9 (331.8)	462.6 (187.2)
New Clearcut	Non-habitat	0.0	16.8 (6.8)	78.0 (31.6)	890.4 (360.3)
Forestland Non-Habitat				**3077.3 (1245.3)**	**3465.9 (1402.6)**
Total Extent of Forestland Habitat (Dispersal + Non-habitat)				**9398.9**	**10039.8**
Percent of Dispersal Habitat on WHMP lands ((Total Dispersal Habitat/ Total Forestland Habitat) *100)				**67.3%**	**65.5%**

1 Vegetation Cover Types based on 2004 Final Technical Report for Vegetation Cover Type Mapping (PacifiCorp and Cowlitz PUD)
2. Change represents a mapping correction, not loss of actual habitat.
3. Includes lands purchased in December 2010 but not the 2012 purchase.

11.2.2 First Precut Surveys

The first pre-cut surveys for 2013 planned harvests in Management Units 4 and 20 were completed in December 2012. Vegetation cover type mapping was updated in Management Unit 4 to reflect current stand conditions but is incomplete in Management Unit 20. Vegetation mapping will be completed in 2013. Buffers were established for streams and wetlands as necessary and access roads were identified. Raptor surveys were scheduled and started in the area as per the WHMP. The results of the first pre-cut surveys are presented in the 2012 Annual Plan.

11.2.3 Harvest Area Traverses and Geographic Information System Update

The GIS database was updated with the 2012 timber harvest areas in Units 6, 15 and 25. The planned versus actual harvest acres were adjusted in Unit 6 to adjust for changes in a reduced harvest area near Speelyai Park and to incorporate rock outcrops in THA 120685 (Appendix E). Planning associated with scheduled forest practices in 2013 also required traversing those proposed areas in Management Units 4 and 20 and reviewing them on the GIS to determine acres and how they contribute to overall forest management goals and objectives.

PacifiCorp purchased approximately 2,100 acres (850.0 ha) near Swift Reservoir in June 2012 and three new Management Units (34, 35 and 38) were created. Part of the property was incorporated into Management Unit 33 that was purchased in 2010. PacifiCorp developed GIS coverage of the new ownership that includes a road and culvert numbering system (Appendix E). The road and culvert inventory was required under Washington State regulations for road maintenance and inventory reporting.

11.2.4 Second Precut Survey

The second precut survey for the 2012 THA's were completed on July 22, 2012. This included final adjustments of reserve areas around rock outcrops in Unit 6 and marking reserve trees in Unit 25. There were no changes to boundaries and no nesting raptor issues within or adjacent the harvest areas.

11.2.5 TCC On-site Meeting

The TCC toured and discussed forest management proposed in Units 6, 15 and 25 on March 14 and 15, 2012. Maps were provided for each of the proposed harvest areas. The TCC provided input regarding buffers to streams, removing conifer shade near oak sites and planting red alder in management unit 15. WDFW and PacifiCorp discussed that the WHMP lands on the south side of Merwin are an opportunity to emphasize deer habitat (include more shrub cover and forage). The TCC concurred with the proposed timber harvests and for incorporating their comments for managing a 150-foot stream buffer in Unit 25 (allowing hardwood removal) and increasing emphasis for deer in Management Unit 15.

11.2.6 Timber Harvest Area Logging Operations

Logging began on August 1, 2012. During logging and road building operations, the contract forester or the PacifiCorp biologist conducted a minimum of twice weekly inspections until scarification and grass seeding was completed on September 24, 2012. Inspections ensured that the operations were compliant with best management practices, contract conditions, State Forest Practices Act, and the Wildlife Habitat Management Plan.

11.2.7 Snag Development

In Management Unit 25, seven back cottonwood snags were developed by topping at approximately 35 feet. Numerous hardwood logs were also retained for coarse woody debris. THA 120685 had 3 conifer snags developed and approximately 25 logs were brought in to distribute for coarse woody debris. In Management Unit 15, ten existing conifer snags were retained during logging.

11.2.8 Site Preparation

Site preparation of the logged sites included piling the logging slash using a tractor fitted with a brush blade and an excavator or log loader to pile the slash in clean piles for later burning (completed in January, 2013).

11.2.9 Forage Seeding

All of the 2012 timber harvest areas were seeded to provide big game forage using the mix described in Table 8. Approximately 2.0 acres (0.8 ha) of red alder in Unit 15 was cleared to expand the existing 0.5 acre meadow that had existed since 1984. The area was scarified and seeded but in 2013 additional leveling and fertilizing will be conducting along with final grass seeding.

11.2.10 Planting and Maintenance

Management Unit 28, a shelter-wood style harvest in 2011 was under-planted with 500 Western white pine (*Pinus monticola*), the first planting of this species on WHMP lands. White pines were native to the site as evidenced by at least two trees that were found and retained during timber harvest. The remaining planting was done on lands purchased in 2010 that had been logged by the prior owner. A total of 25,100 seedlings were planted (Table 16).

Inter-planting to maintain older THAs tree density, and protecting seedlings from big game browse (e.g. protective tubing, Plantskydd®) was also conducted. Continuing to add protective tubing on western red cedar was discontinued on plantations that were greater than five years old due to growth of other non-cedar trees and cost. Cedar will continue to be a species used in planting but if after 5 years the seedling is not in a free to grow state is isn't considered cost effective. Additional seedling protection was provided where needed due to heavy browsing by big game. The following table lists all of the THAs that received seedling maintenance in 2012 and Appendix F provides a map of these areas.

Table 15. 2012 seedling maintenance (planting, Vexar® tube, inter-planting).

Timber Harvest Area	Acres (ha)	Recommended Action for 2012	Action Taken 2012	Reason For Difference
010443 CC	13.2 (5.3)	Re-tube THPL	None	Plantation age; cost
030447 CC	24.6 (10.0)	Re-tube THPL	None	Plantation age; cost; THPL still growing
030678 CC	7.9 (3.2)	Re-tube THPL	None	Plantation age; cost
050771 CC	2.3 (0.9)	Re-tube THPL	Sprayed Plantskydd® on THPL, retubed;	Recommended due to good growth
010837 CC	13.3 (5.4)	Re-tube THPL	None	Plantation age; cost
101126 CC	18.3 (7.4)	Re-tube THPL	Re-tubed	N/A
101127 CC	11.7 (4.8)	Re-tube THPL	Re-tubed	N/A
051239 CC	7.7 (3.1)	Re-tube THPL	None	THPL Ok
091703 CC	22.5 (9.1)	Re-tube THPL	Sprayed Plantskydd® on THPL	Limited browse damage
091704 CC	14.4 (5.8)	Re-tube THPL	Re-tubed	N/A
091705 CC	4.7 (1.9)	Re-tube THPL	None	Other spray priorities
101801 CC	27.5 (11.1)	Re-tube THPL	Sprayed Plantskydd® on THPL	N/A
952008 CC	12.6 (5.1)	Spray Plantskydd®	None	Other spray priorities
082603 CC	8.2 (3.3)	Re-tube THPL; Spray Plantskydd® on THPL, TSHE and PSME	Sprayed Plantskydd® on THPL	Sprayed only, tubes Ok
082604 CC	11.9 (4.8)	Re-tube THPL; Spray Plantskydd® on THPL, TSHE and PSME	Sprayed Plantskydd® on THPL	Sprayed only, tubes Ok
082605 CC	10.2 (4.1)	Re-tube THPL; Spray Plantskydd® on THPL, TSHE and PSME	Sprayed Plantskydd® on THPL	Sprayed only, tubes Ok
122801 CC	21.0 (8.5)	Plant 500 PIST	Planted 500 PIST	N/A
093310 CC	43.2 (17.5)	Plant 13,000 ABPR	Planted 11,400 ABPR	N/A
113313 CC	24.0 (9.7)	Plant 9,000 ABPR	Planted 7,560 ABPR, 900 PIST	N/A
113314 CC	1.9 (.8)	Plant 570 ABPR	Planted 440 ABPR, 100 PIST	N/A
113315 CC	15.0 (6.1)	Plant 3,000 PSME, 1,500 PIST	Planted 3,634 PSME, 500 PIST, 160 ABPR	N/A
113316 CC	32.7 (13.2)	Not planned	Planted 800 ABPR on fire trails	Scarified fire trail in preparation for burning
113317 CC	20.6 (8.3)	Not Planned	Planted 800 ABPR on fire trails	Scarified fire trail in preparation for burning

PIST = White pine; PSME = Douglas Fir; THPL = Western redcedar; ABPR = Noble fir

11.2.11 Tree Seedling Release Practices

New tree seedlings have to compete for moisture against the grass-legume seed mixes that are applied as forage to the entire THA. To reduce this competition for moisture in the first two years of seedling growth, several products are used to kill existing grasses around the seedlings and as a pre-emergent herbicide. Sulfometuron (Oust®) or Surflan with glyphosate was sprayed in an 18-in (45-cm) radius around all seedlings. Surflan or Pendulum is used only around western red-cedar. These are a selective pre-emergence herbicide for control of annual grasses and many broadleaf weeds. They were used along with glyphosate (to kill existing grasses) instead of Oust® on western red-cedar because Oust® was noted to negatively affect cedar. All THAs scheduled to be treated were completed by April 2, 2012 as well as one additional THA that was

identified in spring 2012 surveys. All THAs are listed in Table 16 and locations are mapped in Appendix F.

Table 16. 2012 timber harvest areas treated with Sulfometuron (Oust®) or Pendulum.

Timber Harvest Areas	Acres (hectares)	Recommended Action	Action Taken 2012	Reason For Difference
050770	17.0 (6.9)	Sulfometuron	Sulfometuron	N/A
050771	1.0 (0.4)	Glyphosate-Pendulum	Sulfometuron on PSME and Pendulum on THPL	N/A
101126	12.0 (4.9)	Sulfometuron	Sulfometuron and Glyphosate-Pendulum	Glyphosate-Pendulum was needed around THPL
101127	11.0 (4.5)	Sulfometuron	Sulfometuron and Rodeo-Pendulum	Rodeo-Pendulum was needed around THPL
051239	7.7 (3.1)	None	Rodeo-Pendulum	Rodeo-Pendulum was needed around THPL
091703	20.0 (8.1)	Sulfometuron	Sulfometuron	N/A
091703	1.5 (0.6)	Glyphosate-Pendulum	Glyphosate-Pendulum	N/A
091704	12.0 (4.9)	Sufometuron	Sulfometuron	N/A
091704	1.5 (0.6)	Glyphosate-Pendulum	Glyphosate-Pendulum	N/A
091705	9.0 (3.6)	Sulfometuron	Sulfometuron	N/A
091705	1.5 (0.6)	Glyphosate-Pendulum	Glyphosate-Pendulum	N/A
101801	23.0 (9.3)	Sulfometuron	Sulfometuron	N/A
101801	2.0 (0.8)	Glyphosate-Pendulum	Glyphosate-Pendulum	N/A
952008	2.0 (0.8)	Sulfometuron	Sulfometuron	N/A
082603	3.0 (1.2)	Sulfometuron	Plantskydd on THPL	THPL required treatment for browsing only
082604	10.0 (4.4)	Sulfometuron	Plantskydd on THPL	THPL required treatment for browsing only
082605	7.0 (2.8)	Sulfometuron	Sulfometuron	THPL required treatment for browsing only
Total Acres	**151.5 (61.3)**			

11.2.12 Invasive Plant Control

Invasive plant species and competing vegetation are controlled as necessary to promote big game forage, maintain access, and to reduce seedling competition (other than grasses). Treatments may include both chemical and manual methods. The following table lists all of the 2012 timber harvest areas that were proposed and/or had actual vegetation control in 2012. Appendix G shows all of the areas on WHMP lands where invasive plant species control was conducted in 2012.

Table 17. 2012 timber harvest areas invasive plant control treatments.

Timber Harvest Area	Acres (ha)	Recommended Action in 2012	Action Taken 2012	Reason For Difference
050333 CC	1.0 (0.4)	Spray PTAQ (nc)	None	Too small an area to justify cost
930440 CC	1.0 (0.4)	Spray RUAR (C)	Sprayed CYCS (B), RUAR (C), ALRU	Invading CYSC (B), ALRU needed treatment
020524 CC	7.0 (2.9)	Spray PTAQ (nc)	Sprayed PTAQ (nc)	N/A
050527 CC	16.3 (6.6)	Spray PTAQ (nc)	None	Deferred
040528 CC	5.1 (2.1)	Spray PTAQ (nc)	None	Deferred
010676 CT	35.2 (14.2)	Spray CYSC (B)	Sprayed CYCS (B)	N/A
030677 CC	16.6 (6.7)	Spray PTAQ (nc), RUAR (C)	None	Previous treatments effective
030678 CC	7.9 (3.2)	Spray PTAQ (nc), RUAR (C)	None	Previous treatments effective
030679 CC	7.4 (3.0)	Spray PTAQ (nc), ALRU (nc)	None	Previous treatments effective
030680 CC	5.8 (2.3)	Spray PTAQ (nc), CYSC (B)	Sprayed RUAR (C), CYSC (B)	PTAQ too tall
030681 CC	0.6 (.2)	Spray PTAQ (nc)	None	Deferred
030682 CC	8.5 (3.4)	Spray PTAQ (nc), CYSC (B)	Sprayed CYCS (B)	PTAQ too tall
890931 CC	21.8 (8.8)	Spray CYSC (B)	Sprayed CYSC, ALRU	ALRU discovered in spring survey
920932 CC	13.8 (5.6)	Spray PHAR (C)	Sprayed PHAR	N/A
020936 CC	10.3 (4.2)	Spray PTAQ (nc)	None	Deferred
861103 CC	28.3 (11.5)	Spray RUAR (C)	None	Deferred
911231 CC	4.0 (1.6)	Spray RUAR (C), PHAR (C)	Sprayed RUAR, PHAR, CYSC, ALRU	Additional work identified in spring survey
021236 CC	18.4 (7.4)	Spray PHAR (C)	Sprayed PHAR	N/A
041237 CC	13.9 (5.6)	Spray RUAR (C), PTAQ (nc), PHAR (C)	Sprayed RUAR (C), PTAQ (nc), PHAR (C)	N/A
001541 CC	4.6 (1.9)	Spray PTAQ (nc)	None	Deferred
001542 CC	4.4 (1.8)	Spray PTAQ (nc)	None	Deferred
001543 CC	5.8 (2.3)	Spray PTAQ (nc)	None	Deferred
001544 CC	4.7 (1.9)	Spray PTAQ (nc)	None	Deferred
001545 CC	1.2 (.5)	Spray PTAQ (nc)	None	Deferred
921633 CC	3.3 (1.3)	Spray RUAR (C), MAOR (nc)	None	Deferred
991702 CC	37.2 (15.1)	Spray PTAQ (nc)	None	Deferred
091703 CC	22.5 (9.1)	Spray PTAQ (nc), ALRU (nc)	Sprayed ALRU	PTAQ to tall
091704 CC	14.4 (5.8)	Spray PTAQ (nc), ALRU (nc), CYSC (B)	Sprayed ALRU, Slashed ALRU	PTAQ to tall; CYSC deferred

Table 17. 2012 timber harvest areas invasive plant control treatments. (continued)

Timber Harvest Area	Acres (ha)	Recommended Action in 2012	Action Taken 2012	Reason For Difference
091705 CC	11.3 (4.6)	ALRU (nc)	Sprayed ALRU	N/A
021706 CC	12.0 (4.9)	None	Sprayed RUAR,CYSC	Additional work identified in spring survey
Total Acres Completed	**189.6 (76.9 ha)**			

[1] ALRU =red alder, CYSC = scotch broom, ILAQ = English Holly, MAOR = wild cucumber, , PHAR = Reed Canary Grass , PSME = Douglas-fir , PTAQ = bracken fern, RUAR = Himalayan blackberry, RUSP = salmonberry
[2]Noxious Weed Classification = (A) = Class A, (B) = Class B, (Bd) = Class B designated region 8, (C) = Class C, (nc) = not classified

11.2.13 Pre-Commercial Thinning

Pre-commercial thinning and/or pruning is conducted on timber harvest areas that are generally less than 5.0-7.0 ft (1.5-2.1 m) in height or is necessary to maintain big game forage. Pre-commercial thinning methods include both slash and hack-n-squirt. The hack-n-squirt method is conducted by cutting (hack) through the tree bark into the cambium layer of the tree and applying (squirting) herbicide into the hack and is the preferred method for trees greater than 5.0 ft (1.5 m) in height. The slash method is preferred for trees between 3.0 and 5.0 ft (0.9 and 1.5 m) in height and includes slashing the tree down, removing the limbs, and leaving the tree to decay on the ground. Pruning lower limbs (e.g. limbs in the lower 6 ft [2 m] of the tree) can be conducted to increase the sunlight penetration to the forest floor for enhancing/maintaining forage. All 2012 pre-commercial thinning is listed in Table 18 and locations are identified in Appendix F. A priority was given to conducting work in Management Unit 33 (purchased in 2010) because the tree density was much higher than other WHMP lands.

Table 18. 2012 pre-commercial thin treatment areas

Timber Harvest Area	Acres (ha)	Recommended Action		Action Taken 2012		Reason For Difference
		Slash PCT	Hack & Squirt PCT	Slash PCT	Hack & Squirt PCT	
900225 CC	7.3 (3.0)		X		X	
900227 CC	5.2 (2.1)		X		X	
050332 CC	10.7 (4.3)	X		X		
050333 CC	1.0 (0.4)	Not scheduled		X		Identified in spring survey
880660 CC	2.0 (.8)	X		X		
880661 CC	1.0 (.4)	X				Deferred to 2013
980673 CC	4.9 (2.0)					Pruned lower limbs
970767 CC	4.7 (1.9)	X		X		
000768 CC	8.1 (3.3)					Pruned lower limbs
000769 CC	10.6 (4.3)	X		X		
980836 CC	9.5 (3.8)	X		X		
991122 CC	7.0 (2.8)					Pruned lower limbs

Table 18. 2012 pre-commercial thin treatment areas (continued)

Timber Harvest Area	Acres (ha)	Recommended Action		Action Taken 2012		Reason For Difference
		Slash PCT	Hack & Squirt PCT	Slash PCT	Hack & Squirt PCT	
021236 CC	18.4 (7.4)	X		X		
051238 CC	25.1 (10.2)	X		X		
051239 CC	7.7 (3.1)	X		X		
001542 CC	4.4 (1.8)					Pruned lower limbs
001543 CC	5.8 (2.4)					Pruned lower limbs
001544 CC	4.7 (1.9)					Pruned lower limbs
001545 CC	1.2 (0.5)					Pruned lower limbs
921632 CC	4.4 (1.8)		X		X	
991701 CC	26.5 (10.7)					Pruned lower limbs
752001 CC	22.4 (9.1)		X			Deferred to 2013
043301 CC	59.0 (23.9)	X		X		
043302 CC	4.7 (1.9)	X		X		
043303 CC	6.3 (2.5)	X		X		
043304 CC	1.0 (.4)	X		X		
063305 CC	21.0 (8.5)	X		X		
063306 CC	39.9 (16.1)	X				Deferred to 2013
063307 CC	50.3 (20.4)	X				Deferred to 2013
063308 CC	2.6 (1.1)	X				Deferred to 2013
063309 CC	3.2 (1.3)	X				Deferred to 2013
Total Acres Completed	**380.6 (154.0 ha)**					

The total number of plantations and acres planned for pre-commercial management (thinning, slashing or pruning) was altered based on priorities but exceeded the number of acres planned. Other priorities were assigned to THAs with the highest need or were deferred until the following year or until a future date when they would potentially be commercially thinned. The THAs that were deferred until they are commercially thinned (CT) was based on the age of the plantations being over 20 years. The trees in these THAs are too large to PCT and produce the desired result of increasing forage in the understory. The total acres planned for PCT or pruning in 2012 was 317 acres (128.3 ha) and approximately 381 acres (154.0 ha) were completed.

12.0 Invasive Plant Species Management

Inspections and management actions completed in accordance with Lewis River WHMP Chapter 13.0 Invasive Plant Species Management are described below (Appendix A).

12.1 Prevention

The 2012 timber harvest areas and road construction were the only areas in 2012 that required more than 1000 ft^2 (93 m^2) of ground disturbance. All campgrounds and day use were parks were inspected for noxious weeds in June, no Class A noxious weeds were detected except at the know locations in Speelyai and Cresap Campground.

12.2 Detection

The Washington State, Skamania, and Cowlitz County noxious weed lists were updated in 2012 and was incorporated into the invasive plant species management. PacifiCorp inspected the Speelyai Day Use and Cresap Bay Campground on May 9 and 10 for shiny geranium (*Geranium lucidum*) and garlic mustard (*Alliara petiolata*), both of which are Class A noxious weed on the State and Cowlitz County list. These inspections determined an overall reduction in both shiny geranium and garlic mustard, but new populations of shiny geranium were discovered at both Cresap Bay Campground and Speelyai Park.

12.3 Treatment

Table 19 below lists the areas that were proposed to be treated in the 2012 Annual Plan and the actual areas that were treated in 2012. Several areas proposed to be treated in 2012 either didn't require treatment after further evaluation in the spring or were deferred due to time and budget constraints. Regardless, more work was completed in 2012 than anticipated. Appendix G provides a map of the 2012 invasive plant species treatment areas.

Table 19. 2012 invasive plant species control treatment areas

Mgt Unit	Area	Proposed 2012 Work		Actual 2012 Work		
		Target Species (Classification)[1,2]	Estimated Acres to treat	Target Species (Classification)[1,2]	Control Method	Total of Treated Area
1	Road 100 and 110			CIAR (B), CYSC (B), ALRU (nc), RUAR (C), RUSP (nc), PSME (nc)	Triclopyr, Glyphosate, Clopyralid	3.0
2	M200/M201 Road			CIAR (C), CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Triclopyr, Glyphosate, Clopyralid	1.00
	M200 Road			CIAR (C), CYSC (B), RUAR (C), ALRU (nc), PHAR (C), RUSP (nc), Grasses (nc), and PSME (nc)	Triclopyr, Glyphosate, Clopyralid	1.00
	M230 Road			CIAR (C), CYSC (B), RUAR (C), ALRU (nc), PHAR (C), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	1.00
	203/231 Road			CIAR (C), CYSC (B), RUAR (C), ALRU (nc), PHAR (C), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	3.00
	Studebaker			Grasses (nc)	Glyphosate	0.25
3	300/301/302 Road			CIAR (C), CYSC (B), RUAR (C), ALRU (nc), PHAR (C), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	3.00
	310/320			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), ACMA (nc) and PSME (nc)	Triclopyr, Clopyralid	1.00
4	Road 430			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), ACMA (nc), and PSME (nc)	Triclopyr, Clopyralid	0.50

Table 19. 2012 invasive plant species control treatment areas (continued)

Mgt Unit	Area	Proposed 2012 Work		Actual 2012 Work		
		Target Species (Classification)[1,2]	Estimated Acres to treat	Target Species (Classification)[1,2]	Control Method	Total of Treated Area
4	Road 420 ROW 7/14-1/14			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), ACMA (nc), and PSME (nc)	Triclopyr, Clopyralid	5.00
	Road 410			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), ACMA (nc), and PSME (nc)	Clopyralid	2.00
	HWY 503 and 400 Road jct			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Glyphosate	3.00
	930440			MAOR (nc)	Triclopyr	0.99
	400 Road			CYSC (B), RUAR (C), ALRU (nc)	Triclopyr, Clopyralid	1.00
5	Roads 540 and 541			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	3.00
	Road 550 and 552			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Clopyralid	3.00
	Road 530			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	1.00
	Road 500			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	1.50
	Oak Sites 5-1 and 5-2			CYSC (B)	Triclopyr	2.00
6	Speelyai Road and Day Use Area	GELU (A)	0.2 (0.08)	GELU (A)	Glyphosate	2.00
	Speelyai Road and Day Use Area	ALPE (A), HIPO (B)	0.2 (0.08)	ALPE (A),	Glyphosate	0.2
	610 Road			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	2.50

Table 19. 2012 invasive plant species control treatment areas (continued)

	Area	Proposed 2012 Work		Actual 2012 Work		
		Target Species (Classification)[1,2]	Estimated Acres to treat	Target Species (Classification)[1,2]	Control Method	Total of Treated Area
6	Road 607			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and PSME (nc)	Triclopyr, Clopyralid	3.00
	Road 650			CYSC (B), RUAR (C), ALRU (nc), and RUSP (nc)	Triclopyr, Clopyralid	6.00
	Road 600			CYSC (B), RUAR (C), ALRU (nc), and SYAL (nc)	Triclopyr	1.00
	010676CT			CYSC (B)	Triclopyr, Clopyralid	3.00
	030682CC			CYSC (B)	Triclopyr, Clopyralid	1.00
	Oak Site 6-22a and 6-22b			CYSC (B)	Triclopyr	2.50
	Oak Site 6-45			CYSC (B)	Triclopyr	1.00
	Oak Site 6-45			CYSC (B)	Triclopyr	1.00
	030680CC			CYSC (B), RUAR (C)	Triclopyr, Clopyralid	2.00
7	Roads 790 and 791			CYSC (B), RUAR (C), ALRU (nc), and RUSP (nc)	Triclopyr, Clopyralid	0.50
	Speelyai Road			CYSC (B), RUAR (C), ALRU (nc), MAOR (nc), and RUSP (nc)	Triclopyr, Clopyralid	2.00
	Old-growth 7-1			ILAQ (nc)	Glyphosate	1
8	Cresap Campground	GELU (A)	0.3	GELU (A)	Glyphosate	2.25
	Road 800 and 800c1			CYSC (B), RUAR (C)	Triclopyr, Clopyralid	1.5

Table 19. 2012 invasive plant species control treatment areas (continued)

Mgt Unit	Area	Proposed 2012 Work		Actual 2012 Work		
		Target Species (Classification)[1,2]	Estimated Acres to treat	Target Species (Classification)[1,2]	Control Method	Total of Treated Area
9	Road 937			CYSC (B), RUAR (C), PSME (nc)	Triclopyr, Clopyralid	1.00
	Road 936			CYSC (B), RUAR (C)	Triclopyr, Clopyralid	0.25
	Road 931			CYSC (B), ALRU (nc)	Triclopyr, Clopyralid	2.50
	Road 932			PHAR (C)	Triclopyr, Clopyralid	3.00
	Road 920			CYSC (B), ALRU (nc)	Triclopyr, Clopyralid	1.00
10	Saddle Dam Field 2			CIAR (B)	Triclopyr	8.2
	Saddle Dam Field 1 and 5			CIAR (B)	Triclopyr	9.0
	Saddle Dam			CYSC (B), RUAR (C), RUSP (nc), ALRU (nc), ACMA (nc), PSME (nc)	Triclopyr, Clopyralid	6.0
11	Unit 11 roads			CYSC (B), RUAR (C), ALRU (nc), IMCA (nc)	Triclopyr, Clopyralid	5.00
12	Unit 12 Roads and Hanley-Curry Rd			CYSC (B), RUAR (C), ALRU (nc), RUSP (nc), and ILAQ (nc)	Triclopyr, Glyphosate, Clopyralid	5.0
	Portions of the 1200, 1210 and 1240 roads in THA 021236CC, 911231CC, and 04137CC			PHAR (C)	Glyphosate	20.0
	911231CC			CYSC (B), RUAR (C)	Triclopyr, Clopyralid	5.3
	041237CC			CYSC (B), RUAR (C)	Triclopyr, Clopyralid	2.0
	1201 Road			CIVU (C)	Triclopyr, Clopyralid	1.0
15	Buncombe Hollow Orchard and Meadow			CYSC (B), RUAR (C), and SYAL (nc)	Triclopyr, Clopyralid	2.0

Table 19. 2012 invasive plant species control treatment areas (continued)

Mgt Unit	Area	Proposed 2012 Work		Actual 2012 Work		
		Target Species (Classification)[1,2]	Estimated Acres to treat	Target Species (Classification)[1,2]	Control Method	Total of Treated Area
16	Buncombe Hollow Road			ILAQ (nc)	Glyphosate	2.0
	Across from Boat Ramp			POCU (B)	Glyphosate, Imazpyr	2.5
17	031706CC			CYSC (B) and RUAR (C)	Triclopyr, Clopyralid	9.6
	Jackman Location			PHAR (c), RUAR (C)	Triclopyr, Clopyralid	2
	Hamm Meadows and Planatation			CYSC (B), RUAR (C), PHAR (C)	Triclopyr, Clopyralid	7
	1700 roads			CYSC (B), RUAR (C), ALRU (nc), and RUSP (nc)	Triclopyr, Clopyralid	3
	Hamm Meadow4			CYSC (B) and RUAR (C)	Triclopyr, Clopyralid	23
	ROW Reese Road to Aultman Road			CYSC (B), RUAR (C), PSME (nc)	Triclopyr, Clopyralid	3
18	1800 Road			CIAR (C), CYSC (B), RUAR (C), ALRU (nc), and PSME (nc)	Triclopyr, Clopyralid	3.0
19	Cougar Quarry	POCU (B), BUDA (B)	0.5	CYSC (B), RUAR (C), ALRU (nc), and POCU6 (B)	Imazapyr, Triclopyr, Glyphosate , Clopyralid	2.0
21	Cougar Park			CYSC (B), RUAR (C)	Triclopyr	5.0
	Beaver Bay			CYSC (B), RUAR (C)	Triclopyr	7.0
25	Swift Warehouse Meadow			CYSC (B), RUAR (C), and ALRU (nc)	Triclopyr, Clopyralid	4.00
	Swift Facilites			CYSC (B), RUAR (C), and ALRU (nc)	Triclopyr, Clopyralid	5.00
	Swift Warehouse Meadow			POCU (B)	Glyphosate , Imazpyr	0.50
	2500 Road			CYSC (B)	Triclopyr, Clopyralid	4.00

Table 19. 2012 invasive plant species control treatment areas (continued)

Mgt Unit	Area	Proposed 2012 Work		Actual 2012 Work		
		Target Species (Classification)[1,2]	Estimated Acres to treat	Target Species (Classification)[1,2]	Control Method	Total of Treated Area
25	Swift Warehouse Meadow			CYSC (B), RUAR (C), and ALRU (nc)	Triclopyr, Clopyralid	4.00
	Swift Facilites			CYSC (B), RUAR (C), and ALRU (nc)	Triclopyr, Clopyralid	5.00
	Swift Warehouse Meadow			POCU (B)	Glyphosate , Imazpyr	0.50
	2500 Road			CYSC (B)	Triclopyr, Clopyralid	4.00
26	Roads 2600,2601, and 2602			CYSC (B), RUAR (C), ALRU (nc), and RUSP (nc)	Triclopyr, Clopyralid	4.0
28	Old landing area off of 25 road			CYSC (B)	Triclopyr, Clopyralid	2.0
	Eagle Cliff Park			CYSC (B)	Triclopyr, Clopyralid	3.0
32	Merwin Boat Ramp	IMGL (B)	200 ft^2	IMGL (B), CYSC (B), POCU (B)	Glyphosate , Imazpyr	5.5
	Hydro Control Center and Arial Road			ILAQ (nc), HEHE (C), POCU (B)	Glyphosate , Imazpyr	6.0
		Total Acres	**1.3**		**Total Acres**	**286.6**

[1] ALRU = red alder, ALPE = garlic mustard, CIAR = Canada thistle, CYSC = scotch broom, GELU = Shiny geranium, HEHE = English Ivy, ILAQ= English Holly, IMGL= Policeman's helmet, MAOR = Wild cucumber, PHAR = reed canarygrass POCU = Japanese knotweed, PSME = Douglas-fir, RUAR = Himalayan blackberry, RUSP = Salmonberry, SYAL = Common snowberry

[2]Noxious Weed Classification shown it based on highest ranking between the State and applicable County Weed list (A) = Class A, (B) = Class B, (Bd) = Class B designated region 8, (C) = Class C, (nc) = not classified

13.0 Raptor Management

Management actions were completed in accordance with Lewis River WHMP Chapter 14.0 Raptor Site Management and are described below (Appendix A):

13.1 Monitoring

Raptor nest and roost sites were surveyed as needed to meet management objectives, which included the annual aerial surveys for bald eagle and osprey nests and broadcast acoustical surveys for northern goshawk (*Accipiter gentilis*) nests in areas with proposed timber harvest management projects (i.e., management units 4, 6, 15, 20, 25 and 28).

13.1.1 Aerial Survey for Bald Eagle and Osprey Nests

The aerial surveys for bald eagle and osprey nests were completed on April 18 and June 20, 2012. The April survey focuses primarily on nesting eagles because it is too early to accurately observe osprey nest occupancy. During this survey, two new eagle nests were located in the existing Speelyai Bay (1266) and Drift Creek (544) territories and a new nesting territory was discovered by the Swift Forest Camp. Three of the eagle nest site territories (Woodland, Lake Merwin, and Swift 2 Powerhouse) were occupied.

The June aerial survey focuses on bald eagle nest reproductive success and osprey nest occupancy. The table below provides a summary of the 2012 bald eagle and osprey nest data and compares it to 2011 data. Overall, 2012 had an increase in nests occupancy rates for both bald eagle and osprey nests and new nests were detected for both osprey and bald eagles. However the late and persistent cold conditions through June appeared to cause decline in reproductive success.

Table 20. Summary data for bald eagle and osprey aerial nest data

Nest Attribute	Bald Eagle		Osprey	
	2011	2012	2011	2012
Total number of nests surveyed	12	15	43	43
Total Number of Territories	11	10	Not Applicable	Not Applicable
Number of new nest detected	1	3	2	1
Number of occupied nests	4	6	12	14
Successful Reproduction	4	2	0	0
Number of nest destroyed and unrepaired	7	3	30	10
Percent of Occupancy	36%	60%	28%	33%
Percent of Successful Reproductions	100%	33%	Not applicable	Not Applicable

The McKee-Woodland eagle nest (1486-1) was archived in 2012. This nest was occupied in 2001 through 2003. In 2004 the nest blew down and was never repaired or occupied again. Since the nest has been inactive (i.e. not occupied at any time) for five or more consecutive years, it was eligible for archiving. There are no other remaining active nests within this territory, therefore the site will no longer be monitored. The general area will continue to be searched during the aerial flights.

13.1.2 Broadcast Acoustical Surveys for Northern Goshawks

Broadcast acoustical surveys for northern goshawks were conducted for proposed timber harvest projects in Units 4, 6, 15, 20, 25, and 27. All suitable habitats on WHMP lands within 1,641 ft (500 m) of the proposed project area were surveyed. Each survey consists of two consecutive years with two visits per year that are at least two weeks apart. Appendix H provides maps of the timber harvest areas and the survey stations. Survey forms are available upon request.

- Unit 4 proposed timber harvest areas were surveyed for the first year of two consecutive survey years. In 2012, the two surveys were completed and each survey required two people. The first survey was conducted on June 25 and 26 and the second survey was conducted on August 9. The Woodland Park 2 Osprey nest was confirmed.
- Unit 6 had 3 proposed timber harvest areas: one adjacent to Speelyai Park (Unit 6 – Speelyai) and two below the 600 road (Unit 6 – 600 road). Because of the distance between the 600 road timber harvest area and Speelyai Park timber harvest area, these were split into two separate survey areas: 600 road and Speelyai.
    - The 600 road survey proposed timber harvest areas were surveyed for the first year of two consecutive survey years in 2011. In 2012, two surveys were completed and each survey required two people. The first survey was conducted on June 20 and 21 and the second survey was conducted on July 16. No nesting raptors were observed.
    - The Speelyai survey proposed timber harvest area was surveyed for the first year in 2011 of two consecutive survey years. In 2012, two surveys were completed and each survey required two people. The first survey was conducted on June 25 and the second survey was conducted on July 18. No nesting raptors were observed.
- Unit 15 proposed timber harvest areas were surveyed for the second year of two consecutive survey years. In 2012, the two surveys were completed and each survey required two people. The first survey was conducted on June 11 and 12 and the second survey was conducted on July 23. The Buncombe Hollow 3 Osprey nest was confirmed occupied.
- Unit 20 proposed timber harvest areas were surveyed for the first year of two consecutive survey years. In 2012, two surveys were completed and each survey required two people. The first survey was conducted on July 9 and 12 and the second survey was conducted on August 14 and 15. The Cougar Creek 1 Osprey nest was confirmed occupied.
- Unit 25 proposed timber harvest area was surveyed for the second of two consecutive survey years. In 2012, the two surveys were completed and each survey required two people. The first survey was conducted on June 6 and the second survey was conducted on August 31. No nesting raptors were observed.
- Unit 27 proposed timber harvest area was surveyed for the first year of two consecutive survey years. In 2012, the two surveys were completed by two people in one day. The first survey was conducted between July 10 and the second survey was conducted on August 10. No nesting raptors were observed

13.2 Best Management Practices

The following general raptor and northern spotted owl best management practices were adhered to or applied as needed on WHMP lands:

- The raptor database was reviewed, as needed, to determine all known raptor nest locations within 0.5 miles (0.8 km) of proposed projects that have the potential to remove or modify nesting habitat or have the potential to disturb nesting raptors.
- Completed protocol surveys for northern goshawks prior to implementing activities that will remove or modify northern goshawk nesting habitat.
- Activities that necessitated the removal of suitable northern spotted owl nesting, roosting, and foraging habitat between March 1 and August 31 were approved by the TCC and adhered to the Limited Operating Period.
- Transmission lines on WHMP lands are managed according to PacifiCorp's standards and within industry standards for avian protection on power lines.

13.3 Conservation Measures

The following conservation measures were adhered to or applied as needed on WHMP lands:

- High-impact sound-generating activities that were within 0.25 miles (0.40 km) of unsurveyed suitable habitat occurred outside the early nesting season of March 1 to June 30 to avoid potentially disturbing nesting spotted owls.
- Clearcut harvesting conducted in northern spotted owl roosting and foraging habitat did not exceed 10 to 30 ac (4 to 30 ha) in size (Table 10, 11, and 12).
- No more than 65 acres (26 ha) of mid-successional and upland mixed vegetation were harvested per year (Table 10, 11, and 12)
- Maintained at least 50 percent of dispersal or better habitat.

14.0 PUBLIC ACCESS MANAGEMENT

Inspections and management actions completed in accordance with Lewis River WHMP Chapter 15.0 Public Access Management are described below:

14.1 Inspections

Initial road evaluations on properties acquired in 2012 as well as gates and unauthorized roads/trails inspections on all WHMP lands were conducted as planned in 2012. PacifiCorp acquired 2,111 acres (854.3 ha.) of new habitat in 2012 that included 15.4 miles (24.8 km) of roads. Open public access points were evaluated and abandonment or closures were initiated (Tables 21, 22 and 23).

Table 21. Management Unit 34 roads acquired in 2012

ROAD NAME	ROAD BARRIER TYPE	COMMENTS	OHV FREQUENCY OF USE*	ROAD USE	ROAD SURFACE	LENGTH MILES	Abandoned /Orphaned	2012 ACTIONS
3400	Gate	Gate on Fruit Growers (PPL key)	low	WHMP	Improved - rock	0.95	**No**	Grade, ditch, culvert improvements
3401	None		low	WHMP	Unimproved dirt	0.08	**No**	Drainage improvement
3402	None	Midway Road (CCC camp)	low	WHMP	Unimproved dirt	0.10	**No**	
3403	None		low	WHMP	Unimproved dirt	0.18	**Yes**	
3404	Roadway Ripped		low	WHMP	Unimproved dirt	0.20	**Yes**	removed culverts; ripped
3405	Roadway Ripped	Extensive ATV use from east	low	WHMP	Unimproved dirt	0.78	**Yes**	Roadway Ripped
3406	Roadway Ripped		low	WHMP	Unimproved dirt	0.11	**Yes**	
3410	None	new culverts / ditches	low	WHMP	Rock	1.37	**No**	Grade, ditch, culvert improvements
3410	Roadway Ripped	650 feet ripped adjacent USFS	low	WHMP	x	0.13	**Yes**	Roadway Ripped
3411	None		low	WHMP	Unimproved dirt	0.08	**No**	
3412	natural veg	Orphaned road - no culverts	low	WHMP	Unimproved dirt	0.30	**Yes**	
3413	None		low	WHMP	Unimproved dirt	0.32	**No**	
3420	None		low	WHMP	Unimproved dirt	0.25	**No**	Drainage improvement
3420	Roadway Ripped		low	WHMP	Unimproved dirt	0.12	**Yes**	Roadway Ripped
3421	None		low	WHMP	Unimproved dirt	0.10	**No**	
3422	None		low	WHMP	Unimproved dirt	0.06	**No**	
3423	BERM		low	WHMP	Unimproved dirt	0.11	**No**	
3430	None		low	WHMP	Unimproved dirt	0.79	**No**	Vegetation encroachment cleared
3431	None		low	WHMP	Unimproved dirt	0.11	**No**	
* OHV use considered low <u>after</u> closures					TOTAL	**6.14**		

Table 22. Management Unit 35 roads acquired in 2012

ROAD NAME	ROAD BARRIER TYPE	COMMENTS	OHV FREQUENCY OF USE*	ROAD USE	ROAD SURFACE	LENGTH MILES	Abandoned /Orphaned	ACTION
3500	Gate	Access via FS 8312	low	WHMP	Unimproved dirt	0.52	No	Culvert replacements
3501	None	rock pit access	low	WHMP	Unimproved dirt	0.08	No	
3502			low	WHMP	Unimproved dirt	0.28	No	
3510	Gate	Gate on Fruit Growers (PPL key)	low	WHMP	Unimproved dirt	0.72	No	Vegetation encroachment cleared; New Gate
3515			low	WHMP	Unimproved dirt	0.46	No	
3516			low	WHMP	Unimproved dirt	0.07	No	
3520			low	WHMP	Unimproved dirt	0.47	No	
3530			low	WHMP	Unimproved dirt	0.20	No	
3540	Gate		low	WHMP	Unimproved dirt	1.09	No	Vegetation encroachment cleared; New Gate
3541			low	WHMP	Unimproved dirt	0.11	No	
3542			low	WHMP	Unimproved dirt	0.10	No	
3543	None		low	WHMP	Unimproved dirt	0.15	No	
3550	Gate		low	WHMP	Unimproved dirt	1.28	No	Vegetation encroachment cleared; New Gate
3551	None	Rock pit access	low	WHMP	Unimproved dirt	0.08	No	
3552	None		low	WHMP	Unimproved dirt	0.20	No	
3553	None		low	WHMP	Unimproved dirt	0.22	No	
3560	None	washed out	low	WHMP	Unimproved dirt	1.10	Yes	needs assessment
3565	None		low	WHMP	Unimproved dirt	0.22	No	
3570	None		low	WHMP	Unimproved dirt	0.25	No	
* OHV use considered low after closures					TOTAL	**7.60**		

Table 23. Management Unit 38 roads acquired in 2012

ROAD NAME	ROAD BARRIER TYPE	COMMENTS	OHV FREQUENCY OF USE	ROAD USE	ROAD SURFACE	LENGTH MILES	Abandoned /Orphaned	ACTION
3801	None	Access via ungated DNR road	?	WHMP	Unimproved dirt	**0.62**	No	Gate in 2013
3802	None	Access via ungated DNR road	?	WHMP	Unimproved dirt	**0.61**	No	Gate in 2013
38xx	None	Access via ungated DNR road	?	WHMP	Unimproved dirt	0.41	No	Needs Assessment

14.2 Management Actions

Seven new gates were manufactured and installed on WHMP roads in 2012. Three gates were installed on roads accessing the newly acquired lands (Management Unit 35), two gates were installed on roads where previous closures were ineffective (Roads 530 and 1920), one gate replaced one that was vandalized in 2011 (Management Unit 11) and the final gate was installed on a new access road in Management Unit 15. The new road replaces an old road that was within a riparian buffer and moved it outside the 100 foot buffer for a non-fish seasonal stream. The old gate had a history of unauthorized access around it and the new location should improve our ability to restrict access.

Additional vehicle access restrictions (stumps and welding additions to gates) were added in Management Units 16 and 33 due to trespass around existing gates.

Figure 10. PacifiCorp added extensions to the gate in Management Unit 33 where trespassers had filled in the adjacent ditch.

Public motorized access into Management Unit 34 (acquired in June 2012) previously consisted of an unauthorized road originating from U.S. Forest Service lands and another from private timber land adjoining the property. Both of these roads were ripped with an excavator to prevent vehicle access (Figure 11). Signs were posted along access points indicating the area was closed to motor vehicle access, trees were felled across the old road bed and disturbed soils were grass seeded. These areas were visited with the TCC on October 10, 2012. Forest Service road 8312 crosses the property in the southwest corner but this road is washed out where it crosses Swift Creek and therefore does not provide public vehicle access to Management Unit 34.

Figure 11. Road 3410 was closed to vehicle access from an unauthorized U.S. Forest Service road.

PacifiCorp's WHMP lands now include over 109 miles (175.4 km) of managed roads with 87 gates or barriers to public access directly on WHMP lands. Another 10 barriers exist beyond PacifiCorp ownership that further restricts unauthorized vehicle access. Signs were checked and re-posted as necessary indicating no unauthorized motor vehicle access to aid law enforcement and to further notify the public that these areas are enforced as non-motorized access lands. Unauthorized motorized vehicle use remains an issue in certain areas despite signage and new gates but overall the unauthorized activities have declined.

15.0 Land Acquisition

PacifiCorp Energy completed acquisition of 2,111 acres (854.3 ha) of land on June 4, 2012. The land was previously owned by a private industrial timberland owner and a portion of it is adjacent land acquired in 2010. The purchase was coordinated and approved through the TCC for addition to the Lewis River Wildlife Habitat Management area that now consists of 13,134 acres (5,314 ha). The Swift No. 1 and Swift No. 2 Fund are currently at $28,733.98 (as of December 31, 2012).

Figure 12. TCC member's tour newly acquired WHMP lands located south of Mt. St. Helens

Figure 13. Looking north towards southern boundary of lands acquired in 2012

The Property is located in Township 7 North, Range 5 East, Sections 1, 9 (partial), 10 (partial), 12 (partial), and 13 (Figure 14). The Property is situated to the North of Swift Reservoir and is currently undeveloped land.

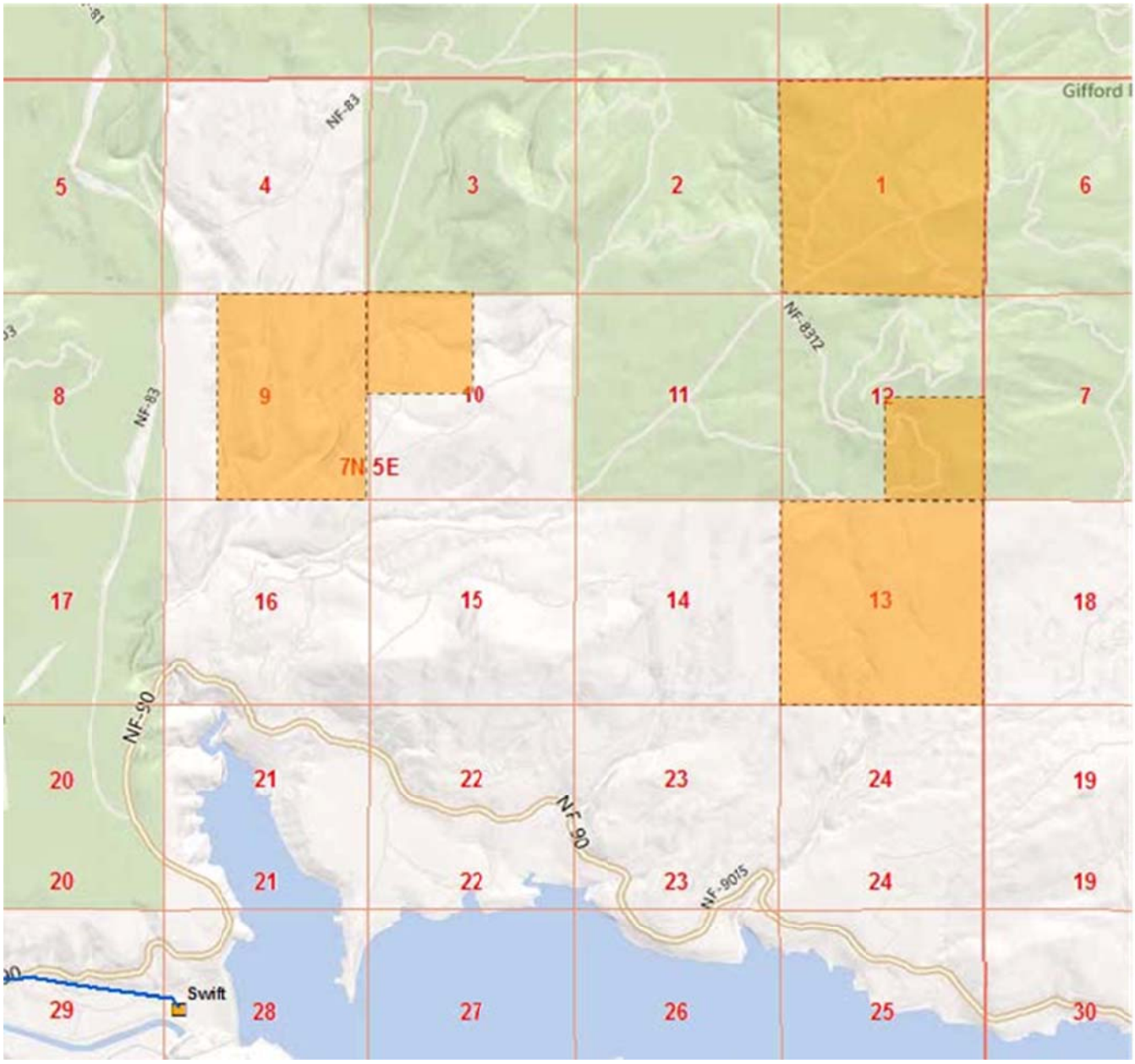
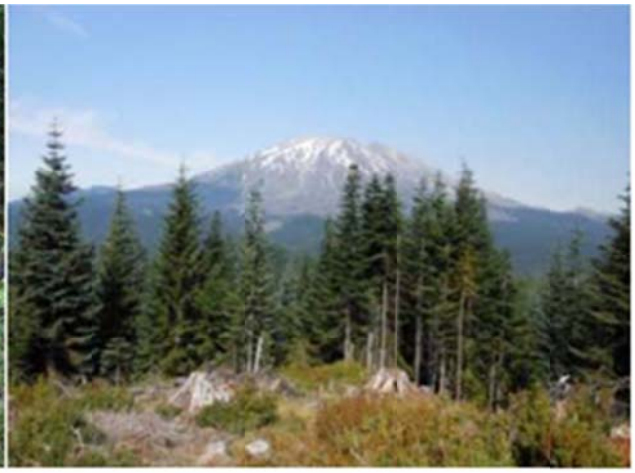


Figure 14. PacifiCorp property purchased in 2012 (highlighted in orange).

With this acquisition PacifiCorp WHMP lands now total 13,133.5 acres (5,315 ha.)

PacifiCorp completed initial inventories and GIS mapping of roads and culverts for these new properties in 2012. Additionally, several roads and trails were closed with gates or other means to prevent unauthorized vehicle access (see 14.0 Public Access).

Photographs of the Property



Section 13

36: Facing south from the north portion of Section 13

Section 13

37: Facing easterly from the north portion of Section 13 on internal access road

16.0 References

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APPENDIX A
2012 WILDLIFE HABITAT MANAGEMENT PLAN SCHEDULE AND BUDGET

License Year 4
Calendar Year 2012
Annual WHMP Budget

Total Available Funds

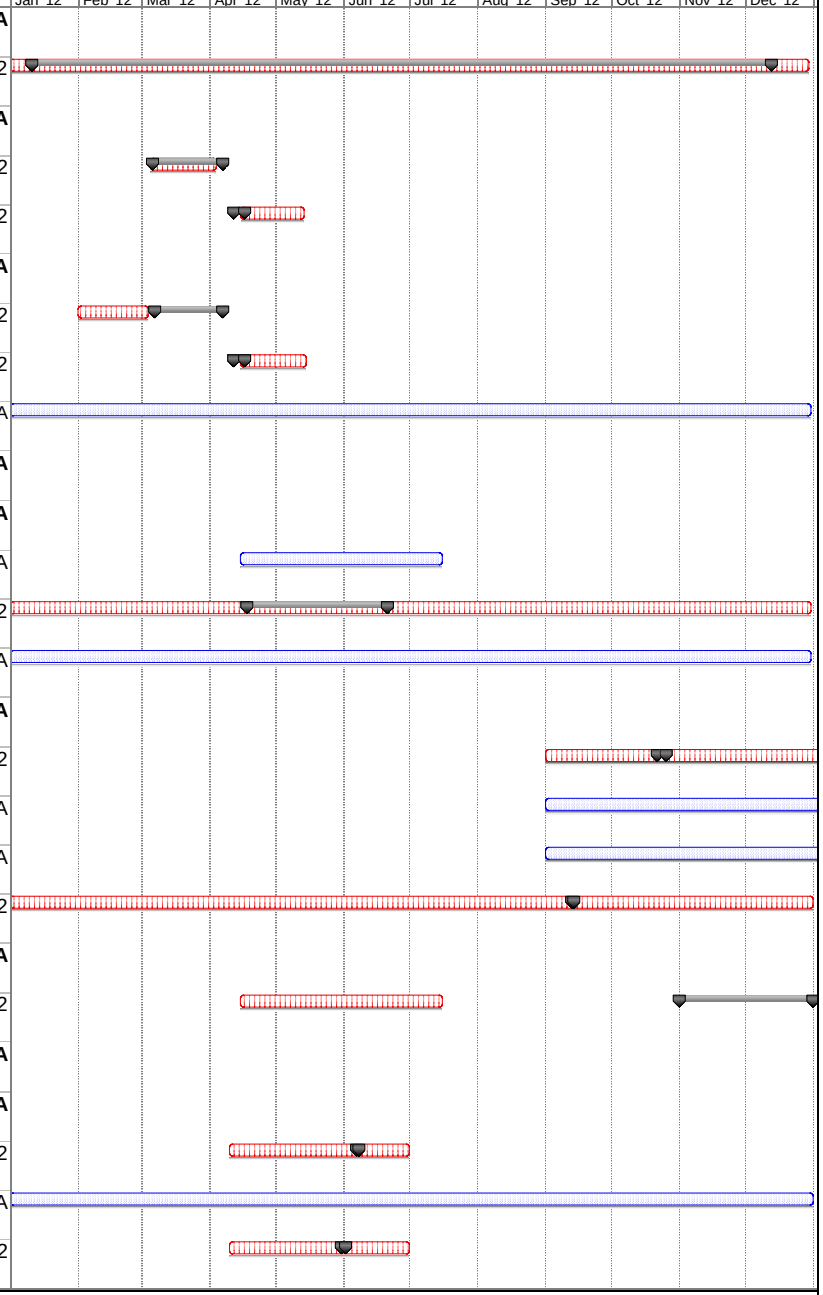
Fee Simple Lands	Acres	11,105
	Cost Per Acre	$32.47
	SubTotal	$360,611.00
Interests in Lands	Acres	16
	Cost Per Acre	$16.24
	SubTotal	$259.78
Other Additional Funds	Remaining Funds from 2011	$33,093.31
	Additional HEP Funding	$0.00
	Property Encroachment Payment*	$2,000.00
	SubTotal	$35,093.31
	Total	**$395,964.09**

Budget

WHMP Management Area or Plan-Wide Goal		**Proposed**	**Actual**	**Difference**
Administration	Amount	$30,500.00	$31,454.60	$954.60
	Percent of Budget/Spent	7.70%	8.02%	
Old-Growth	Cost	$11,250.00	$5,728.90	-$5,521.10
	Percent of Budget	2.84%	1.46%	
Wetlands	Cost	$15,075.00	$5,097.23	-$9,977.77
	Percent of Budget	3.81%	1.30%	
Riparian	Cost	$13,725.00	$2,312.19	-$11,412.81
	Percent of Budget	3.47%	0.59%	
Shrubland	Cost	$2,250.00	$7,531.07	$5,281.07
	Percent of Budget	0.57%	1.92%	
Farmland, Meadow, Idle Areas	Cost	$50,010.00	$50,733.99	$723.99
	Percent of Budget	12.63%	12.94%	
Orchard	Cost	$14,150.00	$16,363.32	$2,213.32
	Percent of Budget	3.57%	4.17%	
Transmission Line Right-of-Way	Cost	$24,150.00	$17,782.79	-$6,367.21
	Percent of Budget	6.10%	4.54%	
Unique Area/Habitat	Cost	$9,900.00	$5,144.47	-$4,755.53
	Percent of Budget	2.50%	1.31%	
Forestland	Cost	$150,400.00	$166,103.38	$15,703.38
	Percent of Budget	37.98%	42.38%	
Invasive Plant Species	Cost	$18,475.00	$18,773.87	$298.87
	Percent of Budget	4.67%	4.79%	
Raptor	Cost	$41,900.00	$53,837.81	$11,937.81
	Percent of Budget	10.58%	13.73%	
Public Access Management	Cost	$11,150.00	$11,116.09	-$33.91
	Percent of Budget	2.82%	2.84%	
Monitoring	Cost	$3,000.00	$0.00	-$3,000.00
	Percent of Budget	0.76%	0.00%	
	Total Cost	**$395,935.00**	**$391,979.71**	
	Total Percent of Budget Spent	**99.99%**	**99.00%**	
	Remaining Funds	**$29.09**	**$3,984.38**	

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

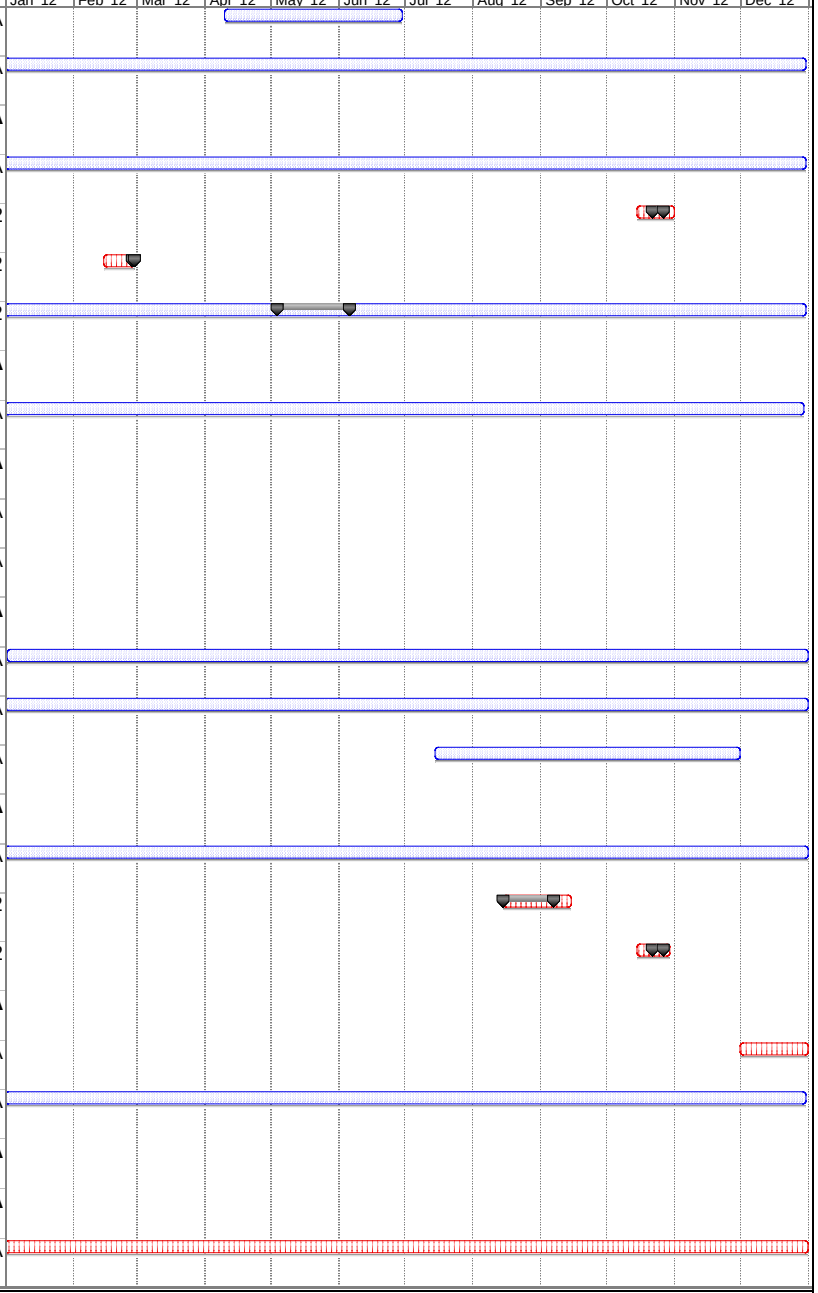
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
1	**Administration**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
2	Terrestrial Coordination Committee	Sun 1/1/12	Sun 12/30/12	Wed 1/11/12	Wed 12/12/12
3	**2011 Annual Report**	**Mon 3/5/12**	**Sun 5/13/12**	**NA**	**NA**
4	TCC 30-day Review	Mon 3/5/12	Tue 4/3/12	Tue 3/6/12	Fri 4/6/12
5	FERC 30-day Review	Sun 4/15/12	Sun 5/13/12	Thu 4/12/12	Mon 4/16/12
6	**2012 Annual Plan**	**Wed 2/1/12**	**Tue 5/15/12**	**NA**	**NA**
7	TCC 30-day Review	Wed 2/1/12	Sat 3/3/12	Wed 3/7/12	Fri 4/6/12
8	FERC 30-day Review	Sun 4/15/12	Tue 5/15/12	Thu 4/12/12	Mon 4/16/12
9	Restoration Plans	Sun 1/1/12	Mon 12/31/12	NA	NA
10	**Old-Growth Habitat**	**Sun 1/1/12**	**Thu 2/28/13**	**NA**	**NA**
11	**Inspections**	**Sun 1/1/12**	**Sun 12/30/12**	**NA**	**NA**
12	Initial Evaluations	Sun 4/15/12	Sun 7/15/12	NA	NA
13	Aerial Surveys	Sun 1/1/12	Sun 12/30/12	Wed 4/18/12	Wed 6/20/12
14	Ground Surveys	Sun 1/1/12	Sun 12/30/12	NA	NA
15	**Development**	**Sun 1/1/12**	**Thu 2/28/13**	**NA**	**NA**
16	Snag Development	Sat 9/1/12	Thu 2/28/13	Mon 10/22/12	Thu 10/25/12
17	Thinning	Sat 9/1/12	Thu 2/28/13	NA	NA
18	Large Woody Debris	Sat 9/1/12	Thu 2/28/13	NA	NA
19	Remove English Holly	Sun 1/1/12	Mon 12/31/12	Thu 9/13/12	Thu 9/13/12
20	**Connectivity**	**Sun 4/15/12**	**Sun 7/15/12**	**NA**	**NA**
21	Mature Stand Connectivity Evaluations	Sun 4/15/12	Sun 7/15/12	Thu 11/1/12	Mon 12/31/12
22	**Wetland Habitat**	**Sun 1/1/12**	**Wed 12/31/25**	**NA**	**NA**
23	**Inspections**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
24	Initial Evaluation	Tue 4/10/12	Sat 6/30/12	Thu 6/7/12	Thu 6/7/12
25	Initial Evaluation Final Report	Sun 1/1/12	Mon 12/31/12	NA	NA
26	Annual Inspection	Tue 4/10/12	Sat 6/30/12	Thu 5/31/12	Fri 6/1/12



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

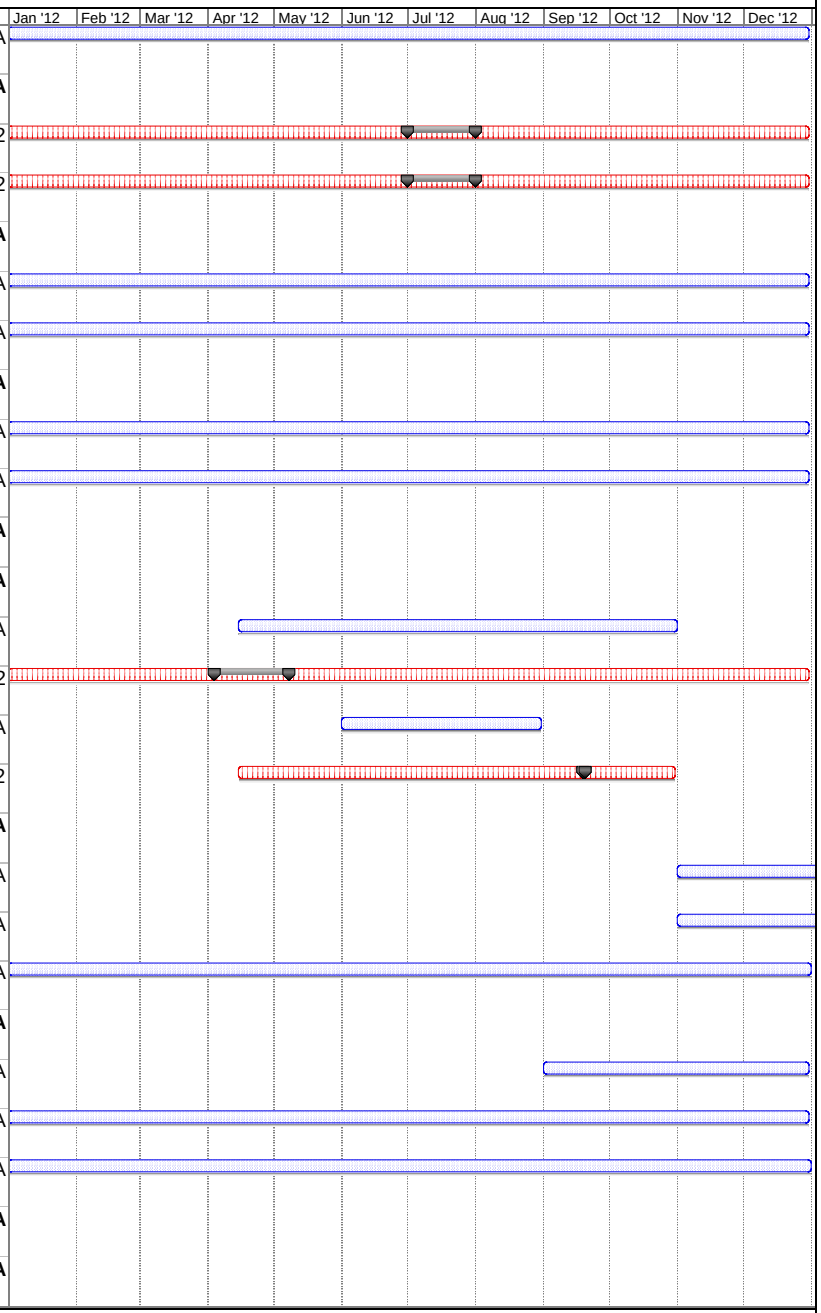
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
27	Annual Inspection with unmanaged wetlands	Tue 4/10/12	Sat 6/30/12	NA	NA
28	Post-Treatment Inspection	Sun 1/1/12	Sun 12/30/12	NA	NA
29	**Water Control**	**Sun 1/1/12**	**Sun 12/30/12**	**NA**	**NA**
30	Diversion Draw Down	Sun 1/1/12	Sun 12/30/12	NA	NA
31	Winter Flow Stop Log Removal	Mon 10/15/12	Wed 10/31/12	Mon 10/22/12	Fri 10/26/12
32	Winter Flow Stop Log Replacement	Wed 2/15/12	Tue 2/28/12	Tue 2/28/12	Tue 2/28/12
33	Dike Maintenance	Sun 1/1/12	Sun 12/30/12	Fri 5/4/12	Tue 6/5/12
34	**Vegetation Management**	**Sun 1/1/12**	**Sun 12/30/12**	**NA**	**NA**
35	Surrounding Wetland Vegetation	Sun 1/1/12	Sun 12/30/12	NA	NA
36	**Yellow Warbler and Mink Habitat Enhancement**	**Fri 1/31/25**	**Wed 12/31/25**	**NA**	**NA**
37	Shrub Planting	Sat 2/1/25	Tue 4/1/25	NA	NA
38	Tree Topping or Pruning to Enhance Existing Shrub	Fri 1/31/25	Wed 12/31/25	NA	NA
39	**Waterfowl and Bat Habitat Enhancement**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
40	Loafing Logs	Mon 1/2/12	Mon 12/31/12	NA	NA
41	Snag Creation	Sun 1/1/12	Mon 12/31/12	NA	NA
42	Aquatic Vegetation Control	Sun 7/15/12	Fri 11/30/12	NA	NA
43	**Bullfrog Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
44	Implement Bullfrog Management Methods	Sun 1/1/12	Mon 12/31/12	NA	NA
45	Remove Stoplogs	Wed 8/15/12	Sat 9/15/12	Wed 8/15/12	Thu 9/6/12
46	Replace Stoplogs	Mon 10/15/12	Tue 10/30/12	Mon 10/22/12	Fri 10/26/12
47	**Great Blue Heron Colony Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
48	Review WDNR Heritage Database	Sat 12/1/12	Mon 12/31/12	NA	NA
49	Great Blue Heron Colony Site Management Repor	Sun 1/1/12	Sun 12/30/12	NA	NA
50	**Riparian Habitat**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
51	**Inspection**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
52	Riparian Mixed Forest Stand Evaluation	Sun 1/1/12	Mon 12/31/12	NA	NA



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

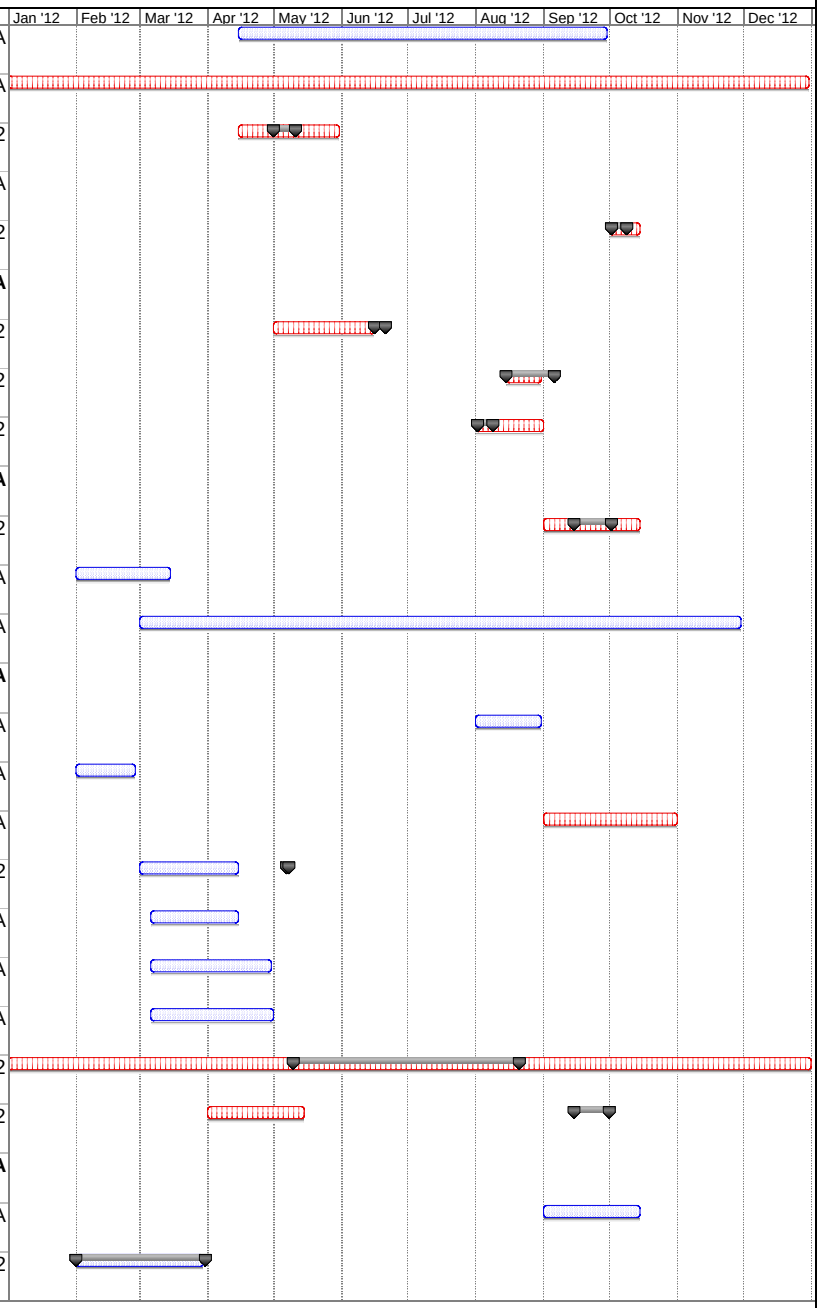
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
53	Other Inspection	Sun 1/1/12	Mon 12/31/12	NA	NA
54	**Establish Buffers**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
55	Establish Buffers	Sun 1/1/12	Mon 12/31/12	Sun 7/1/12	Tue 7/31/12
56	Water Type Modification	Sun 1/1/12	Mon 12/31/12	Sun 7/1/12	Tue 7/31/12
57	**Snag Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
58	Snag Development Schedule	Sun 1/1/12	Mon 12/31/12	NA	NA
59	Snag Removal	Sun 1/1/12	Mon 12/31/12	NA	NA
60	**Restoration**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
61	Riparian Area Damage Indentification	Sun 1/1/12	Mon 12/31/12	NA	NA
62	Riparian Area Restoration	Sun 1/1/12	Mon 12/31/12	NA	NA
63	**Shrubland Management**	**Sun 1/1/12**	**Fri 3/1/13**	**NA**	**NA**
64	**Inspections**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
65	Initial Inspection	Sun 4/15/12	Wed 10/31/12	NA	NA
66	Initial Evaluation Final Report	Sun 1/1/12	Mon 12/31/12	Wed 4/4/12	Mon 5/7/12
67	Post-treatment Inspections	Fri 6/1/12	Fri 8/31/12	NA	NA
68	Periodic Inspection	Sun 4/15/12	Wed 10/31/12	Wed 9/19/12	Wed 9/19/12
69	**Shade Control**	**Sun 1/1/12**	**Fri 3/1/13**	**NA**	**NA**
70	Falling a Tree	Thu 11/1/12	Fri 3/1/13	NA	NA
71	Topping Trees	Thu 11/1/12	Fri 3/1/13	NA	NA
72	Herbicide Injection	Sun 1/1/12	Mon 12/31/12	NA	NA
73	**Other Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
74	Heavy Pruning Circle	Sat 9/1/12	Mon 12/31/12	NA	NA
75	Vegetation Control - Clear Competing Brush	Sun 1/1/12	Mon 12/31/12	NA	NA
76	Revise Management Actions	Sun 1/1/12	Mon 12/31/12	NA	NA
77	**Farmland/Idle Field/Meadow**	**Sun 1/1/12**	**Fri 5/31/13**	**NA**	**NA**
78	**Inspections**	**Sun 1/1/12**	**Fri 5/31/13**	**NA**	**NA**



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

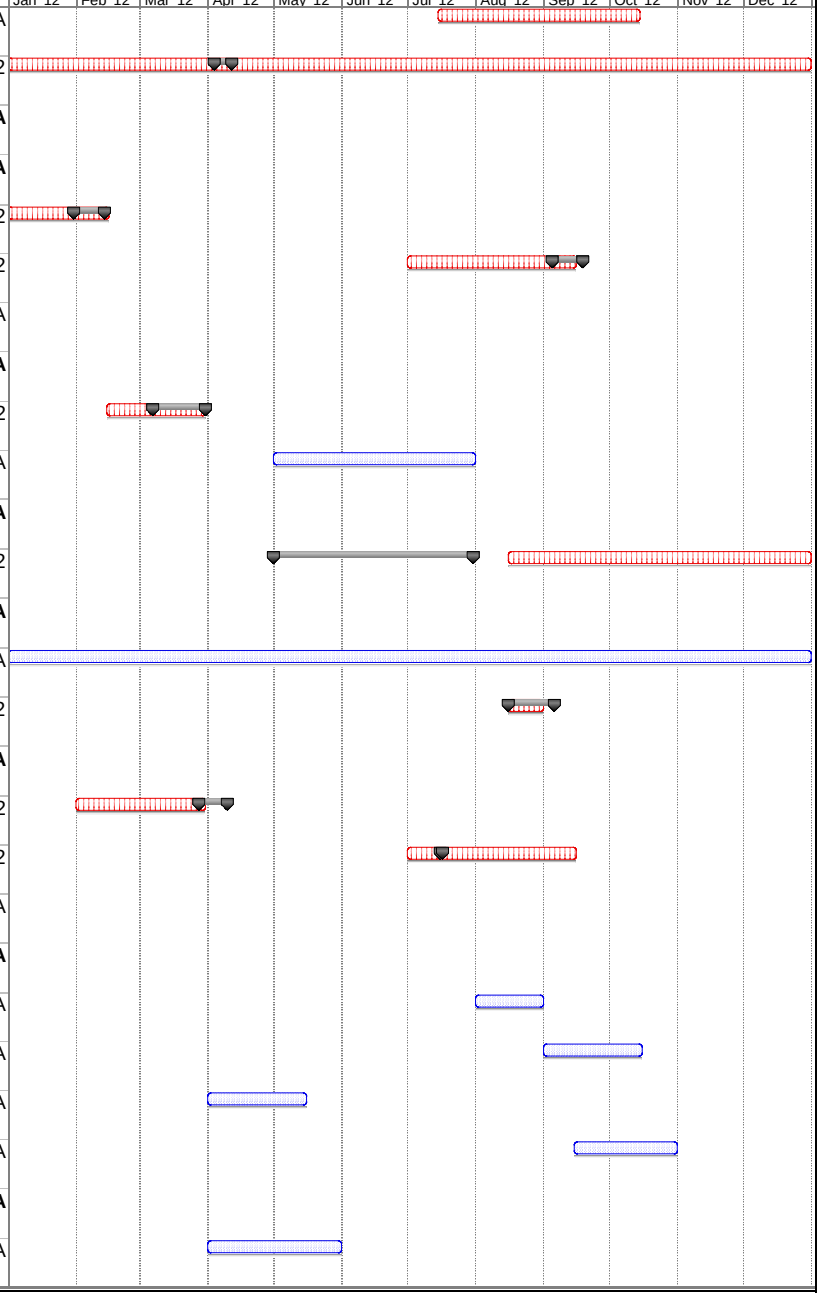
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
79	Initial Inspection	Sun 4/15/12	Sun 9/30/12	NA	NA
80	Initial Inspections Final Report	Sun 1/1/12	Mon 12/31/12	NA	NA
81	Annual Spring Inspection	Sun 4/15/12	Thu 5/31/12	Tue 5/1/12	Thu 5/10/12
82	5-year Passively Managed Area Inspection	Mon 4/15/13	Fri 5/31/13	NA	NA
83	Annual Fall Inspection	Mon 10/1/12	Mon 10/15/12	Tue 10/2/12	Mon 10/8/12
84	**Mowing**	**Tue 5/1/12**	**Fri 8/31/12**	**NA**	**NA**
85	Spring Mowing/Hay Harvest	Tue 5/1/12	Fri 6/15/12	Sat 6/16/12	Wed 6/20/12
86	Fall Mowing/Hay Harvest	Wed 8/15/12	Fri 8/31/12	Wed 8/15/12	Wed 9/5/12
87	**Soil Testing**	Wed 8/1/12	Fri 8/31/12	Thu 8/2/12	Wed 8/8/12
88	**Fertilization and Lime**	**Wed 2/1/12**	**Fri 11/30/12**	**NA**	**NA**
89	Fall Fertilization	Sat 9/1/12	Mon 10/15/12	Sat 9/15/12	Mon 10/1/12
90	Spring Fertilization	Wed 2/1/12	Thu 3/15/12	NA	NA
91	Lime Application	Thu 3/1/12	Fri 11/30/12	NA	NA
92	**Field Restoration**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
93	Soil Testing (season prior)	Wed 8/1/12	Fri 8/31/12	NA	NA
94	Soil Testing (Prior to tillage)	Wed 2/1/12	Tue 2/28/12	NA	NA
95	Lime Application	Sat 9/1/12	Wed 10/31/12	NA	NA
96	Herbicide Application Treatment	Thu 3/1/12	Sun 4/15/12	Mon 5/7/12	Mon 5/7/12
97	Cultivation	Tue 3/6/12	Sun 4/15/12	NA	NA
98	Fertilization	Tue 3/6/12	Mon 4/30/12	NA	NA
99	Seeding/Planting	Tue 3/6/12	Tue 5/1/12	NA	NA
100	Invasive Plant Control	Sun 1/1/12	Mon 12/31/12	Thu 5/10/12	Mon 8/20/12
101	Top Seeding	Sun 4/1/12	Tue 5/15/12	Sat 9/15/12	Sun 9/30/12
102	**Access/Disturbance Reduction**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
103	Fertilizing Vegetation Screen	Sat 9/1/12	Mon 10/15/12	NA	NA
104	Planting	Wed 2/1/12	Fri 3/30/12	Wed 2/1/12	Fri 3/30/12



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

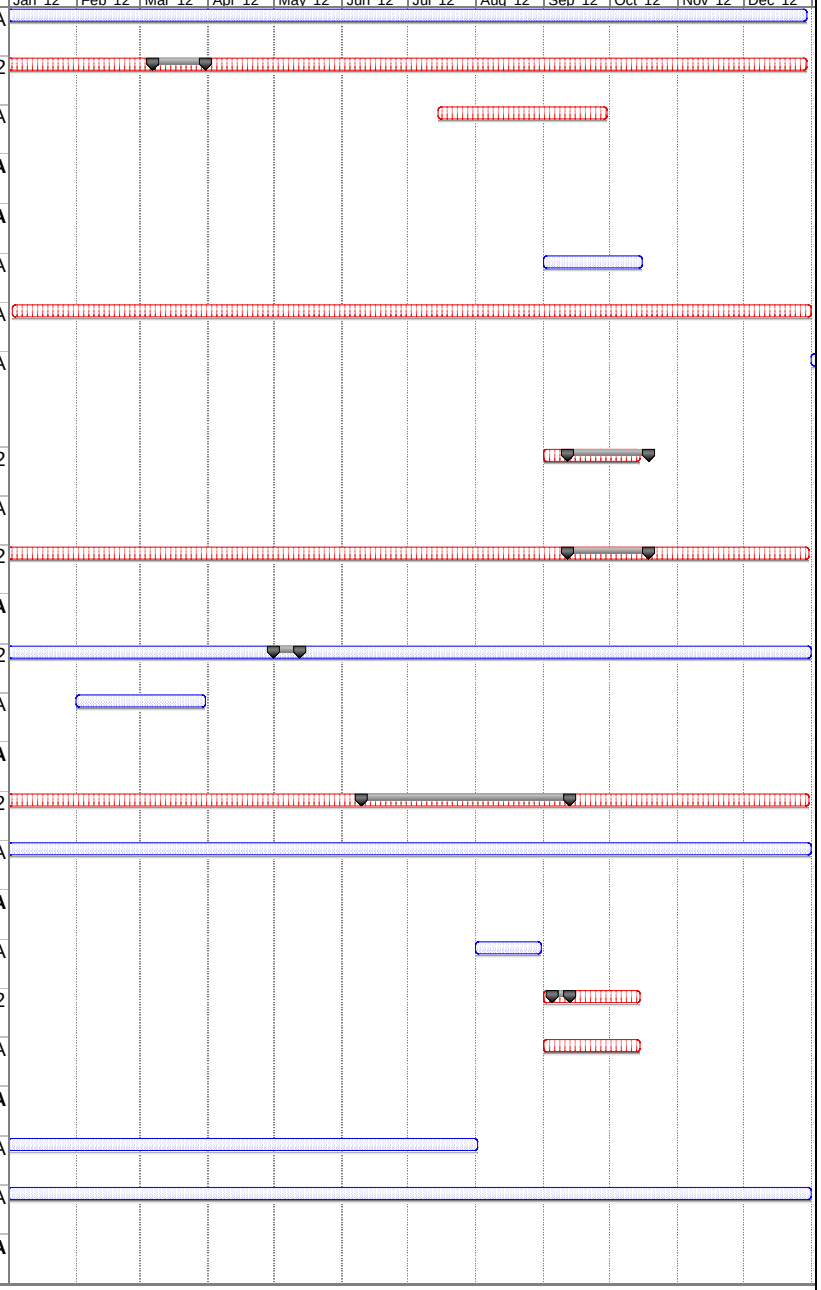
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
105	Supplemental watering	Sun 7/15/12	Mon 10/15/12	NA	NA
106	Animal Damage Control	Sun 1/1/12	Mon 12/31/12	Wed 4/4/12	Wed 4/11/12
107	**Orchards**	**Sun 1/1/12**	**Mon 3/31/14**	**NA**	**NA**
108	**Inspection**	**Sun 1/1/12**	**Mon 3/31/14**	**NA**	**NA**
109	Winter	Sun 1/1/12	Wed 2/15/12	Tue 1/31/12	Mon 2/13/12
110	Summer	Sun 7/1/12	Sat 9/15/12	Wed 9/5/12	Tue 9/18/12
111	5-year Inspection	Mon 7/1/13	Sat 8/31/13	NA	NA
112	**Pruning**	**Wed 2/15/12**	**Tue 7/31/12**	**NA**	**NA**
113	Dormant	Wed 2/15/12	Sat 3/31/12	Wed 3/7/12	Fri 3/30/12
114	Summer	Tue 5/1/12	Tue 7/31/12	NA	NA
115	**Vegetation Control**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
116	Shade Tree Control	Thu 8/16/12	Mon 12/31/12	Tue 5/1/12	Mon 7/30/12
117	**Invasive Plant Species Control**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
118	Invasive Plant Species	Sun 1/1/12	Mon 12/31/12	NA	NA
119	Mowing	Thu 8/16/12	Fri 8/31/12	Thu 8/16/12	Wed 9/5/12
120	**New Plantings**	**Wed 2/1/12**	**Mon 3/31/14**	**NA**	**NA**
121	Replacement Plantings	Wed 2/1/12	Sat 3/31/12	Wed 3/28/12	Mon 4/9/12
122	New Plantings Inspections	Sun 7/1/12	Sat 9/15/12	Mon 7/16/12	Mon 7/16/12
123	Orchard Expansion Planting	Sat 2/1/14	Mon 3/31/14	NA	NA
124	**Big Game Forage**	**Sun 4/1/12**	**Wed 10/31/12**	**NA**	**NA**
125	Soil Testing	Wed 8/1/12	Fri 8/31/12	NA	NA
126	Fertilizing	Sat 9/1/12	Mon 10/15/12	NA	NA
127	Grass Seeding (Spring)	Sun 4/1/12	Tue 5/15/12	NA	NA
128	Grass Seeding (Fall)	Sat 9/15/12	Wed 10/31/12	NA	NA
129	**Other Management**	**Sun 1/1/12**	**Sun 12/30/12**	**NA**	**NA**
130	Orchard Tree Fertilizing	Sun 4/1/12	Thu 5/31/12	NA	NA



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

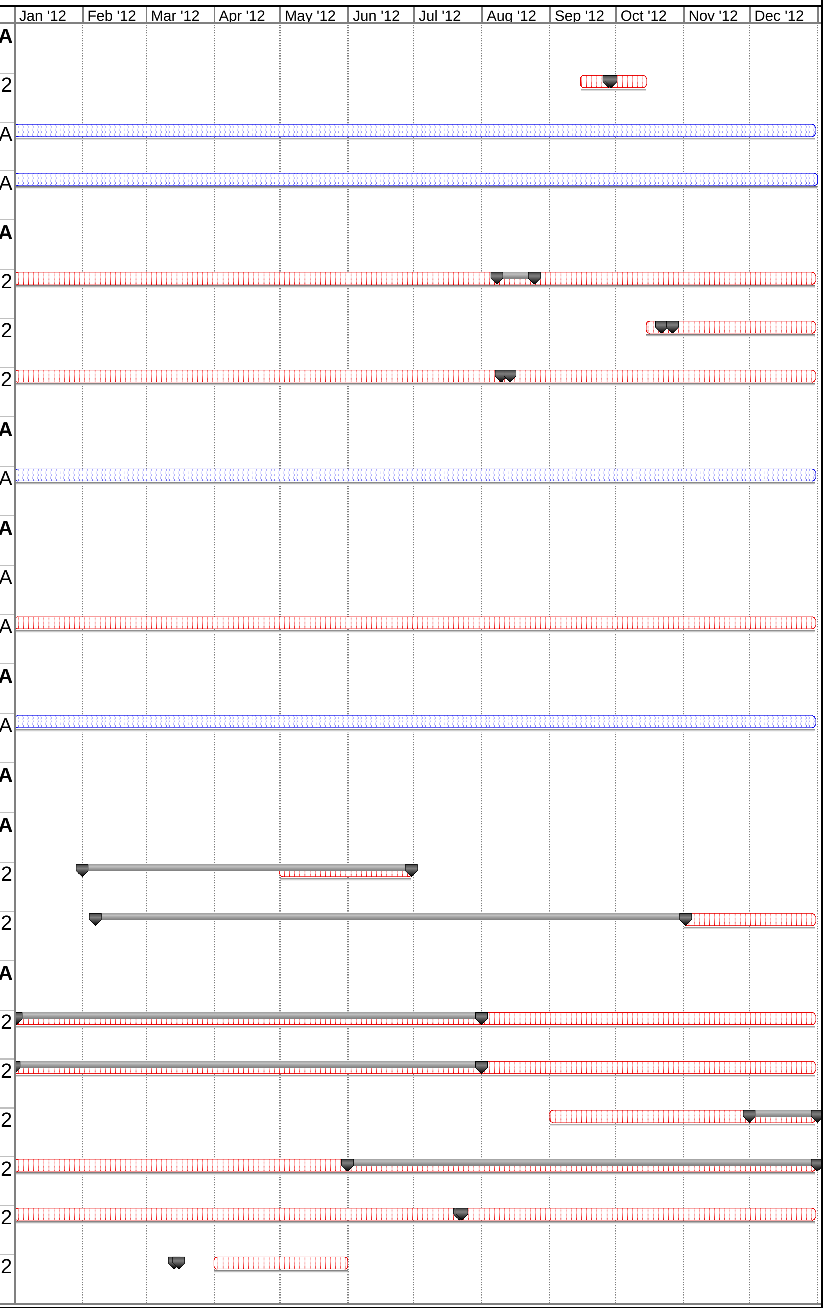
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
131	Pest Control	Sun 1/1/12	Sun 12/30/12	NA	NA
132	Animal Damage Control	Sun 1/1/12	Sun 12/30/12	Wed 3/7/12	Fri 3/30/12
133	Supplemental Water	Sun 7/15/12	Sun 9/30/12	NA	NA
134	**Transmission Line Rights-of-Way**	**Sun 1/1/12**	**Wed 10/15/14**	**NA**	**NA**
135	**Inspections**	**Sun 1/1/12**	**Wed 10/15/14**	**NA**	**NA**
136	Initial Evaluations with Photo Documentation	Sat 9/1/12	Mon 10/15/12	NA	NA
137	Initial Inspections Final Report	Mon 1/2/12	Mon 12/31/12	NA	NA
138	Revise Transmission Line Right-of-Way Habitat Management Chapter	Tue 1/1/13	Tue 12/31/13	NA	NA
139	Annual Inspection	Sat 9/1/12	Mon 10/15/12	Wed 9/12/12	Thu 10/18/12
140	Annual Inspection with Photo Documentation	Mon 9/1/14	Wed 10/15/14	NA	NA
141	Post hazard tree and invasive plant species manag	Sun 1/1/12	Mon 12/31/12	Wed 9/12/12	Thu 10/18/12
142	**Shrub Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
143	Shrub Management	Sun 1/1/12	Mon 12/31/12	Tue 5/1/12	Sat 5/12/12
144	Plantings	Wed 2/1/12	Sat 3/31/12	NA	NA
145	**Invasive Plant Species Control**	**Sun 1/1/12**	**Sun 12/30/12**	**NA**	**NA**
146	Invasive Plant Species Control	Sun 1/1/12	Sun 12/30/12	Sun 6/10/12	Wed 9/12/12
147	Aquatic Area Management	Sun 1/1/12	Mon 12/31/12	NA	NA
148	**Big Game Forage Enhancement**	**Wed 8/1/12**	**Mon 10/15/12**	**NA**	**NA**
149	Soil Testing	Wed 8/1/12	Fri 8/31/12	NA	NA
150	Annual Mowing	Sat 9/1/12	Mon 10/15/12	Wed 9/5/12	Wed 9/12/12
151	Fertilizing	Sat 9/1/12	Mon 10/15/12	NA	NA
152	**Access/Disturbance Reductions**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
153	Access/Disturbance Reduction	Sun 1/1/12	Wed 8/1/12	NA	NA
154	Closing Open Roads	Sun 1/1/12	Mon 12/31/12	NA	NA
155	**Unique Area /Habitat Management**	**Fri 1/1/10**	**Mon 12/31/12**	**NA**	**NA**



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

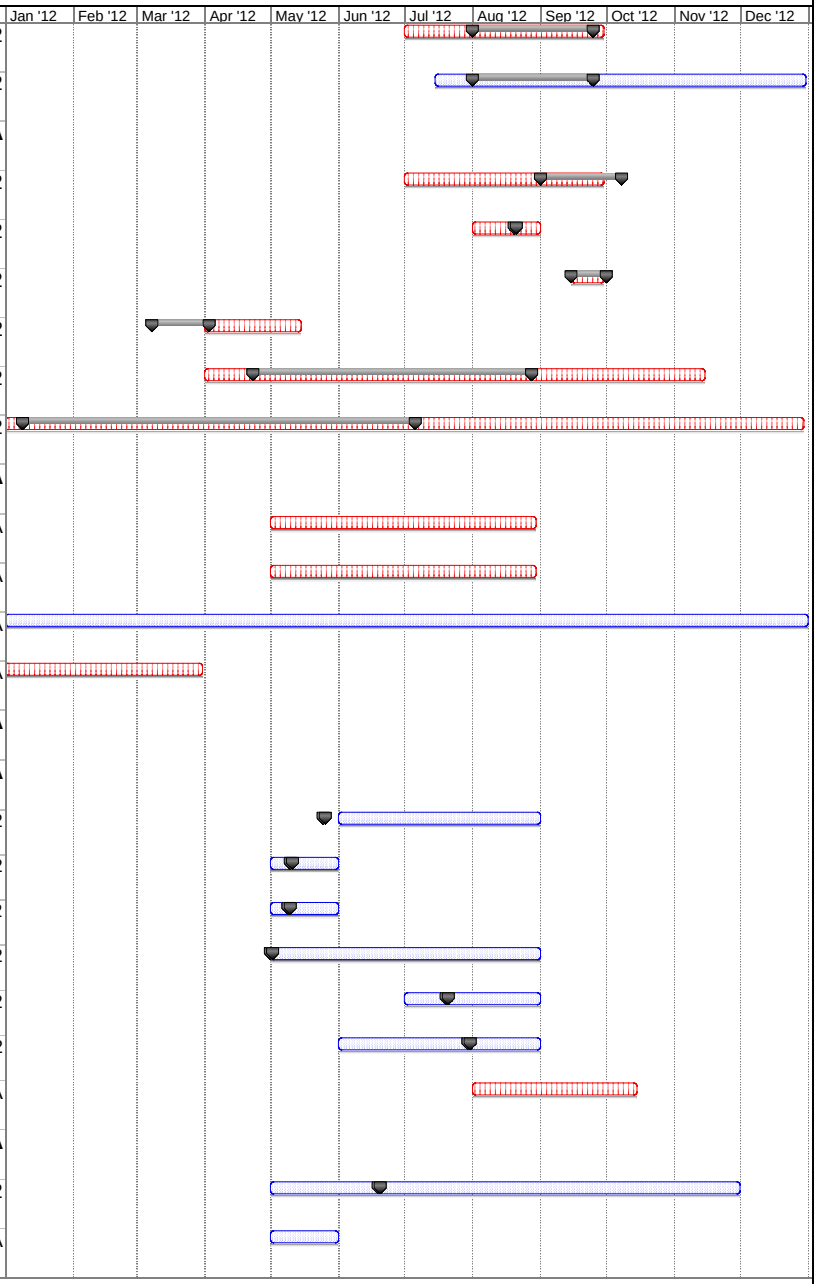
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
156	**Inspections**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
157	Annual Oak Stands	Sat 9/15/12	Mon 10/15/12	Fri 9/28/12	Fri 9/28/12
158	Additional Oak Stands	Sun 1/1/12	Mon 12/31/12	NA	NA
159	Other Unique Areas/Habitats	Sun 1/1/12	Mon 12/31/12	NA	NA
160	**Oak Stand Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
161	Topping a Competing Tree and Hand Piling Debris	Sun 1/1/12	Mon 12/31/12	Wed 8/8/12	Fri 8/24/12
162	Falling a competing Tree and Hand Piling Debris	Mon 10/15/12	Mon 12/31/12	Mon 10/22/12	Fri 10/26/12
163	Invasive Plant Species Control	Sun 1/1/12	Mon 12/31/12	Fri 8/10/12	Mon 8/13/12
164	**Cave Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
165	Develop Management Strategy	Sun 1/1/12	Mon 12/31/12	NA	NA
166	**Unique Area Record Management**	**Fri 1/1/10**	**Mon 12/31/12**	**NA**	**NA**
167	Create Unique Area Database	Fri 1/1/10	Fri 12/31/10	NA	NA
168	Update Unique Area Database	Sun 1/1/12	Mon 12/31/12	NA	NA
169	**Ethnobotanically Significant Plant Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
170	Develop Management Strategy	Sun 1/1/12	Mon 12/31/12	NA	NA
171	**Forestland Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
172	**Inspections**	**Tue 5/1/12**	**Mon 12/31/12**	**NA**	**NA**
173	Spring Timber Harvest Area Survey	Tue 5/1/12	Sat 6/30/12	Wed 2/1/12	Fri 6/29/12
174	Fall Timber Harvest Survey	Thu 11/1/12	Mon 12/31/12	Tue 2/7/12	Thu 11/1/12
175	**Management Actions**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
176	Harvest Planning	Sun 1/1/12	Mon 12/31/12	Mon 1/2/12	Tue 7/31/12
177	Harvest Scheduling	Sun 1/1/12	Mon 12/31/12	Sun 1/1/12	Tue 7/31/12
178	First Precut Survey	Sat 9/1/12	Mon 12/31/12	Sat 12/1/12	Mon 12/31/12
179	Timber Harvest Area Traverse and GIS Update	Sun 1/1/12	Mon 12/31/12	Fri 6/1/12	Mon 12/31/12
180	Second Precut Survey	Sun 1/1/12	Mon 12/31/12	Sun 7/22/12	Sun 7/22/12
181	TCC On-Site Meeting	Sun 4/1/12	Thu 5/31/12	Wed 3/14/12	Thu 3/15/12



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

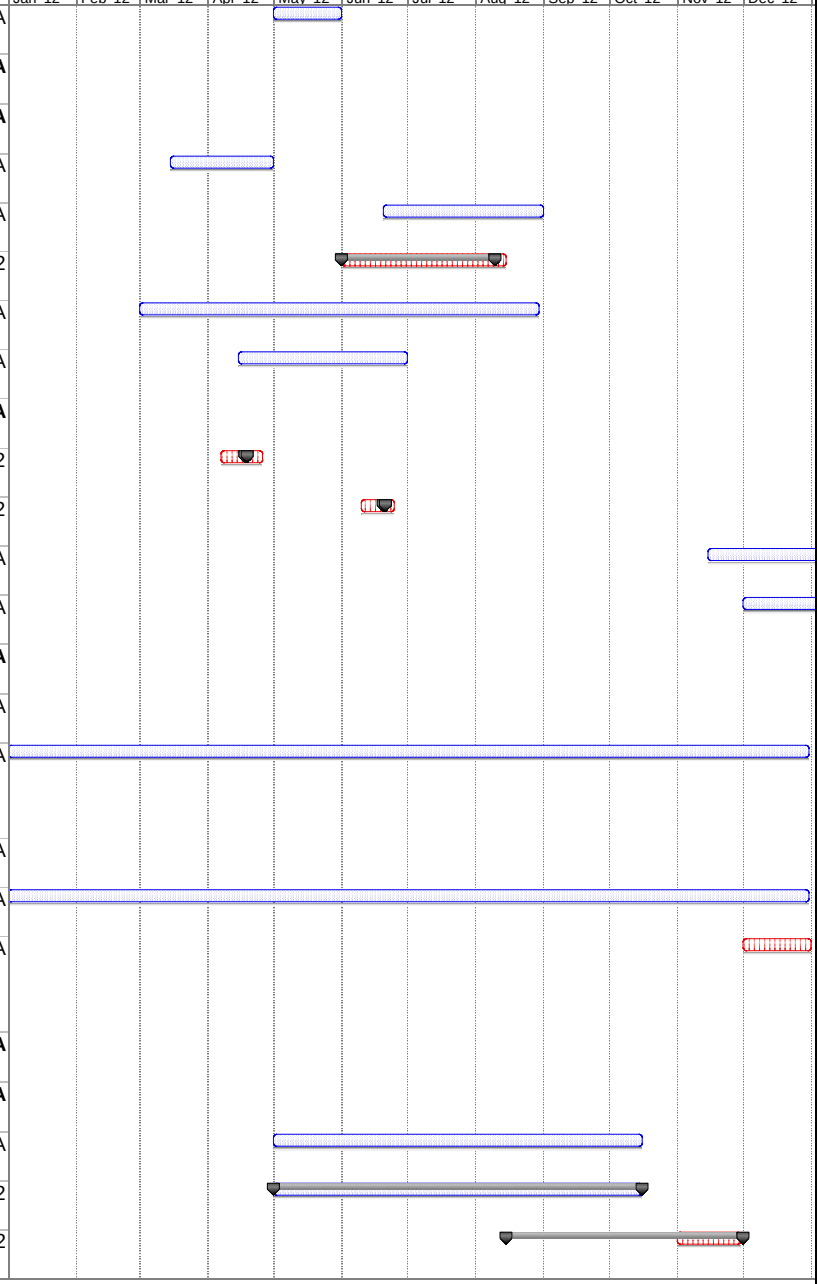
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
182	Timber Harvest Area Logging Inspections	Sun 7/1/12	Sun 9/30/12	Wed 8/1/12	Mon 9/24/12
183	Snag Development	Sun 7/15/12	Mon 12/31/12	Wed 8/1/12	Mon 9/24/12
184	**Regeneration Practices**	**Sun 4/1/12**	**Thu 11/15/12**	**NA**	**NA**
185	Site Preparation	Sun 7/1/12	Sun 9/30/12	Sat 9/1/12	Sun 10/7/12
186	Purchase Forage Mix	Wed 8/1/12	Fri 8/31/12	Mon 8/20/12	Mon 8/20/12
187	Forage Seeding	Sat 9/15/12	Sun 9/30/12	Sat 9/15/12	Sun 9/30/12
188	Invasive Species; Oust	Sun 4/1/12	Tue 5/15/12	Thu 3/8/12	Mon 4/2/12
189	Invasive Species (e.g. blackberry, ect.)	Sun 4/1/12	Thu 11/15/12	Mon 4/23/12	Mon 8/27/12
190	Precommercial thinning	Sun 1/1/12	Sun 12/30/12	Mon 1/9/12	Thu 7/5/12
191	**Invasive Plant Species Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
192	Pre-Ground Disturbance Evaluation	Tue 5/1/12	Thu 8/30/12	NA	NA
193	Post-Ground Disturbance Evaluation	Tue 5/1/12	Thu 8/30/12	NA	NA
194	Detection	Sun 1/1/12	Mon 12/31/12	NA	NA
195	Update State and County Noxious Weed Lists	Sun 1/1/12	Sat 3/31/12	NA	NA
196	**Control Treatments**	**Tue 5/1/12**	**Fri 8/31/12**	**NA**	**NA**
197	**Control Treatments**	**Tue 5/1/12**	**Fri 8/31/12**	**NA**	**NA**
198	Policeman's helmet at Merwin Boat Launch	Fri 6/1/12	Fri 8/31/12	Fri 5/25/12	Fri 5/25/12
199	Speelyai Day Use	Tue 5/1/12	Thu 5/31/12	Thu 5/10/12	Thu 5/10/12
200	Cresap Camp Ground	Tue 5/1/12	Thu 5/31/12	Wed 5/9/12	Wed 5/9/12
201	Cougar Quarry	Tue 5/1/12	Fri 8/31/12	Tue 5/1/12	Tue 5/1/12
202	Poke Weed 991702CC	Sun 7/1/12	Fri 8/31/12	Fri 7/20/12	Fri 7/20/12
203	Jewel weed 1100C4	Fri 6/1/12	Fri 8/31/12	Mon 7/30/12	Mon 7/30/12
204	Control Treatments within the Ordinary High Water Ma	Wed 8/1/12	Mon 10/15/12	NA	NA
205	**Monitoring**	**Tue 5/1/12**	**Fri 11/30/12**	**NA**	**NA**
206	Monitoring	Tue 5/1/12	Fri 11/30/12	Tue 6/19/12	Tue 6/19/12
207	Speelyai Bay Day Use	Tue 5/1/12	Thu 5/31/12	NA	NA



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

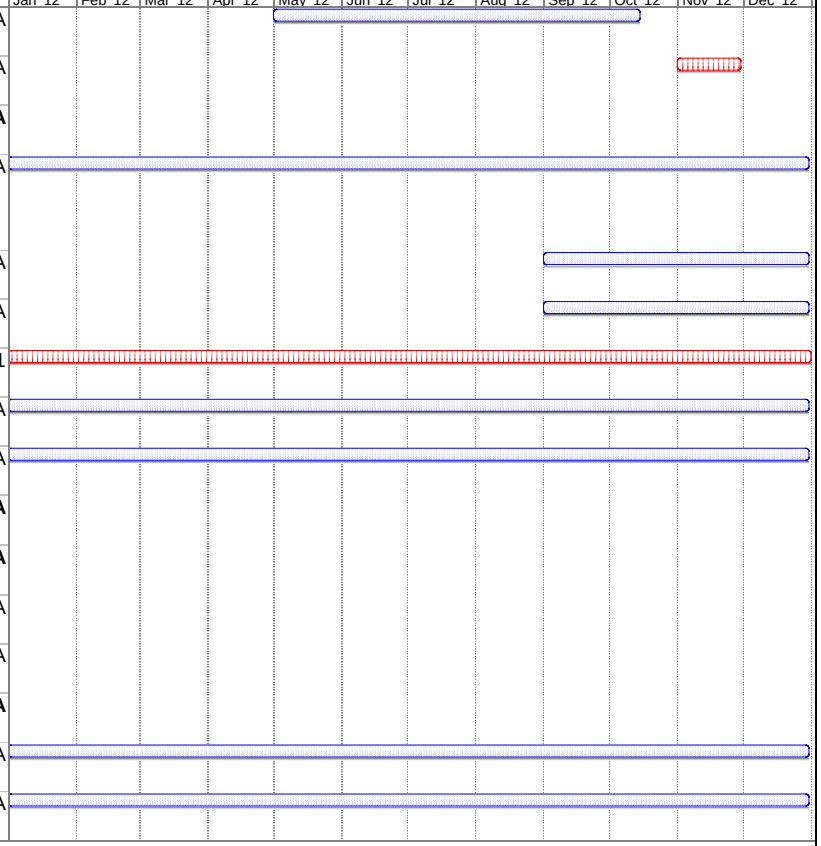
ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
208	Cresap Bay Campground	Tue 5/1/12	Thu 5/31/12	NA	NA
209	**Raptor Site Management**	**Fri 1/1/10**	**Mon 7/15/13**	**NA**	**NA**
210	**Northern Goshawk Survey**	**Thu 3/15/12**	**Fri 8/31/12**	**NA**	**NA**
211	Dawn Acoustical Survey	Thu 3/15/12	Mon 4/30/12	NA	NA
212	Intensive Search Survey	Wed 6/20/12	Fri 8/31/12	NA	NA
213	Broadcast Acoustical Survey	Fri 6/1/12	Wed 8/15/12	Fri 6/1/12	Thu 8/9/12
214	Northern Spotted Owl Surveys	Thu 3/1/12	Thu 8/30/12	NA	NA
215	Peregrine Falcon Monitoring	Sun 4/15/12	Sat 6/30/12	NA	NA
216	**Bald Eagle and Osprey Monitoring**	**Sat 4/7/12**	**Sun 3/31/13**	**NA**	**NA**
217	Bald Eagle Nest Occupancy Monitoring	Sat 4/7/12	Wed 4/25/12	Wed 4/18/12	Wed 4/18/12
218	Osprey Nest Occupancy and Bald Eagle Nest Prod	Sun 6/10/12	Mon 6/25/12	Wed 6/20/12	Wed 6/20/12
219	Known Communal Roost Monitoring	Thu 11/15/12	Sun 3/31/13	NA	NA
220	Potential Communal Roost Monitoring	Sat 12/1/12	Thu 2/28/13	NA	NA
221	**Habitat Management**	**Fri 1/1/10**	**Mon 7/15/13**	**NA**	**NA**
222	Mature and Old-growth Raptor Habitat Evaluations	Mon 4/15/13	Mon 7/15/13	NA	NA
223	Develop a Schedule for Implementing Habitat Enhancement Actions in Old-growth and Mature Stands	Sun 1/1/12	Mon 12/31/12	NA	NA
224	Complete Bald Eagle Management Plan	Fri 1/1/10	Fri 12/31/10	NA	NA
225	Revised Bald Eagle Management Plan	Sun 1/1/12	Mon 12/31/12	NA	NA
226	Review and Update Industry Standards for Avian Protection from Power Lines	Sat 12/1/12	Mon 12/31/12	NA	NA
227	**Public Access Management**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
228	**Inspections**	**Tue 5/1/12**	**Fri 11/30/12**	**NA**	**NA**
229	Initial Road Evaluation	Tue 5/1/12	Mon 10/15/12	NA	NA
230	Initial Road Evaluation on Newly Acquired Lands	Tue 5/1/12	Mon 10/15/12	Tue 5/1/12	Mon 10/15/12
231	Road Closure Inspection	Thu 11/1/12	Fri 11/30/12	Wed 8/15/12	Fri 11/30/12



Baseline Scheduled Completed

Appendix A 2012 Lewis River Wildlife Habitat Managment Plan Schedule

ID	Task Name	WHMP Start Date	WHMP Finish Date	Date Work Began	Date Work
232	Initial Trail Evaluation	Tue 5/1/12	Mon 10/15/12	NA	NA
233	Trail Inspections	Thu 11/1/12	Fri 11/30/12	NA	NA
234	**Management Actions**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
235	Initial Evaluations of Dispersed Shoreline Campsites	Sun 1/1/12	Mon 12/31/12	NA	NA
236	Site Pioneering Monitoring	Sat 9/1/12	Mon 12/31/12	NA	NA
237	Site Creep Evaluation	Sat 9/1/12	Mon 12/31/12	NA	NA
238	Controlling Unauthorized Motorized Vehicle Use	Sun 1/1/12	Mon 12/31/12	Thu 2/3/11	Mon 2/28/11
239	Visual Screen	Sun 1/1/12	Mon 12/31/12	NA	NA
240	Road Construction	Sun 1/1/12	Mon 12/31/12	NA	NA
241	**Monitoring**	**Sun 1/1/12**	**Wed 12/31/25**	**NA**	**NA**
242	**Inspections**	**Tue 7/1/14**	**Wed 12/31/25**	**NA**	**NA**
243	Year 17 HEP	Tue 7/1/25	Wed 12/31/25	NA	NA
244	Newly Acquired Lands	Tue 7/1/14	Tue 9/30/14	NA	NA
245	**Management Actions**	**Sun 1/1/12**	**Mon 12/31/12**	**NA**	**NA**
246	Modify the Goal and Objectives	Sun 1/1/12	Mon 12/31/12	NA	NA
247	Revise the WHMP	Sun 1/1/12	Mon 12/31/12	NA	NA



Baseline Scheduled Completed

APPENDIX B
TERRESTRIAL COORDINATION COMMITTEE 2012 ANNUAL REPORT
CONSULTATION RECORD

FINAL Meeting Notes
Lewis River License Implementation
Terrestrial Coordination Committee (TCC) Meeting
March 21, 2013
Woodland Police Dept. (Council Chambers)

TCC Participants Present: (9)

Bob Nelson, RMEF
Ray Croswell, RMEF
Peggy Miller, WDFW
Eric Holman, WDFW
Kirk Naylor, PacifiCorp Energy
Kimberly McCune, PacifiCorp Energy
Kendel Emmerson, PacifiCorp Energy
Diana Gritten-MacDonald, Cowlitz PUD
Mitch Wainwright, USDA Forest Service

Calendar:

Tuesday – April 9, 2013	TCC Meeting	HCC
Wednesday – May 8, 2013	TCC Meeting	HCC

Assignments from March 21, 2013	**Status**
McCune: Modify April meeting date to 4/9/13 and change location to Woodland Police Department (council chambers).	**Complete 3/21/13**

Assignments from January 9, 2013	**Status**
Gritten-MacDonald: Investigate an inter-local agreement with Skamania County for 2013 weed control.	**Pending as of 3/21/13**

Assignments from December 12, 2012	**Status**
Peggy Miller/Eric Holman: Research WDFW process for changing hunting regulations (Hamm Meadow Issues). Discuss at the January 2013 TCC meeting.	**In Progress as of 2/12/13**

Assignments from June 13, 2012	**Status**
Naylor: Review the SA/WHMP budget(s) as well as determine status and opportunity for coordination with John Cook (NCASI) and Lisa Shipley (Washington State University) doing the blacktail study and report back to the TCC.	**In Progress**

Parking lot items from April 13, 2011 Meeting	**Status**
Naylor: Provide TCC with Riparian Management Plan for review.	**Pending**

Parking lot items from December 12, 2012 Meeting	Status
PacifiCorp: Work with TCC to proceed with second RMEF/PAC Project Proposal.	**Pending**

Parking lot items from February 12, 2013 Meeting	Status
Cowlitz PUD: Schedule a field tour of the Devil's Backbone management unit	**Pending for summer 2013**

Review of Agenda and Finalize Meeting Notes
Kirk Naylor (PacifiCorp Energy) called the meeting to order at 9:15 a.m. Naylor reviewed the agenda and asked the TCC if there were any changes/additions. Diana Gritten-MacDonald (Cowlitz PUD) would like to add a Cowlitz PUD Wildlife Habitat Management Plan (WHMP) 2013 update.

Naylor reviewed the February 12, 2013 meeting notes and assignments. No changes were requested. The meeting notes were approved at 9:20 am.

ACC/TCC 2012 Draft Annual Report
Kim McCune (PacifiCorp Energy) reminded the TCC attendees that the ACC/TCC 2012 Draft Annual Report was submitted for its 30-day review and comment period on March 5, 2013. All comments, if any, are due on or before April 5, 2013.

PacifiCorp WHMP 2012 Annual Report
Kendel Emmerson (PacifiCorp Energy) and Naylor provided a cursory review of PacifiCorp's WHMP 2012 Annual Report which was emailed to the TCC for its 30-day review and comment period on March 5, 2013. The document can be viewed at the link provided below. All comments, if any, are due on or before April 5, 2013.

http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/2012Annual%20Report(draft_2.22.13).pdf

<Break 11:15am>
<Reconvene 11:30am>

PacifiCorp WHMP 2013 Annual Plan
Emmerson and Naylor provided a cursory review of PacifiCorp's WHMP 2013 Annual Plan which was emailed to the TCC for its 30-day review and comment period on March 5, 2013. The document can be viewed at the link provided below. All comments, if any, are due on or before April 5, 2013.

http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/2013AnnualPlanDraftWHMP.pdf

Emmerson also briefly reviewed the overall 2013 budget compared with the 2012 funds (details provided below):

Overall 2013 Budget

License Year 5
Calendar Year 2013
Annual WHMP Budget

Total Available Funds		2012 Funds	2013 Funds
Fee Simple Lands	Acres	11,105	13,134
	Cost Per Acre	$32.47	$33.18
	SubTotal	$360,611.00	$435,792.62
Interests in Lands	Acres	16	16
	Cost Per Acre	$16.24	$16.59
	SubTotal	$259.78	$265.44
Other Additional Funds	Remaining Funds from 2012	$33,093.31	$1,724.60
	Additional HEP Funding	$0.00	$0.00
	Interest	$2,000.00	$12,323.19
	SubTotal	$35,093.31	$14,047.79
	Total	**$395,964.09**	**$450,105.85**

Budget				
WHMP Management Area or Plan-Wide Goal		2012 Budget		Proposed 2013
		Proposed	Actual	
Administration	Cost	$30,500.00	$31,454.60	$33,980.00
	Percent of Budget	6.78%	6.99%	7.55%
Old-Growth	Cost	$11,250.00	$5,728.90	$9,300.00
	Percent of Budget	2.50%	1.27%	2.07%
Wetlands	Cost	$15,075.00	$5,097.23	$24,273.00
	Percent of Budget	3.35%	1.13%	5.39%
Riparian	Cost	$13,725.00	$2,312.19	$18,278.00
	Percent of Budget	3.05%	0.51%	4.06%
Shrubland	Cost	$2,250.00	$7,531.07	$3,348.00
	Percent of Budget	0.50%	1.67%	0.74%
Farmland, Meadow, Idle Areas	Cost	$50,010.00	$50,733.99	$60,707.00
	Percent of Budget	11.11%	11.27%	13.49%
Orchard	Cost	$14,150.00	$16,363.32	$14,643.00
	Percent of Budget	3.14%	3.64%	3.25%
Transmission Line Right-of-Way	Cost	$24,150.00	$17,782.79	$22,820.00
	Percent of Budget	5.37%	3.95%	5.07%
Unique Area/Habitat	Cost	$9,900.00	$5,144.47	$4,836.00
	Percent of Budget	2.20%	1.14%	1.07%
Forestland	Cost	$150,400.00	$166,103.38	$189,260.00
	Percent of Budget	33.41%	36.90%	42.05%
Invasive Plant Species	Cost	$18,475.00	$18,773.87	$19,486.00
	Percent of Budget	4.10%	4.17%	4.33%
Raptor	Cost	$41,900.00	$53,837.81	$28,996.00
	Percent of Budget	9.31%	11.96%	6.44%
Public Access Management	Cost	$11,150.00	$11,116.09	$15,146.00
	Percent of Budget	2.48%	2.47%	3.36%
Monitoring	Cost	$3,000.00	$0.00	$5,000.00
	Percent of Budget	0.67%	0.00%	1.11%
	Total Cost	**$395,935.00**	**$391,979.71**	**$450,073.00**
	Total Percent of Budget Spent	**99.99%**	**98.99%**	**99.99%**
	Remaining Funds	**$29.09**	**$3,984.38**	**$32.85**

Emmerson informed the TCC attendees that at this time PacifiCorp does not have a farmer under contract but they are working on securing these services for 2013. Depending on when a farming

contract can be completed, some of the actions in the manual plan may need to be deferred (e.g. spring mowing and Buncome Hollow meadow clearing and grass seeding).
During the review of the Raptor chapter Erik Holman (WDFW) specifically asked Naylor and Emmerson if during their bald eagle flights next month to please keep an eye out for golden eagles and advise if any sightings.

Bonneville Power Administration – I5 Corridor Reinforcement Transmission Project
McCune informed the TCC attendees that PacifiCorp submitted its response to BPAs Draft Environmental Impact Statement (DEIS) on March 20 2013. The letters to BPA and the U.S. Army Corps of Engineers can be viewed on the Lewis River website at the following location:

http://www.pacificorp.com/es/hydro/hl/lr.html# >BPA I-5 Transmission Reinforcement Project

Old Growth Connectivity
Emmerson provided a cursory review of the *Lewis River Wildlife Habitat Management Plan Old-Growth Management (Objective D) Memorandum*, dated December 21, 2012 (**Attachment A**), which was emailed to the TCC on February 26, 2013. The TCC was provided hard copies of the document and asked to review and provide any comments, questions/concerns on or before Tuesday, April 9, 2013.

Emmerson informed the TCC attendees that she developed a GIS model that essentially identified all of the old-growth and the mature stands that are greater than 1.0 acre in size and on WHMP lands.

The mature stands were then scored based on criteria for size, proximity to old-growth, spotted owl habitat connectivity, and within a protected raptor habitat and/or riparian buffer. The table in the document lists the criteria and its associated scores (for further details see **Attachment A**).

Hamm Meadow Update
Naylor informed the TCC attendees that a private property owner contacted PacifiCorp the week of Mach 18, 2013 and reported hunters requesting access to Hamm Meadow in the month of March. PacifiCorp contacted local law enforcement on the property owner's behalf. The property owner informed the hunters that they were on private property and were asked to leave. Naylor further encouraged the property owner to post more signs on the access road to their property.

Cowlitz PUD WHMP 2013 Plan
Diana Gritten-MacDonald informed the TCC attendees that the comment period ended on March 8, 2013 but provided an additional opportunity and asked if any questions or comments from the TCC. None were provided so she will be filing the document with the FERC on or before April 30, 2013.

Public Comment Opportunity
No public comment was provided.

<12:35 p.m. meeting adjourned>

Agenda items for April 9, 2013

- Review March 21, 2013 Meeting Notes
- Review Old-Growth Connectivity Memo edits or comments
- I-5 Corridor Reinforcement Project Update
- Tour timber harvest areas (Units 4, 15 & 20)
- Tour BPA crossing

Next Scheduled Meetings

April 9, 2013	May 8, 2013
TCC Meeting	TCC Meeting
Merwin Hydro Control Center	Merwin Hydro Control Center
Ariel, WA	Ariel, WA
9:00am – 3:00pm	9:00am – 3:00pm

Attachments:

- March 21, 2013 Meeting Agenda
- February 12, 2013 Meeting Notes
- **Attachment A** – Lewis River Wildlife Habitat Management Plan Old-Growth Management (Objective D), dated December 21, 2012

APPENDIX C
WATER TYPE MODIFICATION

2924752

Region Reference Number- DNR Use Only			
Region	WRIA	Year	Number
PC	27	12	0171
Comment Due Date (mm/dd/yyyy) 07/11/12			

Reviewer Comments
Water Type Modification

Attention Reviewers: DNR will make a decision by the Comment Due Date. Your comments only will be considered if they are received on or before the Comment Due Date. Return this completed form by mail, fax, or e-mail to the appropriate DNR Region office.

Reviewer's Name: ______________________ **Reviewer's Affiliation:** ______________________

Reviewer's Phone Number: ______________________ **Reviewer's E-Mail:** ______________________

☐ **Agree with proposed change(s)** ☐ **Disagree with proposed change(s)**

Reasons for Agreement or Disagreement (*add attachments if necessary*):

Signature ______________________ **Date** ______________________
(Signatures are not necessary for e-mailed responses) (mm/dd/yyyy)

DNR Office Summary and Decision

Name of Reviewers	Agree	Disagree	Date Comment Received	No Reply
DNR: Marc Ratcliff	✓		7/2/12, see email	
WDFW: Sam Kolb	✓		S.K. 6/21/12	
DOE: Rod Thysell				✓
Tribe: Cowlitz				✓
Other: Yakama				✓
Other:				

☒ Approve change ☐ Disapprove change

Reasons for disapproval

Signature [signature] Date 7/16/12 (mm/dd/yyyy)

Proponent and reviewers notified of decision by Jacqui Fahr (Name) on 7/24/12 (Date)

√ Proponent 6/12/12

CHANDLER, BRUCE (DNR)

From: RATCLIFF, MARC (DNR)
Sent: Monday, July 02, 2012 11:18 AM
To: CHANDLER, BRUCE (DNR)
Subject: WTMs

I concur with the following WTMFs

0171
0125

Marc Ratcliff
Woodland Forest Practices
WADNR – Pacific Cascade
360/907-3521
marc.ratcliff@dnr.wa.gov

WASHINGTON STATE DEPARTMENT OF
Natural Resources

2924752

Water Type Modification Form
(For changes to the Water Type Map)

Check all that apply

[ ] *Adding streams/lakes
[ ] *Removing streams/lakes
[x] *Changing location of streams/lakes
[ ] Changing water type based on physical characteristics
[ ] Changing water type based on protocol survey
[ ] Other. Describe_____

Region Reference Number - DNR Use Only									
Region		*WRIA*		*Year*		*Number*			
P	C	2	7	1	2	0	1	7	1

1. *Water Reference Id	2. Name of Water	3. Tributary To	4. *Legal Description (Section, Township, Range, E/W)
B			NE1/4SE1/4, Sec. 25, T.6N., R.2E., WM

5. *County	6. Water Type Shown on Map	7. Proposed Water Type	8. *Date of Field Visit
Clark			6/5/2012

9. *Forest Practices Application Number(s) (if applicable)

10. Change is based on the following (check all that apply).
[ ] Fish found
[ ] No fish found
[ ] Physical characteristics
[ ] Public water diversion
[ ] Fish hatchery diversion
[ ] Water feature exists, but does not meet WAC 222-16-031 definition.

11. Water levels in the survey area were: [ ] Above Normal [ ] Normal [ ] Below Normal
Description:

12. The water type break was determined by:
[ ] Stopping at last observed fish
[ ] Stopping at upper extent of fish habitat
[ ] Stopping at end of harvest or property boundary
[ ] Other – Describe:

13. Are there any fish passage barriers downstream of the surveyed stream segment(s):
[ ] Natural barriers: [ ] Falls [ ] Cascades [ ] Bedrock chutes If yes, what is the height _____
[ ] Temporary barriers (log jams)
[ ] Man-made barriers (culverts)

Fish passage barriers were identified by: [ ] Maps [ ] Field observation [ ] Other – describe:

14. Is there evidence of mass wasting or scouring events?
[ ] Yes. Describe how these affected current stream channel conditions and fish distribution in the stream.
[ ] No

*Proponent name and signature	Organization name and address	Telephone number
Kirk S Naylor Print Name: Kirk Naylor	PACIFICORP ENERGY	503-813-6619
Surveyor name	Organization name and address	Telephone number
Greg Taylor	Forest Resource Management	503-682-2200

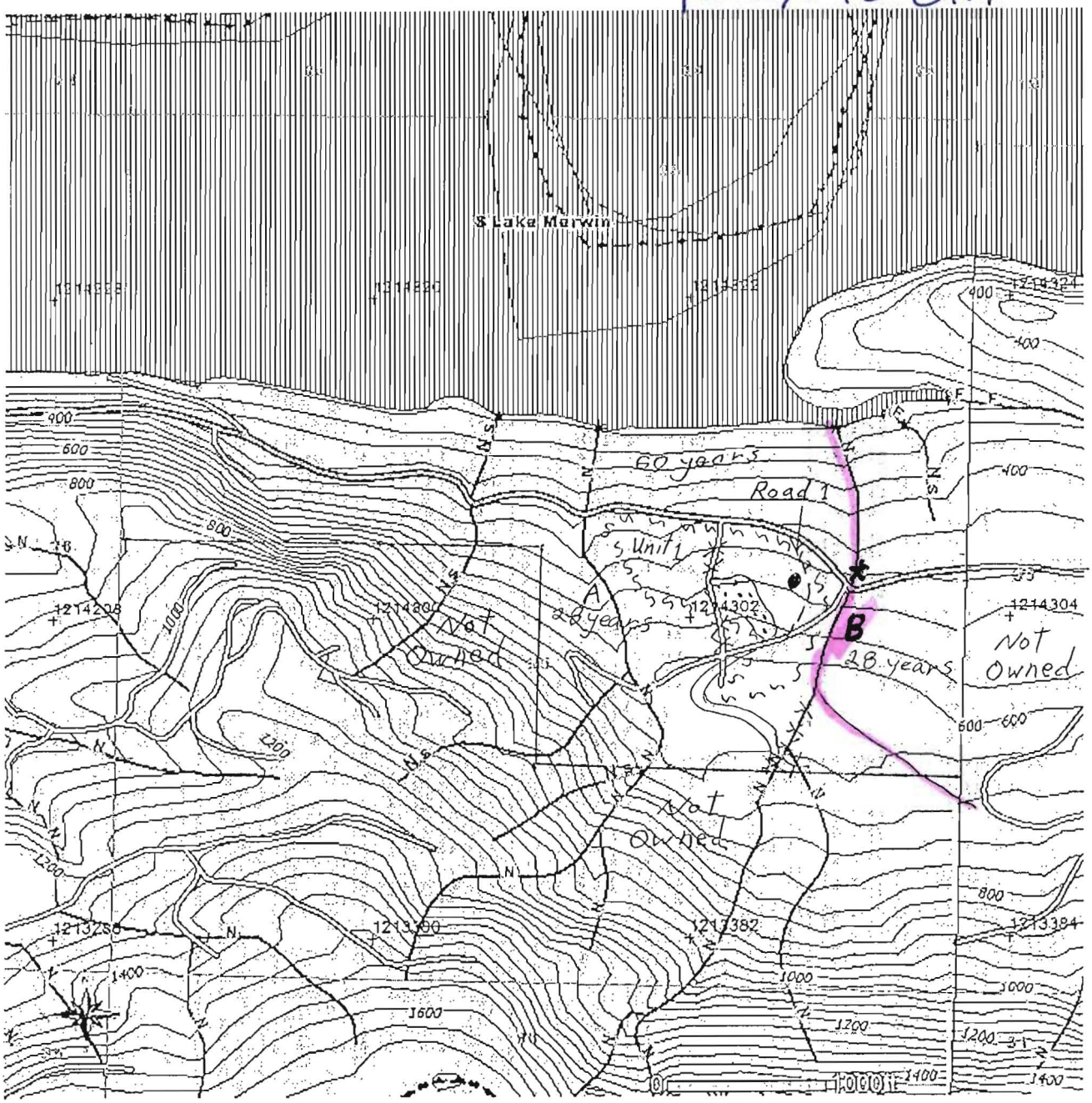
Unit 1

FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 6 NORTH HALF 0, RANGE 2 EAST (W.M.) HALF 0, SECTION 25

Application #: 2924752

PC-27-12-0171



Please use the legend from the FPA Instruction or provide a list of symbols used.

Unit Boundary
Existing Road
New Road
Landing
Streams
Stream does not exist
WRTs and GERTs
Road does not exist

Friday, June 01, 2012 2:44:15 PM
NAD 83
Contour Interval: 40 Feet

APPENDIX D
2012 TIMBER HARVEST INSPECTION SUMMARY

Note! Legend at bottom of spreadsheet

6/29/2012

PACIFICORP ENERGY
LEWIS RIVER HARVEST AREA SURVEY
SPRING 2012

PROJECT
Lewis River

Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Fall 2011 Comments	Spring Inventory Results
1	840107 CC	9.2	220	55-65	11	1	10	<5	15	99-02	X	Hvy. POMU, MAAQ	No issues requiring action
	960108 CC	12.0	220	40	8	1	14	10	20	03-08	X	Hvy. POMU, Mod MAAQ, Lt. ILEX; No new bear damage	No new bear damage
	990109 CT	21.4										OK	ALRU in understory
	020110 CC	10.0	220	15-20	4	1	5	20	40	2010		PIST N.; Mod. PTAQ, RUUR; Spray effective	Good conifer growth
2	880226 CC	22.1	220	65	10	1	25	<5	15	99-04	X	Hvy. POMU, MAAQ in understory	No issues requiring action
	900225 CC	7.3	220	55	10	1	1	5	20	04-07	X	Overstocked pockets	No new issues requiring action
	900227 CC	5.2	230	50	9	1	12	5	20	2004	X	Overstocked pockets	No new issues requiring action
	960228 CC	0.5	200	15-20	3	1	0	20	20	2007		OK	No new issues requiring action
	990229 CC	9.9	200	20	4	1-2	4	15	15	2007		Rocky, steep slope prohibited scarification; Mod. POMU, RUUR	No issues requiring action
	990230 CT	5.1										OK	No issues requiring action
	020231 CC	1.9	220	8-15	2	1	14	60	10	2010		Mod. PTAQ, RUUR	Heavy PTAQ, Spray PTAQ
	020232 CC	9.2	220	10-20	3	1	8	60	10	2010		THPL doing well; Lt. RUAR, CYSC	Great forage of grass and legumes, No new issues requiring action
	020233 CC	2.8	220	10-20	3	1	5	60	10	2010		Lt. RUAR	Heavy PHAR, Spray PHAR
3	820318 CC	5.7					8			2004		ALRU Stand	No issues requiring action
	860309 CC	28.2	220	60	11	1	28	<5	10	1997	X	POMU, MAAQ understory	No issues requiring action
	880328 CC	13.4	230	55-60	11	1	14	<5	25	99-02	X	Overstocked pockets	No issues requiring action
	980329 CC	2.3	210	25-35	7	1	2	40	30	04-10	X	Lt. RUSP	No issues requiring action
	980330 CC	7.1	200	40-50	8	1	7	<5	15	04-08	X	Mod. POMU, MAAQ	Grasses are gone
	980331 CC	13.1	220	30-40	7	1	12	5	60	04-08	X	Hvy. RUUR; Mod. POMU, MAAQ; Lt. RUAR	Grasses are gone
	050332 CC	10.7	280	10-15	2	1	9	20	40			Hvy. RUUR; Mod. RUSP	Light RUAR, good shrub component
	050333 CC	1.0	300	8-12	2	1	3	30	40			Mod. PTAQ, RUUR; Lt. RUAR	Good conifer growth, no new issues
	050334 CT	5.9										OK	No issues requiring action
4	870415 CC	14.8	190	50-60	12	1-2	12	<5	20	2003	X	OK	No issues requiring action
	900437 CC	13.4	200	45-55	9	1-2	13	10	30	2004	X	OK	No issues requiring action
	900438 CC	10.9	110	40-55	10	1-2	11	20	20	2004	X	OK	Opening filling in
	900439 CT	2.2										OK	No issues requiring action
	930440 CC	1.0	150	20-40	6	1	0	10	30			Good screen; Mod. RUAR	Spray RUAR, no new issues
	930441 CC	0.4	150	30-40	6	1	0	20	30			OK	No issues requiring action
	930442 CC	2.2	250	35-40	8	1	0	10	10			OK; Good screen & elk use	No issues requiring action
	010443 CC	13.2	200	25	5	1	6	20	30	06-08		THPL N.; Heavy RUUR; Spray effective	No issues requiring action
	010444 CC	4.9	210	25	5	1	1	20	30	06-08		Mod. RUUR covering grass	Good conifer growth
	010445 CC	9.3	210	25	5	1	5	20	30	06-08		Mod. elk foraging; RUUR covering grass; Lt. RUAR	Good conifer growth
	020446 CC	0.7	200	3-6	<1	1	0	50	15			Spray effective	No issues requiring action
	030447 CC	24.6	200	10-20	3	1	17	50	15	2011		THPL SE.	THPL growing slowly, No issues requiring action
5	820511 CC	20.7	230	60-65	11	1	27	5	15	95-04	X	OK	No issues requiring action
	820512 CC	2.1										ALRU Stand	No issues requiring action
	860520 CC	30.6	220	45-60	11	1	34	<5	5	98-04	X	Hvy. POMU, MAAQ	No issues requiring action
	930521CT	15.5										OK	No issues requiring action
	930522CT	5.0										OK	No issues requiring action
	020523CC	22.6	220	10-20	3	1	30	40	10	2009		PIPO, PIST N.; PTAQ spray effective; Lt. ALRU, RUUR	Good grass growth; PIPO OK
	020524CC	7.1	230	10-20	3	1-2	7	50	10	2009		PIPO, PIST N.; Mod. PTAQ	Good grass growth; PIPO OK; PTAQ needs herbicide treatment
	020525CT	22.9										OK	No issues requiring action
		428.1											

PROJECT
Lewis River

Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Comments	Spring Inventory Results
5	040527CC	16.3	300	6-12	2	1-2	8	50	10			Mod. PTAQ; Lt. ACMA SW., ALRU	PTAQ needs herbicide treatment, Lt. ALRU
	040528CC	5.1	250	6-10	2	1-2	2	50	10			Mod. PTAQ; Spray effective	PTAQ needs herbicide treatment, No issues requiring action
	830621CC	1.7	220	35-50	9	1	2	<5	25	2002		Lt. RUAR N.	No issues requiring action
	830633CC	10.7	220	50-65	11	1-2	11	<5	20	96-02	X	Hvy. POMU	No new issues requiring action
	860631CC	1.8	190	40-60	9	1	2	<5	50	99-02	X	Hvy. POMU	No new issues requiring action
	860632CC	1.6	200	45-65	10	1	4	5	25	99-02	X	OK	No new issues requiring action
	860636CC	0.8	200	45-60	9	1-2	1	5	30	2002		OK	No new issues requiring action
	860637CC	4.8	200	30-60	11	1-2	5	5	20	2002	X	THPL, Root rot center of unit - moderate mortality	No new issues requiring action
	860639CC	1.0	200	40-50	8	1-2	1	5	20	02-10	X	OK	No new issues requiring action
	860646CC	8.3	200	50-60	11	1	10	<5	5	99-10	X	Mod. POMU	No new issues requiring action
	880659CC	2.6	150	40-55	9	1	3	40	10	2002	X	OK	No new issues requiring action
	880660CC	2.0	230	40-55	8	1-2	0	5	15	02-12	X	Overstocked pockets; Hvy. MAAQ, POMU	Spacing looks good
	880661CC	1.0	230	40-50	8	1-2	5	5	15	02-12	X	Overstocked pockets	Spacing looks good
	890662CC	14.9	210	40-60	9	1-2	15	10	35	2002	X	Slightly overstocked	No new issues requiring action
	890663CC	7.5	200	40-55	9	1-2	8	5	20	02-10	X	OK	No new issues requiring action
	910664CC	13.7	220	35-50	9	1	14	<5	10	2003	X	Overstocked pockets; Hvy. GASH; Lt. RUAR S.	No new issues requiring action
	930665CT	25.1										OK	No new issues requiring action
	940666CT	9.8										OK	No new issues requiring action
6	960668CC	6.1	210	25-40	6	1	6	30	20	03-10	X	Mod. POMU	No new issues requiring action
	960669CT	7.9										OK	No new issues requiring action
	970670CT	13.9										OK	No new issues requiring action
	970671CC	19.2	220	25-35	6	1-2	19	20	40	05-08	X	Mod. POMU	No new issues requiring action
	970672CT	11.4										OK	No new issues requiring action
	970675CT	14.9										OK	No new issues requiring action
	970683CT	14.6										OK	No new issues requiring action
	980667CT	11.6										OK	No new issues requiring action
	980673CC	4.9	200	25-40	6	1	6	50	15	05-08	X	OK	Pruning looks good
	980674CC	8.7	200	30-40	7	1	7	50	20	05-08	X	OK	No new issues requiring action
	010676CT	35.2										CYSC Above Road 607	No new issues requiring action
	030677CC	16.6	220	10-15	3	1	14	10	50	2010		THPL W.; Hvy RUUR S.; Mod. PTAQ; Lt. RUAR	No new issues requiring action
	030678CC	7.9	330	8-10	2	1	6	40	30			THPL, PIPO OK; Mod. PTAQ, RUAR	PIPO growing well
	030679CC	7.4	210	10-15	2	1	6	70	10	2011		Hvy. PTAQ; Med. ALRU; Lt. RUAR	PCT looks good
	030680CC	5.8	210	10-15	2	1	5	70	10	2011		Hvy. PTAQ; Lt. CYSC	PCT looks good
	030681CC	0.6	210	8-20	2	1	2	70	10	2011		Mod PTAQ	PCT looks good
	030682CC	8.5	200	8-15	2	1	4	60	5	2011		Hvy. CYSC E; Mod. PTAQ	PCT looks good
7	840718CC	12.6	200	25-55	7	1-2	25	15	25	03-05	X	Hvy. POMU, MAAQ	No new issues requiring action
	840772CC	13.5	200	25-60	10	1-2	14	5	20	2005	X	Hvy. POMU, MAAQ	No new issues requiring action
	870740CC	11.3	180	30-60	9	1	13	5	20	2003	X	Hvy. POMU, MAAQ	No new issues requiring action
	880756CC	5.4	200	45-65	10	1-2	5	5	30	05-10	X	Hvy. POMU	No new issues requiring action
	880757CC	6.4	230	50-60	9	1	2	20	30		X	Overstocked pockets	No new issues requiring action
	880758CC	10.9	190	40-60	10	1	12	15	15		X	OK	No new issues requiring action
	890745CC	6.6	200	30-50	10	1	6	20	10		X	Hvy. MAAQ; Spray effective	No new issues requiring action
		399.1											

PROJECT Lewis River													
							%Forage						
Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	Grass	Shrubs	PCT	Pruned	Comments	Spring Inventory Results
7	950759CC	2.2	210	20-30	6	1-2	5	5	30		X	Overstocked pockets	No new issues requiring action
	950760CC	8.8	190	25-35	6	1-2	7	30	20	08-09	X	No new bear damage	No new issues requiring action
	950761CT	15.8										OK	No new issues requiring action
	950762CC	9.1	190	20-35	6	1	6	20	30	2008	X	Mod. MAAQ, POMU; No new bear damage	No new issues requiring action
	950763CC	2.9	180	20-30	5	1	3	15	25	2008	X	Mod. MAAQ, POMU	No new issues requiring action
	950764CT	10.1										OK	No new issues requiring action
	950765CT	3.4										OK	No new issues requiring action
	950766CT	1.2										OK	No new issues requiring action
	970767CC	4.7	230	15-25	5	1	4	15	40			PIPO, THPL OK; Mod. PTAQ; Spray effective	No new issues requiring action
	000768CC	8.1	220	25-30	5	1	4	30	20	2008	X	Heavy elk and deer use; Spray effective; Mod. RUUR	Pruning looks good
	000769CC	10.6	180	20-30	5	1	6	30	10		X	Overstocked pockets; Lt. RUAR	PCT and Pruning looks good
	050770CC	24.9	330	2-6	<1	1-2	30	90	5			Hvy. elk and deer browse	Lt. ALRU, Treat ALRU, PTAQ spray effective
	050771CC	2.3	330	2-4	<1	1	0	80	5			PIPO, THPL OK; Hvy. Elk use	Lt. ALRU, Good WRC growth
8	880833CC	4.4	220	40-50	9	1-2	2	<5	10		X	Overstocked pockets; Hvy. POMU, GASH	No new issues requiring action
	880834CC	7.4	220	45-60	10	1-2	5	15	15		X	Overstocked pockets; Lt. RUAR N., ALRU E.	No new issues requiring action
	980835CT	16.3										OK	No new issues requiring action
	980836CC	9.5	200	20-30	4	1-2	8	5	5			Overstocked pockets; GASH overtaking grass; Mod. PTAQ	PCT and Pruning looks good
	010837CC	13.3	220	5-9	1	1-2	9	60	10	07-10		THPL OK; Lt. PTAQ	Lt. ALRU
9	840907CC	10.2	220	50-70	10	1-2	11	5	10	2002	X	Overstocked pockets; Hvy. MAAQ, POMU	No new issues requiring action
	840921CC	12.8	200	50-70	10	1	13	5	15	96-02	X	Hvy. POMU	No new issues requiring action
	890931CC	21.8	200	35-50	10	1	25	10	15	08-10	X	Lt. CYSC SW	No new issues requiring action
	920932CC	13.8	200	30-50	8	1	14	15	20	03-10	X	Hvy. POMU, GASH; PHAR W.	PTAQ W.
	920933CC	14.4	220	20-40	5	1-2	5	30	20	08-10	X	OK	No new issues requiring action
	990934CC	14.5	220	15-30	5	1-2	6	25	25	2008	X	Hvy. RUUR crowding grasses; Mod. PTAQ	No new issues requiring action
	990935CC	10.9	200	15-35	4	1-2	6	10	20	2008	X	Hvy. POMY, MAAQ	No new issues requiring action
	020936CC	10.3	190	5-20	3	1-2	3	60	5	2011		Hvy. PTAQ	PTAQ spraying not necessary this year
10	841006CC	3.1										ALRU Stand	No new issues requiring action
11	861103CC	28.3	210	40-65	9	1-2	31	<5	25	03-08	X	Hvy. RUAR S.	PHAR S., Treat PHAR
	901117CC	13.0	210	20-45	8	1-2	16	15	25	03-08	X	Lt. RUAR; Lt. Bear damage	No new issues requiring action
	901118CT	4.8										OK	No new issues requiring action
	901119CC	1.3	140	15-30	5	1-2-3	2	25	10	2005		OK	No new issues requiring action
	991122CC	7.0	210	20-35	5	1-2	7	50	10	05-08		Lt. ALRU; Good elk use; Spray effective	New bear damage, Pruning looks good
	991123CC	1.0	200	12-25	3	1-2	3	30	10	05-08		Hvy. POMU	No new issues requiring action
	011124CC	7.9	210	25-35	5	1	5	30	10	06-08		Mod. MAAQ	No new issues requiring action
	011125CC	12.4	200	15-25	4	1-2	5	50	10	06-08		OK	No new issues requiring action
	101126CC	18.3	300	1-2	<1	1-2		90	5			Well stocked plantation; Hvy. Browse	Heavy grass and legumes, OUST treatment effective
	101127CC	11.7	300	1-2	<1	1-2		90	5			Well stocked plantation; Hvy. Browse	Heavy grass and legumes, ALRU, Treat ALRU, OUST treatment effective
		372.5											

PROJECT
Lewis River

Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Comments	Spring Inventory Results
12	871202CC	8.4	190	50-65	10	1-2	3	<5	30	99-03	X	Hvy POMU	No new issues requiring action
	871214CC	6.3	190	40-60	10	1-2	6	<5	30	03-10		OK	No new issues requiring action
	871220CC	13.2	170	50-65	11	1	17	<5	15	99-03	X	Lt. RUAR W.	No new issues requiring action
	911230CC	2.2	220	6-30	1-4	2	0	40	10			OK	No new issues requiring action
	911231CC	4.0	200	15-30	1-6	1	0	50	15	2011	X	Mod. RUAR; Lt. PHAR, PTAQ, RUSP	No new issues requiring action
	911232CC	0.8	220	25-40	6	1-2	0	20	20			Lt. ALRU	No new issues requiring action
	931233CC	3.1	<100			2-3	0					Suppressed	No new issues requiring action
	971234CC	4.8	210	30-40	8	1-2	2	<5	15	2008	X	Mod. PTAQ	No new issues requiring action
	971235CC	11.6	200	20-40	7	1-2	12	<5	20	2008	X	Hvy. RUSP	No new issues requiring action
	021236CC	18.4	250	8-15	2	1-2	11	30	20			Mod. RUSP, POMU, PHAR W.; Overstocked pockets	No new issues requiring action
	041237CC	13.9	200	10-15	2	1-2	13	70	10	2011	X	Mod. RUAR; Hvy. PTAQ W.; Lt. PHAR N.	PCT looks good, THPL growing well
	051238CC	25.1	310	5-15	1	1-2	22	50	10		X	Spray effective; Mod. PATQ, POMU, RUSP	PCT looks good, THPL OK
	051239CC	7.7	300	3-12	1	1-2	12	30	20		X	THPL; Heavy deer use; Hvy. RUSP	PCT looks good, THPL OK
15	841522CC	5.8	210	70	11	1	12	<5	15	2003	X	Overstocked pockets	No new issues requiring action
	841523CC	15.9	240	50-70	10	1-2	23	5	20	2003	X	Overstocked pockets	No new issues requiring action
	841546CC	9.1	220	80	11	1	9	<5	15	2003	X	Overstocked pockets	No new issues requiring action
	871510CC	2.1	210	35-45	8	1-2	0	5	30	99-09		Good Screen	No new issues requiring action
	871514CC	29.4	250	40-65	11	1	29	<5	10	99-03	X	Overstocked	No new issues requiring action
	891535CC	22.5	210	55	10	1	23	5	10	2003	X	Overstocked pockets	No new issues requiring action
	891536CC	1.5	75	15-40	4-8	1-2	1	<5	60			OK	No new issues requiring action
	951537CC	17.2	190	20-50	8	1	17	20	30	2008	X	Hvy. PTAQ, Lt. RUAR; No new bear damage; Mtn beaver	No new issues requiring action
	951538CC	8.7	170	10-45	7	1	6	40	15	2008	X	Hvy. PTAQ, Lt. RUAR; Hvy bear damage; Mtn Beaver	No new issues requiring action
	951539CT	11.5										Heavy ALRU	No new issues requiring action
	951540CT	9.9										Heavy ALRU	No new issues requiring action
	001541CC	4.6	190	20-30	4	1-2	7	30	15	2009		Heavy PTAQ	No new issues requiring action
	001542CC	4.4	220	25-35	5	1-2	4	40	20	2009		Med. PTAQ, RUSP	Pruning looks good
	001543CC	5.8	200	15-30	5	1-2	5	40	20	2009		Med. PTAQ; Hvy. deer use; Mtn Beaver	Pruning looks good
	001544CC	4.7	220	25-35	5	1-2	6	30	10	2009		Hvy. PTAQ; Mod. Deer use	Pruning looks good
	001545CC	1.2	200	20-30	5	1-2	3	30	10	2009		Hvy. PTAQ	Pruning looks good
16	851615CC	34.5	180	65-75	13	1	33	<5	15	97-02	X	Lt. RUAR	No new issues requiring action
	851616CC	7.0	100	55-65	11	1	0	20	20			Lt. RUAR	No new issues requiring action
	851630CC	63.1	170	35-65	11	1-2	65	<5	30	97-03	X	Overstocked pockets; ALRU	No new issues requiring action
	921631CC	8.6	160	5-55	5	1	8	50	10	2003		THPL OK	No new issues requiring action
	921632CC	4.4	190	45-55	10	1-2	3	25	10		X	Overstocked pockets; ALRU N.; Lt. RUAR	No new issues requiring action
	921633CC	3.3	170	45-55	10	1-2	0	5	35	2005	X	Lt. MAOR, RUAR	No new issues requiring action
17	991701CC	26.5	220	20-30	5	1-2	0	30	10	2008		Purchased - no grass seeding	Pruning not finished
	991702CC	37.2	200	25-30	5	1-2	0	20	30	2008	X	Purchased - no grass seeding; Mod. GASH	No new issues requiring action
	091703CC	22.5	320	2-3	<1	1	0	80	10			Mod. PTAQ, ALRU N.	OUST treatment effective
	091704CC	14.4	300	2-3	<1	1	0	80	10			Hvy. ALRU; Mod. PTAQ; LT. CYSC	Heavy ALRU - not sprayed, Treat ALRU, OUST treatment effective
	091705CC	11.3	320	2-3	<1	1	0	80	10			Hvy. PTAQ; Mod. ALRU	OUST treatment effective
	021706CC	12.0	200	10-20	3	1-2	0	15	15	2010		Hvy. RUAR, PTAQ	No new issues requiring action
		518.6											

PROJECT
Lewis River

Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Comments	Spring Inventory Results
18	101801CC	27.5	280	1-2	<1	1	0	90	5			Mod. Elk use; THPL S.	Heavy elk damage to THPL, Moderate elk damage to PSME
19	861901CC	14.1	230	50-60	11	1	0	<5	15	2003	X	Mod. MAAQ	No new issues requiring action
	861902CC	8.4	230	45-60	10	1	0	<5	15	2003	X	OK	No new issues requiring action
	861903CC	7.2	200	45-55	10	1	0	<5	20	2003	X	OK	No new issues requiring action
20	752001CC	22.4	240	15-50	11	1	0	<5	25	2008		Overstocked; Purchased - no grass seeding	No new issues requiring action
	912002CC	10.4	180	30-50	8	1-2	0	10	5	2005	X	Hvy POMU; Lt RUAR	No new issues requiring action
	932003CC	41.9	200	20-30	8	1	0	<5	20	06-08	X	Purchased - no grass seeding; No new bear damage	New bear damage
	952004CC	15.5	210	20-50	8	1	0	<5	20	05-10		Purchased - no grass seeding; No new bear damage	No new bear damage
	952005CC	4.7	200	25-50	8	1	0	<5	20	05-09		Purchased - no grass seeding; No new bear damage	New bear damage
	952006CC	11.7	200	30-50	8	1	0	<5	20	05-09		Purchased - no grass seeding; No new bear damage	New bear damage
	952007CC	16.4	210	40-50	9	1-2	0	<5	5	2008	X	Purchased - no grass seeding; Spray effective	No new issues requiring action
	952008CC	12.6	180	20-50	8	1-2-3	0	10	10	2008	X	Purchased - no grass seeding; Spray effective; Hvy. PTAQ W.	PIPO OK
	002009CC	1.4	220	20-30	5	1	1	<5	25	2010		Purchased property - no grass seedling; Spray effective	No new issues requiring action
23	842301CC	23.5					0			2006		ALRU Stand	No new issues requiring action
	842302CC	7.3	150	25-55	10	1-2	0	<5	5			Hvy POMU, MAAQ	No new issues requiring action
	932303CC	10.8	150	25-40	7	1-2	0	30	10		X	Lt. RUAR, ALRU; Heavy ATV use	No new issues requiring action
26	862601CC	30.8	190	70	11	1	0	<5	20	01-03	X	Heavy elk use; OK	No new issues requiring action
	862602CC	22.4	200	60-70	10	1	0	<5	5	01-03	X	Heavy elk use; OK	No new issues requiring action
	082603CC	8.2	250	1-2	<1	1-2-3	0	90	5			Hvy elk use and browse damage	Heavy elk damage to THPL, light elk damage to PSME
	082604CC	11.9	250	1-2	<1	1-2	0	90	5			Hvy elk use and browse damage	Heavy elk damage to THPL, light elk damage to PSME
	082605CC	10.2	220	1-2	<1	1-2	0	90	5			Hvy elk use and browse damage	Heavy elk damage to THPL, light elk damage to PSME
28	112801CC	21.0	70	75	18	1	3	10	35			Hvy elk use	Planted, Heavy PTAQ, Spray PTAQ
33	043301CC	59.0	320	5-10	2	1	0	5	15	2012		Overstocked	PCT looks good
	043302CC	4.7	320	5-10	2	1	0	5	15	2012		Overstocked	PCT looks good
	043303CC	6.3	320	5-10	2	1	0	5	15	2012		Overstocked	PCT looks good
	043304CC	1.0	320	5-10	2	1	0	5	15	2012		Overstocked	PCT looks good
	063305CC	21.0	360	4-8	2	1	0	5	15			Overstocked	No new issues requiring action
	063306CC	39.9	360	4-8	2	1	0	5	15			Overstocked	No new issues requiring action
	063307CC	50.3	360	4-8	2	1	0	5	15	2012		Overstocked	PCT looks good
	063308CC	2.6	360	4-8	2	1	0	5	15	2012		Overstocked	PCT looks good
	063309CC	3.2	360	4-8	2	1	0	5	15	2012		Overstocked	PCT looks good
	063316CC	3.8	360	4-8	2	1	0	5	15			Overstocked	No new issues requiring action
	093310CC	43.2	10	1-3	<1	1-2	0	5	50			Understocked	Planted
	113311CC	31.3	0					<5	5			Unplanted	Planted fire breaks
	113312CC	18.9	0					<5	5			Unplanted	Planted fire breaks
	113313CC	24.0	0					40	<5			Unplanted	Planted
	113314CC	1.9	0					40	<5			Unplanted	Planted
	113315CC	15.0	0					40	<5			Unplanted	Planted
		395.4											

Total Acres 2113.7

ACCI	Vine maple	GASH	Salal	PSME	Douglas Fir	N.	North
ACMA	Bigleaf maple	ILEX	English holly	PTAQ	Bracken fern	E.	East
ABPR	Noble fir	MAAQ	Oregon grape	RUAR	Himalayan blackberry	S.	South
ALRU	Red alder	MAOR	Wild cucumber	RUSP	Salmonberry	W.	West
APRU	Mountain beaver	PATO	Empress tree	RUUR	Trailing blackberry		
BUDA	Butterfly bush	PHAR	Reed canarygrass	SACA	Red elder		
CIAR	Canada thistle	PIPO	Ponderosa pine	SEJA	Tansy		
CIVU	Bull thistle	PIST	White pine	THPL	Western redcedar		
CL spp.	Clematis	POMU	Sword fern	TSHE	Western hemlock		
CYSC	Scotch broom						

Note! Legend at bottom of spreadsheet

11/26/2012

PACIFICORP ENERGY
LEWIS RIVER HARVEST AREA SURVEY
2012-2013

PROJECT Lewis River														
Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Comments	Recommended Action for 2013	Action Taken 2012
1	840107 CC	9.2	220	55-65	11	1	10	<5	15	99-02	X	Hvy. POMU, MAAQ		
	960108 CC	12.0	220	40	9	1	14	5	20	03-08	X	Hvy. POMU, Mod MAAQ, Lt. ILEX; No new bear damage		
	990109 CT	21.4										OK		
	020110 CC	10.0	220	15-20	4	1	5	20	40	2010		PIST N.; Mod. PTAQ, RUUR		
2	880226 CC	22.1	220	65	11	1	25	<5	15	99-04	X	Hvy. POMU, MAAQ in understory		
	900225 CC	7.3	210	55	11	1	1	<5	5	07-12	X	H&S effective		H&S PCT
	900227 CC	5.2	210	50	9	1	12	5	20	04-12	X	H&S effective		H&S PCT
	960228 CC	0.5	200	15-20	3	1	0	20	20	2007		OK		
	990229 CC	9.9	200	25	5	1-2	4	10	15	2007		Rocky, steep slope prohibited scarification; Mod. POMU, RUUR		
	990230 CT	5.1										OK		
	020231 CC	1.9	220	10-20	2	1	14	30	10	2010		Hvy PTAQ, Mod. RUUR		
	020232 CC	9.2	220	15-20	3	1	8	50	10	2010		THPL doing well; Lt. RUAR, CYSC	Spray CYSC N.	
	020233 CC	2.8	220	15-20	3	1	5	60	10	2010		Lt. RUAR		
3	820318 CC	5.7					8			2004		ALRU Stand		
	860309 CC	28.2	220	60	11	1	28	<5	10	1997	X	POMU, MAAQ understory		
	880328 CC	13.4	230	55-60	11	1	14	<5	20	99-02	X	Overstocked pockets		
	980329 CC	2.3	210	25-40	7	1	2	20	30	04-10	X	Lt. RUSP		
	980330 CC	7.1	200	40-50	8	1	7	<5	10	04-08	X	Mod. POMU, MAAQ		
	980331 CC	13.1	220	35-45	8	1	12	5	50	04-08	X	Hvy. RUUR; Mod. POMU, MAAQ; Lt. RUAR		
	050332 CC	10.7	200	15-20	3	1	9	20	40	2012		Hvy. RUUR; Mod. RUSP; Lt. RUAR		Slash PCT
	050333 CC	1.0	200	8-15	3	1	3	20	40	2012		Mod. PTAQ, RUUR; Lt. RUAR		Slash PCT
	050334 CT	5.9										OK		
4	870415 CC	14.8	190	50-60	12	1-2	12	<5	20	2003	X	OK		
	900437 CC	13.4	200	45-55	10	1-2	13	10	30	2004	X	Lt. RUAR along stream		
	900438 CC	10.9	110	40-55	10	1-2	11	10	20	2004	X	OK		
	900439 CT	2.2										OK		
	930440 CC	1.0	150	20-50	7	1	0	10	30			Good screen; Mod. RUAR		Sprayed CYSC, RUAR, ALRU
	930441 CC	0.4	150	30-50	8	1	0	20	30			OK		
	930442 CC	2.2	250	45-50	10	1	0	5	10			OK; Good screen & elk use	Cut trees in ROW limits	
	010443 CC	13.2	200	25-35	7	1	6	15	30	06-08		THPL N.; Hvy elk use	Prune	
	010444 CC	4.9	210	25-35	7	1	1	10	30	06-08		Mod. RUUR covering grass; Hvy elk use	Prune	
	010445 CC	9.3	210	25-35	7	1	5	15	30	06-08		Mod. elk foraging; RUUR covering grass; Lt. RUAR	Prune; Cut trees in ROW limits	
	020446 CC	0.7	200	3-6	<1	1	0	50	15			Spray effective		
	030447 CC	24.6	200	10-25	3	1	17	50	15	2011		THPL SE.; Hvy PTAQ	Spray PTAQ	
5	820511 CC	20.7	230	60-65	11	1-2	27	5	15	95-04	X	Overstocked pockets		
	820512 CC	2.1										ALRU Stand		
	860520 CC	30.6	220	45-60	11	1	34	<5	5	98-04	X	Hvy. POMU, MAAQ		
	930521CT	15.5										OK		
	930522CT	5.0										OK		
	020523CC	22.6	220	15-30	4	1-3	30	20	10	2009		PIPO, PIST N.; Lt. ALRU S., RUUR; Lt. disease in PSME	Slash ALRU	
	020524CC	7.1	230	15-25	3	1-3	7	30	10	2009		PIPO, PIST N.; Mod. PTAQ; Mod disease in PSME	Monitor disease in PSME	
	020525CT	22.9										OK		
		428.1												

PROJECT Lewis River														
Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Comments	Recommended Action for 2013	Action Taken 2012
5	040527CC	16.3	300	8-15	2	1-2	8	40	10			Mod. PTAQ; Lt. ACMA SW., ALRU	Slash PCT, Slash ALRU	
	040528CC	5.1	250	8-15	2	1-2	2	30	10			Hvy PTAQ	Slash PCT	
6	830621CC	1.7	220	35-50	9	1	2	<5	25	2002		Lt. RUAR N.		
	830633CC	10.7	220	50-65	11	1-2	11	<5	20	96-02	X	Hvy. POMU		
	860631CC	1.8	190	40-60	9	1	2	<5	50	99-02	X	Hvy. POMU		
	860632CC	1.6	200	45-65	10	1	4	5	25	99-02	X	OK		
	860636CC	0.8	200	45-60	12	1-2	1	5	30	2002		OK		
	860637CC	4.8	200	30-65	11	1-2	5	5	20	2002	X	THPL, Root rot center of unit - moderate mortality		
	860639CC	1.0	200	40-50	8	1-2	1	5	20	02-10	X	OK		
	860646CC	8.3	200	50-60	11	1	10	<5	5	99-10	X	Mod. POMU		
	880659CC	2.6	150	40-55	9	1	3	40	10	2002	X	OK		
	880660CC	2.0	230	40-55	8	1-2	0	5	15	08-12	X	Overstocked pockets; Hvy. MAAQ, POMU		Slash PCT
	880661CC	1.0	230	40-50	8	1-2	5	5	15	08-12	X	Overstocked pockets		Slash PCT
	890662CC	14.9	210	40-60	9	1-2	15	10	20	2002	X	Slightly overstocked		
	890663CC	7.5	200	40-55	9	1-2	8	5	20	02-10	X	OK		
	910664CC	13.7	220	35-50	9	1	14	<5	10	2003	X	Overstocked pockets; Hvy. GASH; Lt. RUAR S.		
	930665CT	25.1										OK		
	940666CT	9.8										OK		
	960668CC	6.1	210	30-40	7	1	6	30	20	03-10	X	Overstocked for steep slope	Slash PCT to 180 trees per acre	
	960669CT	7.9										OK		
	970670CT	13.9										OK		
	970671CC	19.2	220	25-35	6	1-2	19	20	40	05-08	X	Mod. POMU		
	970672CT	11.4										OK		
	970675CT	14.9										OK		
	970683CT	14.6										OK		
	980667CT	11.6										OK		
	980673CC	4.9	200	25-40	6	1	6	30	15	05-08	X	OK		Pruned
	980674CC	8.7	200	30-40	8	1	7	30	30	05-08	X	OK		
	010676CT	35.2										CYSC Above Road 607		Sprayed CYSC
	030677CC	16.6	220	15-20	4	1	14	10	50	2010		THPL W.; Hvy RUUR S.; Mod. PTAQ; Lt. RUAR		
	030678CC	7.9	330	8-10	2	1	6	30	30			THPL, PIPO OK; Mod. PTAQ	Slash PCT	
	030679CC	7.4	210	10-15	2	1	6	70	10	2011		Hvy. PTAQ; Med. ALRU; RUAR; Lt. CYSC	Spray PTAQ, RUAR, CYSC; Slash ALRU	
	030680CC	5.8	210	10-15	2	1	5	70	10	2011		Hvy. PTAQ; Lt. RUAR	Spray PTAQ, RUAR	Sprayed CYSC, RUAR
	030681CC	0.6	210	8-20	2	1	2	70	10	2011		Mod PTAQ; Lt. RUAR	Spray PTAQ, RUAR	
	030682CC	8.5	200	8-15	2	1	4	60	5	2011		Hvy. CYSC E; Mod. PTAQ		Sprayed CYSC
	120684CC	12.9											Plant 3,600 PSME; Spray OUST	Harvested and scarified
	120685CC	23.5											Plant 6,600 PSME; Spray OUST	Harvested and scarified
	120686CC	5.0										Speelyai ?	Plant 1,500 PSME; Spray OUST	Harvested and scarified
7	840718CC	12.6	200	25-55	7	1-2	25	15	25	03-05	X	Hvy. POMU, MAAQ		
	840772CC	13.5	200	25-60	10	1-2	14	5	20	2005	X	Hvy. POMU, MAAQ		
	870740CC	11.3	180	30-65	9	1	13	<5	20	2003	X	Hvy. POMU, MAAQ		
	880756CC	5.4	200	45-65	10	1-2	5	<5	30	05-10	X	Hvy. POMU		
	880757CC	6.4	230	50-60	9	1	2	20	30		X	Overstocked pockets		
	880758CC	10.9	190	40-60	10	1	12	10	15		X	OK		
	890745CC	6.6	200	30-50	10	1	6	10	20		X	Hvy. MAAQ; Spray effective		
		440.5												

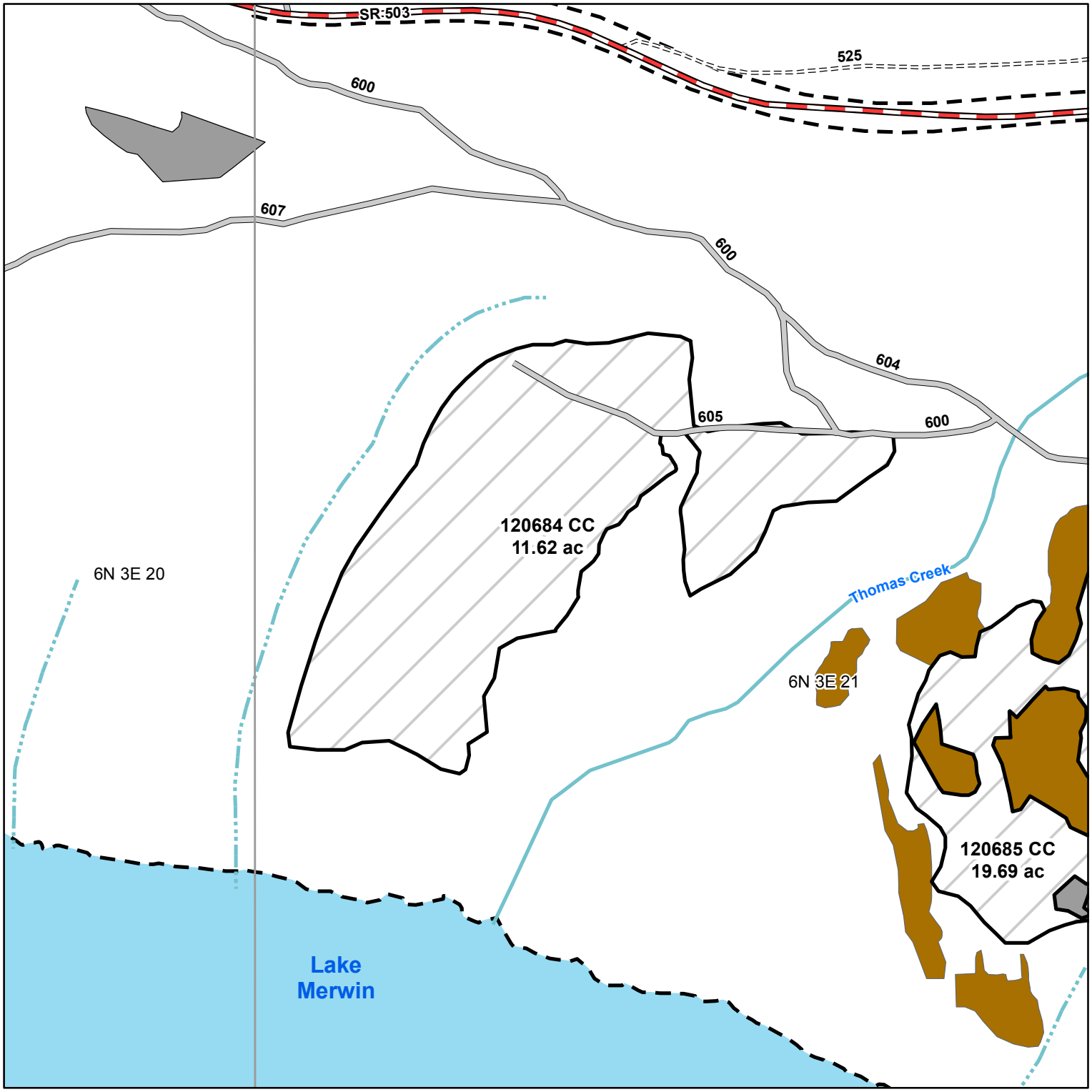
PROJECT Lewis River														
	Harvest		Trees/		Ave.			%Forage					Recommended	Action
Unit	Area	Acres	Acre	Height	Dia.	Vigor	Snags	Grass	Shrubs	PCT	Pruned	Comments	Action for 2013	Taken 2012
7	950759CC	2.2	210	20-30	6	1-2	5	5	30		X	Overstocked pockets		
	950760CC	8.8	190	25-35	6	1-2	7	30	20	08-09	X	No new bear damage		
	950761CT	15.8										OK		
	950762CC	9.1	190	20-35	6	1	6	15	30	2008	X	Mod. MAAQ, POMU; No new bear damage		
	950763CC	2.9	180	20-35	6	1-2	3	5	30	2008	X	Mod. MAAQ, POMU; No new bear damage		
	950764CT	10.1										OK		
	950765CT	3.4										OK		
	950766CT	1.2										OK		
	970767CC	4.7	210	20-30	7	1	4	15	40	2012		PIPO, THPL OK; Mod. PTAQ		Slash PCT
	000768CC	8.1	220	25-30	5	1	4	20	25	2008	X	Heavy elk and deer use; Mod. RUUR		Pruned
	000769CC	10.6	180	20-30	5	1	6	30	10	2012	X	OK		
	050770CC	24.9	330	3-10	1	1-2	30	70	5			Hvy. elk and deer browse; ALRU S.	Slash PCT lower flat; Slash ALRU	Sprayed OUST
	050771CC	2.3	330	2-10	<1	1-2	0	70	5			PIPO, THPL OK; Hvy. Elk use	Spray Plantskydd, retube THPL	Sprayed Plantskydd on THPL, retubed; OUST on PSME and Pendulum on THPL
8	880833CC	4.4	220	40-60	9	1-2	2	<5	15		X	Overstocked pockets; Hvy. POMU, GASH		
	880834CC	7.4	220	45-60	10	1-2	5	15	15		X	Overstocked pockets; Lt. RUAR N., ALRU E.		
	980835CT	16.3										OK		
	980836CC	9.5	200	20-35	5	1-2	8	5	5	2012	X	GASH overtaking grass; Mod. PTAQ; Poor pruning in one acre	Reprune one acre	
	010837CC	13.3	220	5-9	1	1-2	9	60	10	07-10		THPL OK; Lt. PTAQ		
9	840907CC	10.2	220	50-70	10	1-2	11	5	10	2002	X	Overstocked pockets; Hvy. MAAQ, POMU		
	840921CC	12.8	200	50-70	10	1	13	5	15	96-02	X	Hvy. POMU		
	890931CC	21.8	200	35-50	11	1	25	5	10	08-10	X	OK		Sprayed CYSC, ALRU
	920932CC	13.8	200	30-50	8	1	14	10	20	03-10	X	Hvy. POMU, GASH; PHAR W.		Sprayed PHAR
	920933CC	14.4	220	20-40	6	1-2	5	30	20	08-10	X	OK		
	990934CC	14.5	220	20-30	6	1-2	6	15	25	2008	X	Hvy. RUUR crowding grasses; Hvy. POMU; Mod. PTAQ		
	990935CC	10.9	200	20-35	5	1-2	6	10	20	2008	X	Hvy. POMU, MAAQ		
	020936CC	10.3	190	5-20	3	1-2	3	50	5	2011		PIPO poor vigor; Mod. PTAQ		
10	841006CC	3.1										ALRU Stand		
11	861103CC	28.3	210	40-65	10	1-2	31	<5	20	03-08	X	OK		
	901117CC	13.0	210	25-45	8	1-2	16	15	25	03-08	X	Lt. RUAR; Lt. Bear damage		
	901118CT	4.8										OK		
	901119CC	1.3	140	15-30	5	1-2-3	2	25	10	2005		OK		
	991122CC	7.0	210	25-35	7	1	7	40	10	05-08	X	Hvy. elk use; Lt. ILEX		Pruned
	991123CC	1.0	200	12-25	4	1-2	3	30	10	05-08		Hvy. POMU		
	011124CC	7.9	210	30-40	7	1	5	30	10	06-08		Mod. MAAQ; Hvy. elk use		
	011125CC	12.4	200	20-30	6	1-2	5	30	10	06-08		Mod. elk use		
	101126CC	18.3	300	1-2	<1	1-2		90	5			THPL doing well; Hvy. elk use	Spray OUST, Rodeo-Pendulum; Retube	Sprayed Oust, Rodeo-Pendulum; Retubed THPL
	101127CC	11.7	300	1-2	<1	1-2		90	5			THPL doing well; Hvy. elk use	Spray OUST, Rodeo-Pendulum; Retube	Sprayed Oust, Rodeo-Pendulum; Retubed THPL
		372.5												

PROJECT Lewis River														
Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Comments	Recommended Action for 2013	Action Taken 2012
12	871202CC	8.4	190	50-65	10	1-2	3	<5	30	99-03	X	Hvy POMU		
	871214CC	6.3	190	40-60	10	1-2	6	<5	30	03-10		RUAR S.	Spray RUAR	
	871220CC	13.2	170	50-65	11	1	17	<5	15	99-03	X	Lt. RUAR W.		
	911230CC	2.2	220	6-30	1-4	2	0	40	10			OK		
	911231CC	4.0	200	15-30	1-6	1	0	30	25	2011	X	Lt. PTAQ, RUSP; Spray effective		Sprayed RUAR, PHAR, CYSC, ALRU
	911232CC	0.8	220	25-40	6	1-2	0	20	20			Lt. ALRU		
	931233CC	3.1	<100			2-3	0					Suppressed		
	971234CC	4.8	210	30-40	8	1-2	2	<5	15	2008	X	Mod. PTAQ		
	971235CC	11.6	200	20-40	7	1-2	12	<5	20	2008	X	Hvy. RUSP		
	021236CC	18.4	250	10-20	3	1-2	11	20	20	2012		Mod. RUSP, POMU, PHAR W.	Spray PHAR	Sprayed PHAR
	041237CC	13.9	200	15-25	3	1-2	13	50	20	2011		Lt. RUAR; Hvy. PTAQ W.; Spray effective		Sprayed PHAR,CYSC, RUAR
	051238CC	25.1	200	10-20	3	1-2	22	30	20	2012		Mod. PATQ, POMU, RUSP		
	051239CC	7.7	300	3-12	1	1-2	12	10	40	2012		THPL; Hvy. deer use; Hvy. RUSP, RUUR		Sprayed Rodeo-Pendulum
15	841522CC	6.1	210	70	11	1	12	<5	15	2003	X	Overstocked pockets		
	841523CC	22.0	240	50-70	10	1-2	23	5	20	2003	X	Overstocked pockets		
	841546CC	10.8	220	80	11	1	9	<5	15	2003	X	Overstocked pockets		
	871510CC	2.1	210	35-45	8	1-2	0	5	30	99-09		Good Screen		
	871514CC	29.4	250	40-65	11	1	29	<5	10	99-03	X	Overstocked		
	891535CC	22.5	210	55	10	1	23	5	10	2003	X	Overstocked pockets		
	891536CC	1.5	75	15-40	4-8	1-2	1	<5	60			OK		
	951537CC	17.2	190	20-50	8	1	17	20	30	2008	X	Hvy. PTAQ, Lt. RUAR; old bear damage, mtn. beaver damage		
	951538CC	8.7	170	10-45	7	1	6	40	15	2008	X	Hvy. PTAQ, Lt. RUAR; old bear damage, mtn. beaver damage		
	951539CT	11.5										Heavy ALRU		
	951540CT	9.9										Heavy ALRU		
	001541CC	4.6	190	20-30	5	1-2	7	20	20	2009		Heavy PTAQ	Prune	
	001542CC	4.4	200	25-35	6	1-2	4	20	30	2009	X	Hvy. PTAQ, RUSP		Pruned
	001543CC	5.8	200	15-30	6	1-2	5	30	20	2009	X	Med. PTAQ; Hvy. deer use; Mtn. Beaver; Hvy. porcupine damage		Pruned
	001544CC	4.7	220	25-35	6	1-2	6	20	20	2009	X	Hvy. PTAQ; Mod. Deer use		Pruned
	001545CC	1.2	180	20-30	6	1-2	3	20	20	2009	X	Hvy. PTAQ		Pruned
	121547CC	15.4											Plant 1,000 PSME, 3,000 ALRU	Harvested and scarified
16	851615CC	34.5	180	65-75	13	1	33	<5	15	97-02	X	Lt. RUAR		
	851616CC	7.0	100	55-65	11	1	0	20	20			Lt. RUAR		
	851630CC	63.1	170	35-65	12	1-2	65	<5	30	97-03	X	Overstocked pockets; ALRU		
	921631CC	8.6	160	10-55	6	1	8	30	20	2003		THPL OK; RUAR E.	Spray RUAR	
	921632CC	4.4	190	45-55	10	1-2	3	25	10	2012	X	Overstocked pockets; ALRU N.; Lt. RUAR		H&S PCT
	921633CC	3.3	170	45-55	10	1-2	0	5	35	2005	X	Lt. MAOR, RUAR		
17	991701CC	26.5	210	25-35	5	1-2	0	30	10	2008	X	Purchased - no grass seeding; Lt. CYSC		Pruned
	991702CC	37.2	200	25-35	5	1-2	0	20	30	2008	X	Purchased - no grass seeding; Mod. GASH		
	091703CC	22.5	320	3-6	<1	1	0	70	10			Mod. PTAQ		Sprayed Oust, Rodeo-Pendulum; Sprayed ALRU
	091704CC	14.4	300	3-5	<1	1	0	60	10			Hvy. PTAQ	Spray PTAQ	Sprayed Oust, Rodeo-Pendulum; Sprayed ALRU, Slashed ALRU
	091705CC	11.3	320	3-6	<1	1	0	70	10			Hvy. PTAQ	Spray PTAQ	Sprayed Oust, Rodeo-Pendulum; Sprayed ALRU
	021706CC	12.0	190	20-30	4	1-2	0	20	15	2010		Hvy. PTAQ	Spray PTAQ	Sprayed RUAR,CYSC
		542.1												

PROJECT Lewis River													
Mgmt. Unit	Harvest Area	Acres	Trees/ Acre	Height	Ave. Dia.	Vigor	Snags	%Forage Grass	%Forage Shrubs	PCT	Pruned	Comments	Recommended Action for 2013	Action Taken 2012
18	101801CC	27.5	280	2-3	<1	1	0	90	5			Hvy. elk use; THPL S.	Spray THPL with Plantskydd; Retube	Sprayed Oust, Rodeo-Pendulum, Plantskydd on THPL
19	861901CC	14.1	230	50-65	11	1	0	<5	15	2003	X	Mod. MAAQ		
	861902CC	8.4	230	45-65	10	1	0	<5	15	2003	X	OK		
	861903CC	7.2	200	45-55	10	1	0	<5	20	2003	X	OK		
20	752001CC	22.4	240	15-50	11	1	0	<5	25	2008		Overstocked; Purchased - no grass seeding	H&S PCT	
	912002CC	10.4	180	30-50	8	1-2	0	10	5	2005	X	Hvy POMU; Lt RUAR		
	932003CC	41.9	200	25-40	9	1	0	<5	20	06-08	X	Purchased - no grass seeding; old bear damage; Hvy. elk use		
	952004CC	15.5	210	20-50	8	1	0	<5	20	05-10		Purchased - no grass seeding; old bear damage		
	952005CC	4.7	200	25-50	8	1	0	<5	20	05-09		Purchased - no grass seeding; old bear damage		
	952006CC	11.7	200	30-50	8	1	0	<5	20	05-09		Purchased - no grass seeding; old bear damage		
	952007CC	16.4	210	40-50	9	1-2	0	<5	5	2008	X	Purchased - no grass seeding; Spray effective		
	952008CC	12.6	180	20-50	8	1-2-3	0	10	10	2008	X	Purchased - no grass seeding; Spray effective; Hvy. PTAQ W.		Sprayed Oust
	002009CC	1.4	220	20-30	5	1	1	<5	25	2010		Purchased property - no grass seeding; Spray effective		
23	842301CC	23.5					0			2006		ALRU Stand		
	842302CC	7.3	150	25-55	10	1-2	0	<5	5			Hvy POMU, MAAQ		
	932303CC	10.8	150	25-40	7	1-2	0	30	10		X	Lt. RUAR, ALRU; Heavy ATV use		
25	122501CC	6.7											Plant 2,000 PSME	Harvested and scarified
	122502CC	9.8											Plant 3,000 PSME	
26	862601CC	30.8	190	70	11	1	0	<5	20	01-03	X	Heavy elk use; OK		
	862602CC	22.4	200	60-70	10	1	0	<5	5	01-03	X	Heavy elk use; OK		
	082603CC	8.2	250	1-3	<1	1-2-3	0	70	5			THPL N. in poor condition; Hvy elk use and browse damage		Sprayed Plantskydd on THPL
	082604CC	11.9	250	1-4	<1	1-2	0	70	5			THPL fair condition; Hvy elk use and browse damage		Sprayed Plantskydd on THPL
	082605CC	10.2	220	1-2	<1	1-2	0	90	5			THPL N. in poor condition; Hvy elk use and browse damage		Sprayed Plantskydd on THPL
28	112801CC	21.0	70	75	18	1	3	10	35			PIST OK; Mod. elk use; Hvy. PTAQ; Lt. CYSC	Spray PTAQ, CYSC	Planted 500 PIST
33	043301CC	69.9	210	5-10	2	1	0	5	15			ALRU W.; PCT not finished	Slash ALRU W.; Finish slash PCT W.	Slash PCT E.
	043302CC	4.8	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		Slash PCT
	043303CC	6.5	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		Slash PCT
	043304CC	11.5	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		Slash PCT
	043305CC	31.1	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		Slash PCT
	063306CC	6.2	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		Slash PCT
	063307CC	19.8	360	4-6	2	1-2	0	5	15			Hvy. browse damage; Pruchased property - no grass seeding		
	063308CC	23.5	360	4-8	2	1	0	5	15			Overstocked; Pruchased property - no grass seeding	Slash PCT	
	063309CC	42.2	360	4-8	2	1	0	5	15			Overstocked; Purchased property - no grass seeding	Slash PCT	
	063310CT	1.9										OK		
	063311CC	51.9	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		
	063312CC	3.1	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		
	063313CC	3.5	210	5-10	2	1	0	5	15	2012		Purchased property - no grass seeding		
	063314CC	4.0	360	5-10	2	1	0	5	15			Overstocked; Purchased property - no grass seeding		
	093315CC	47.9	300	1-4	<1	1	0	5	30			Hvy. RUID; Pruchased property - no grass seeding		Planted 11,440 ABPR
	113316CC	32.7							5			Only fire trail planted	Scarify	Planted 800 ABPR
	113317CC	20.6							5			Only fire trail planted	Scarify	Planted 800 ABPR
	113318CC	23.9	300	1	<1	1	0	40	5			OK		Planted 7,560 ABPR, 900 PIST
	113319CC	1.8	300	1	<1	1	0	40	5			OK		Planted 440 ABPR, 100 PIST
	113320CC	14.2	300	1	<1	1	0	40	5			OK		Planted 3,634 PSME, 500 PIST, 160 ABPR
38	053801CC	40.0	360	4-10	1	1	0	5	10			ALRU is competing with PSME	Slash PCT; Slash ALRU	
	053802CC	52.4	360	4-10	1	1	0	5	10			ALRU is competing with PSME	Slash PCT; Slash ALRU	
		849.2												
	Total Acres	2632.4												

ACCI	Vine maple	GASH	Salal	PSME	Douglas Fir	N.	North
ACMA	Bigleaf maple	ILEX	English holly	PTAQ	Bracken fern	E.	East
ABPR	Noble fir	MAAQ	Oregon grape	RUAR	Himalayan blackberry	S.	South
ALRU	Red alder	MAOR	Wild cucumber	RUID	Wild red raspberry	W.	West
APRU	Mountain beaver	PATO	Empress tree	RUSP	Salmonberry		
BUDA	Butterfly bush	PHAR	Reed canarygrass	RUUR	Trailing blackberry		
CIAR	Canada thistle	PIPO	Ponderosa pine	SACA	Red elder		
CIVU	Bull thistle	PIST	White pine	SEJA	Tansy		
CL spp.	Clematis	POMU	Sword fern	THPL	Western redcedar		
CYSC	Scotch broom			TSHE	Western hemlock		

APPENDIX E
2012 TIMBER HARVEST AREA MAPS AND WILDLIFE/FORESTRY EVALUATION FORMS



2012 Forest Management

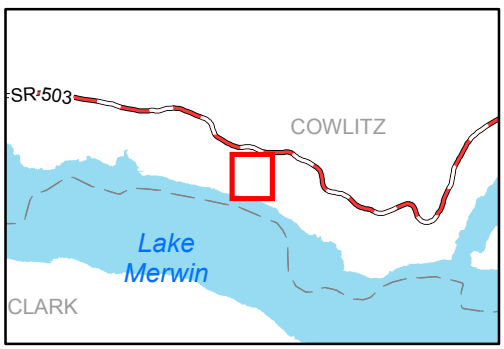
Unit 6

Harvest 120684

Legend

Highway	Oak
Road	Old Growth
Abandoned Road	Meadow
Fish Stream	Rock Outcrop
Non-fish Perennial	Wetland
Non-fish Seasonal	Water Body
Other Stream	PacifiCorp Land
Harvest Area	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

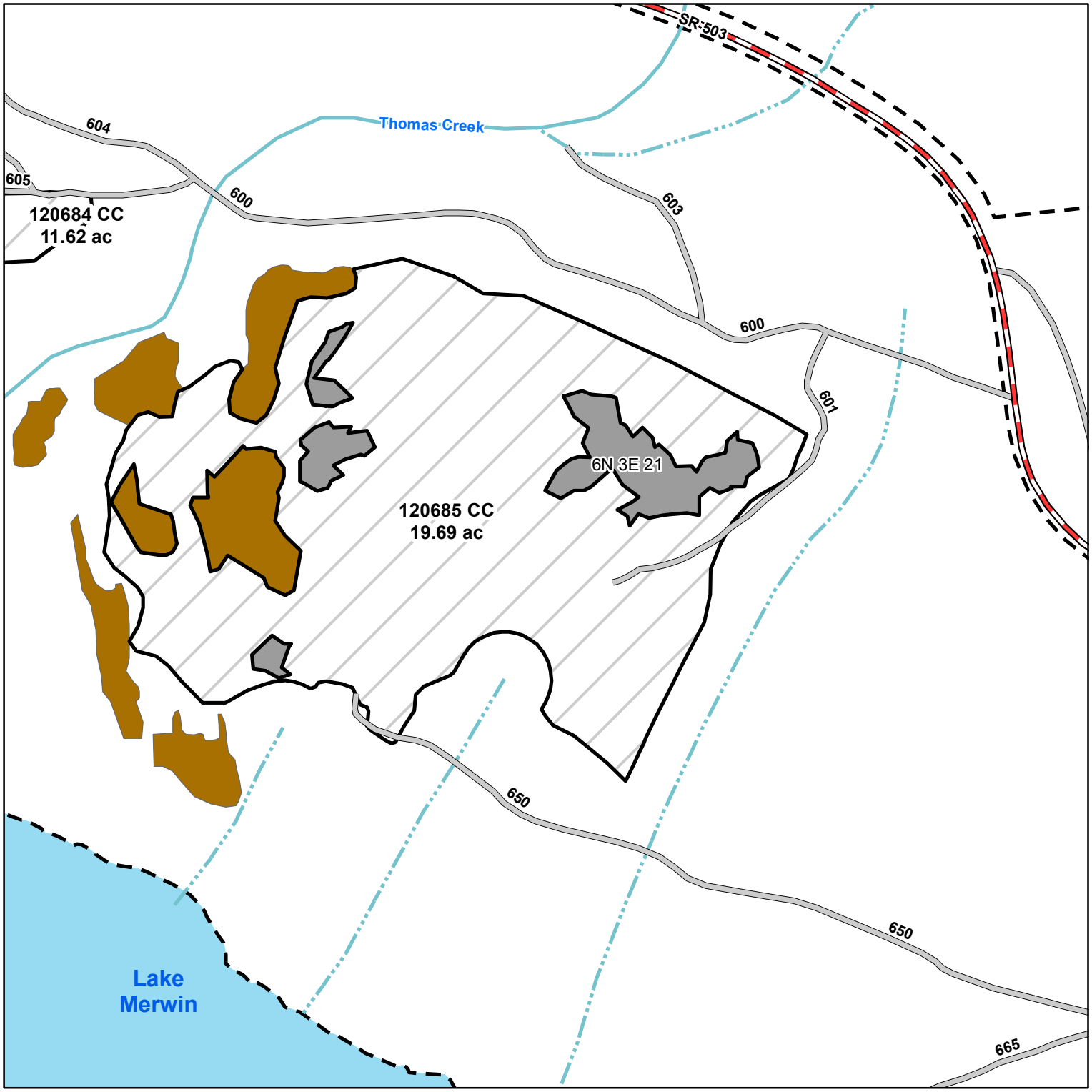


1:3,500

0 100 200 Feet

N W E S

02/18/2013 gisdept@pacificorp.com U:\Projects\2013\13-050\Completed Harvests Maps.mxd



2012 Forest Management

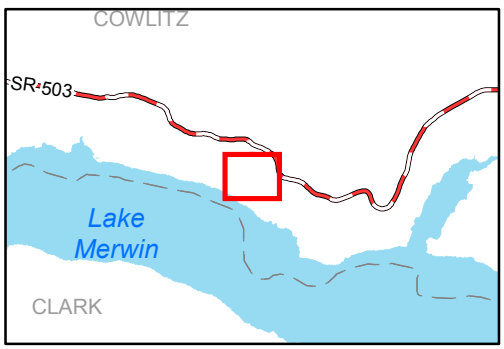
Unit 6

Harvest 120685

Legend

Highway	Oak
Road	Old Growth
Abandoned Road	Meadow
Fish Stream	Rock Outcrop
Non-fish Perennial	Wetland
Non-fish Seasonal	Water Body
Other Stream	PacifiCorp Land
Harvest Area	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP



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0 100 200 Feet

N W E S

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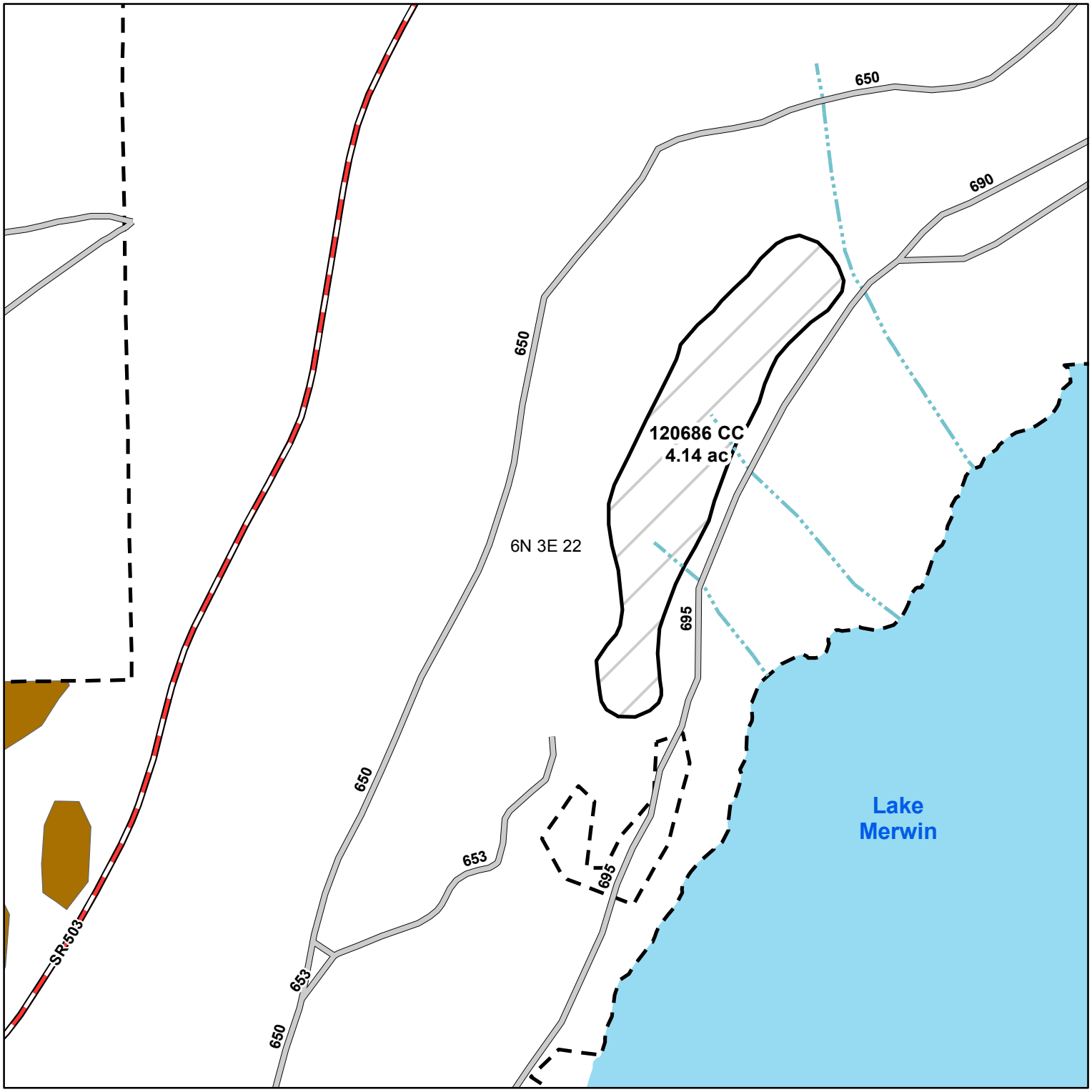


2012 Forest Management

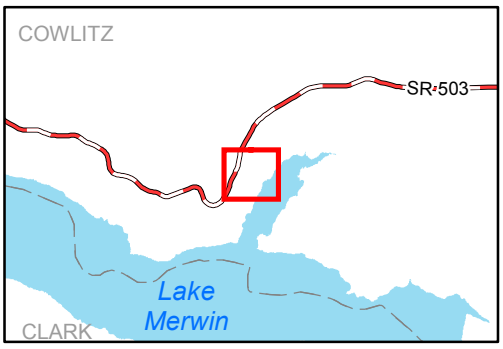
Unit 6

Harvest 120686

Legend

Highway	Oak
Road	Old Growth
Abandoned Road	Meadow
Fish Stream	Rock Outcrop
Non-fish Perennial	Wetland
Non-fish Seasonal	Water Body
Other Stream	PacifiCorp Land
Harvest Area	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP



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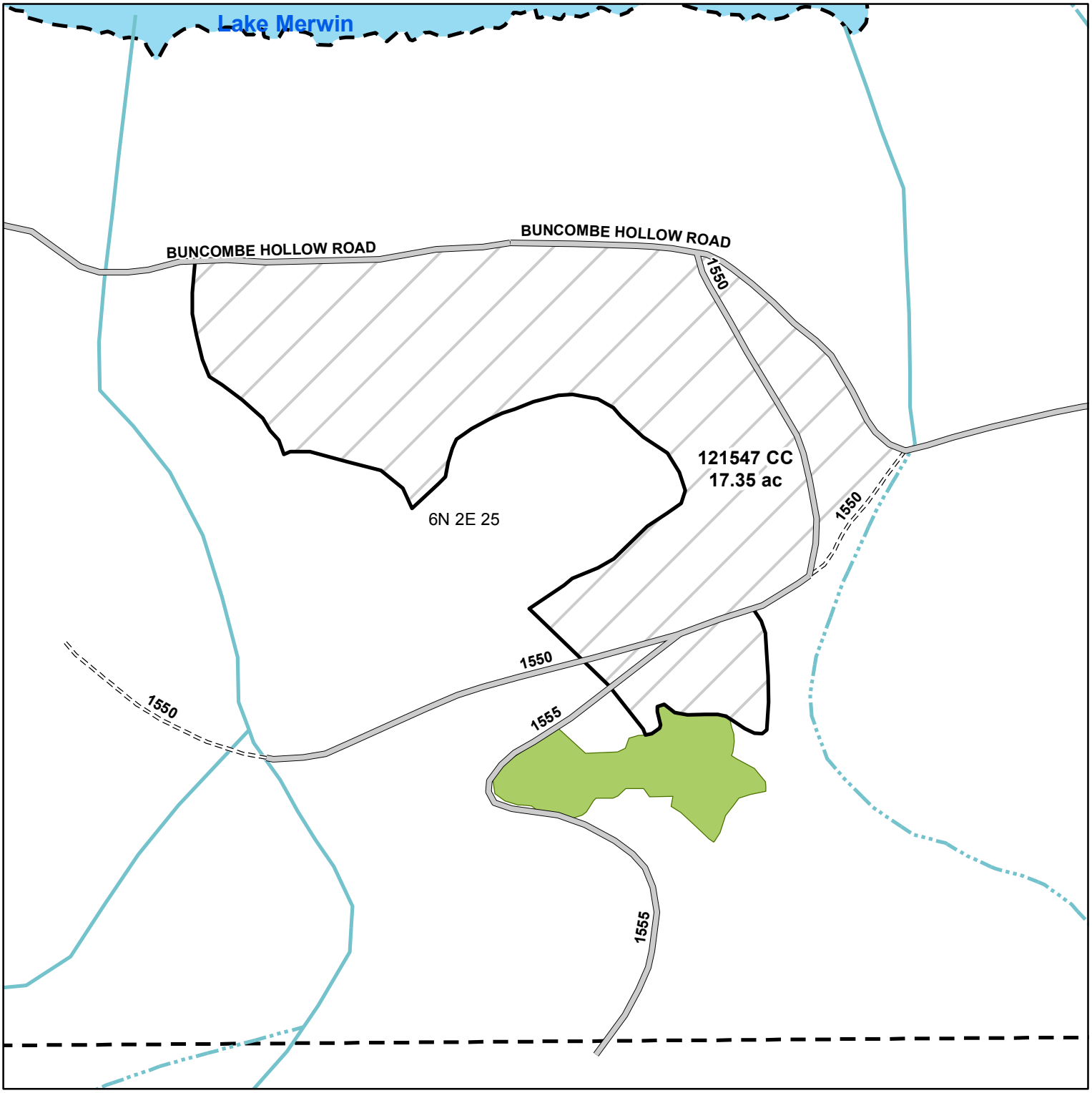


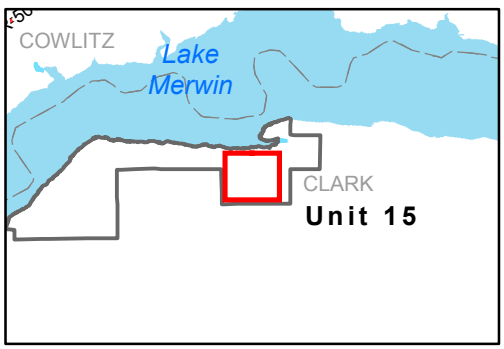
2012 Forest Management

Unit 15

Legend

Highway	Oak
Road	Old Growth
Abandoned Road	Meadow
Fish Stream	Rock Outcrop
Non-fish Perennial	Wetland
Non-fish Seasonal	Water Body
Other Stream	PacifiCorp Land
Harvest Area	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP



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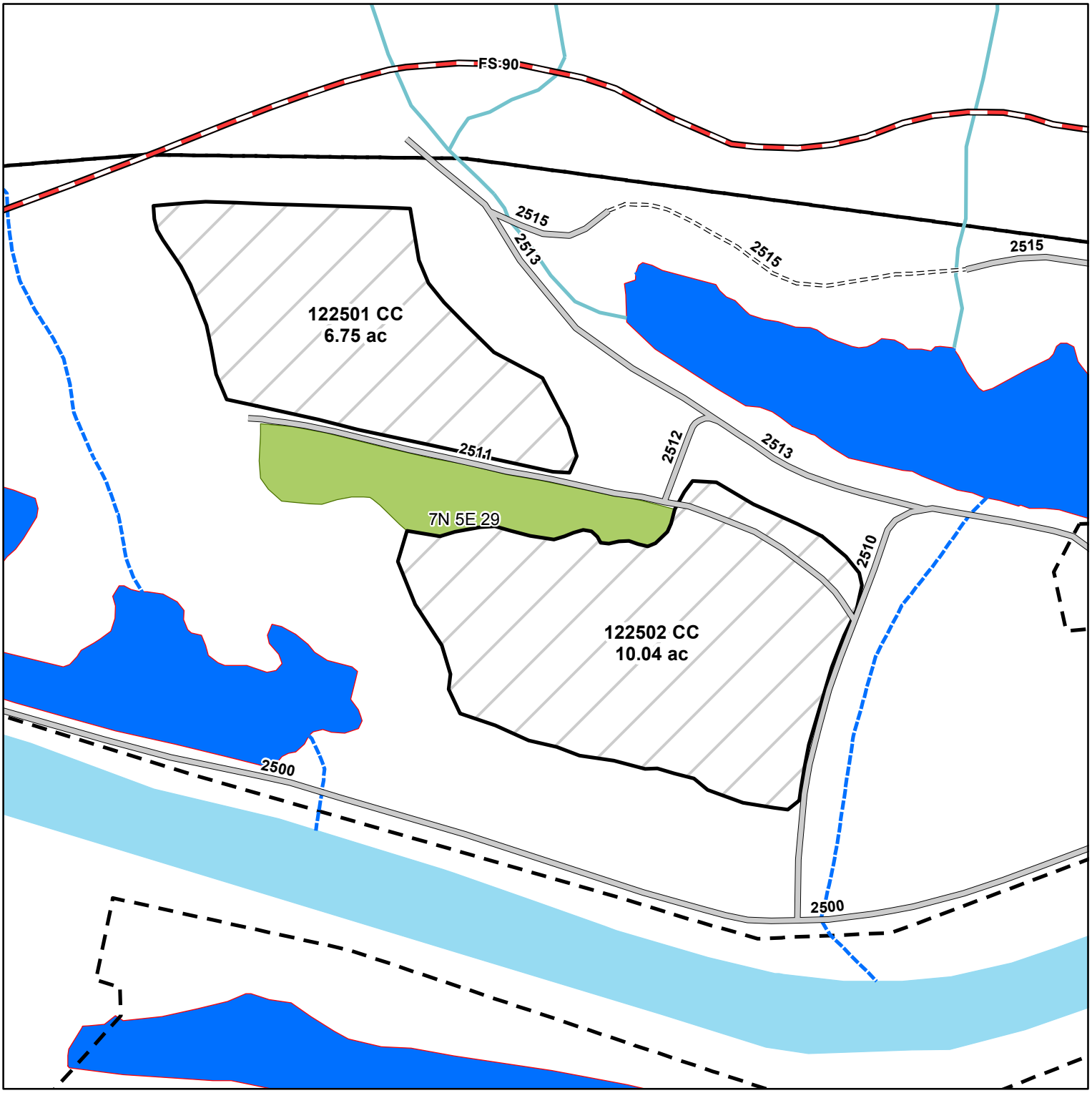


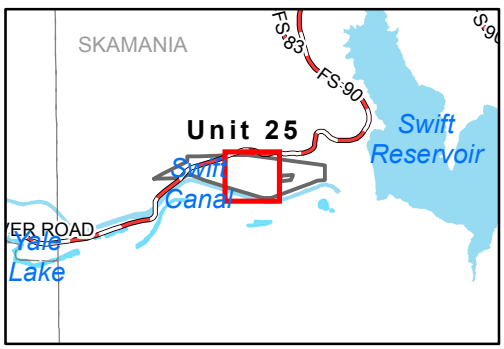
2012 Forest Management

Unit 25

Legend

Highway	Oak
Road	Old Growth
Abandoned Road	Meadow
Fish Stream	Rock Outcrop
Non-fish Perennial	Wetland
Non-fish Seasonal	Water Body
Other Stream	PacifiCorp Land
Harvest Area	Section

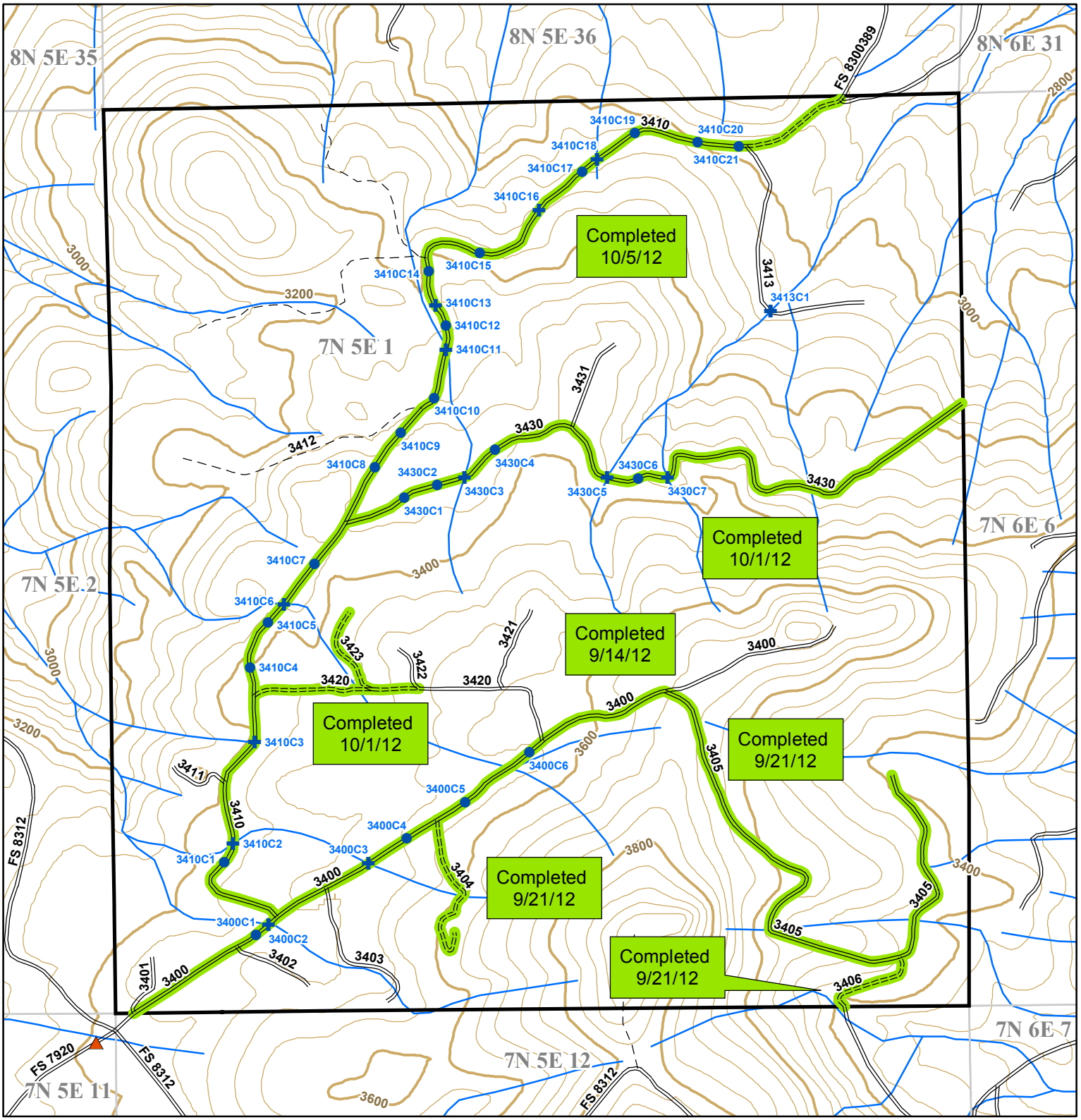
PACIFICORP ENERGY
A DIVISION OF PACIFICORP



1:3,500
0 100 200 Feet

N W E S

02/18/2013 gisdept@pacificorp.com U:\Projects\2013\13-050\Completed Harvests Maps.mxd



PacifiCorp - Unit 34

RMAP Number R2900305

Swift Road Management Block

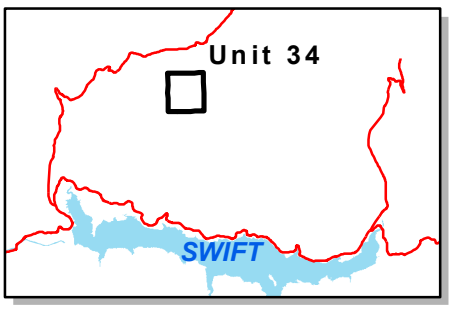
1:10,000

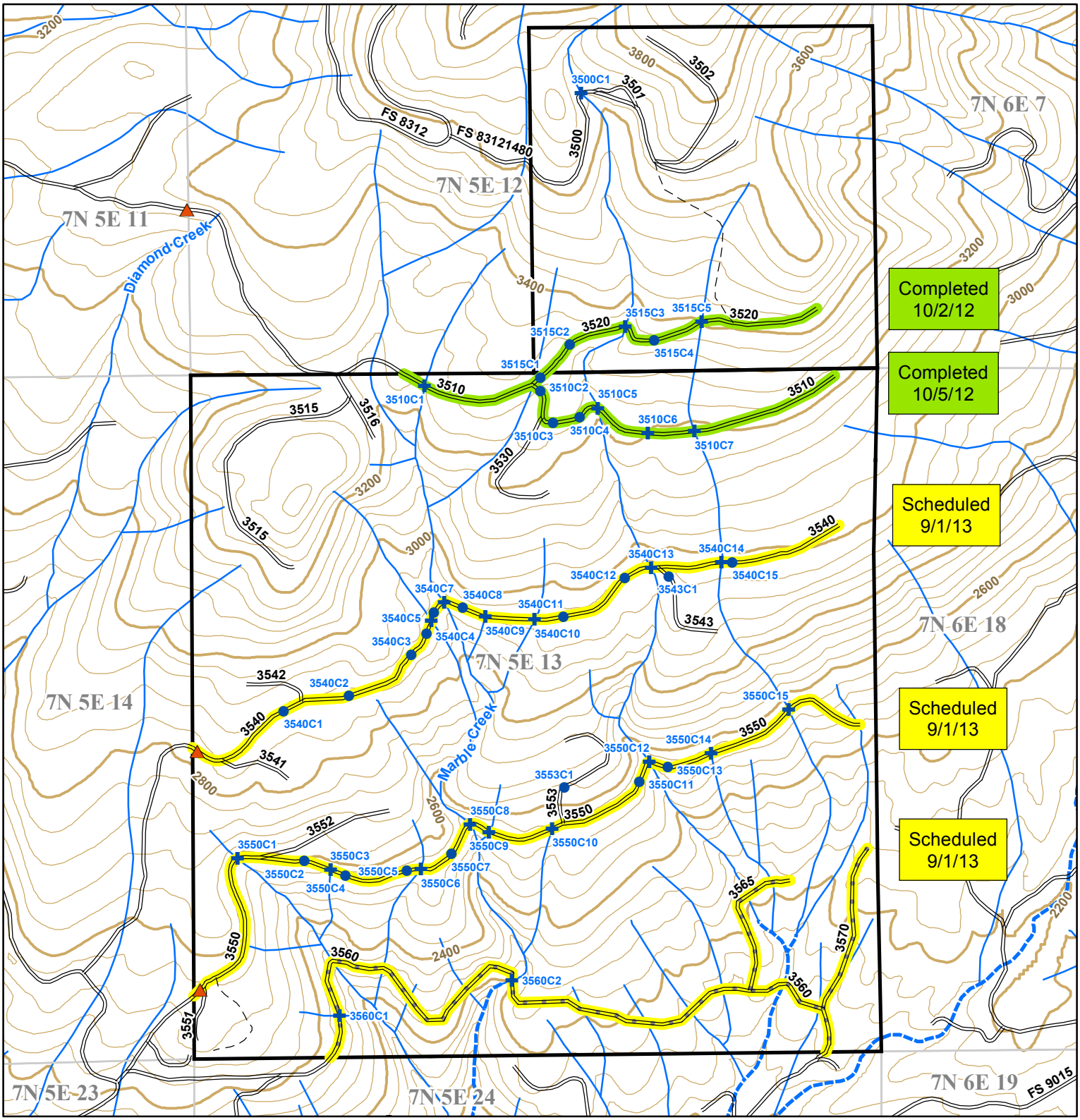
0 500 1,000 Feet

N E S

Road (Meets Standards)	Ditch Culvert
Not Meeting Standards	Stream Culvert
Abandoned Road	Wetlands
Orphaned Road	Water Body
Completed	Fish Stream
Scheduled	Non-fish Perennial
Road Block	Non-fish Seasonal
Gate	Other Stream
Ford	PacifiCorp Land
Bridge	Contour (40')

PACIFICORP ENERGY
A DIVISION OF PACIFICORP





PacifiCorp - Unit 35

RMAP Number R2900305

Swift Road Management Block

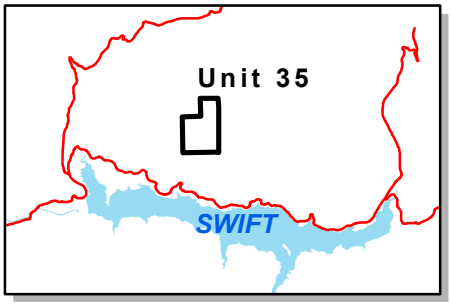
1:12,500

0 500 1,000 Feet

N W E S

- Road (Meets Standards)
- Not Meeting Standards
- Abandoned Road
- Orphaned Road
- Completed
- Scheduled
- Road Block
- Gate
- Ford
- Bridge
- Ditch Culvert
- Stream Culvert
- Wetlands
- Water Body
- Fish Stream
- Non-fish Perennial
- Non-fish Seasonal
- Other Stream
- PacifiCorp Land
- Contour (40')

PACIFICORP ENERGY
A DIVISION OF PACIFICORP



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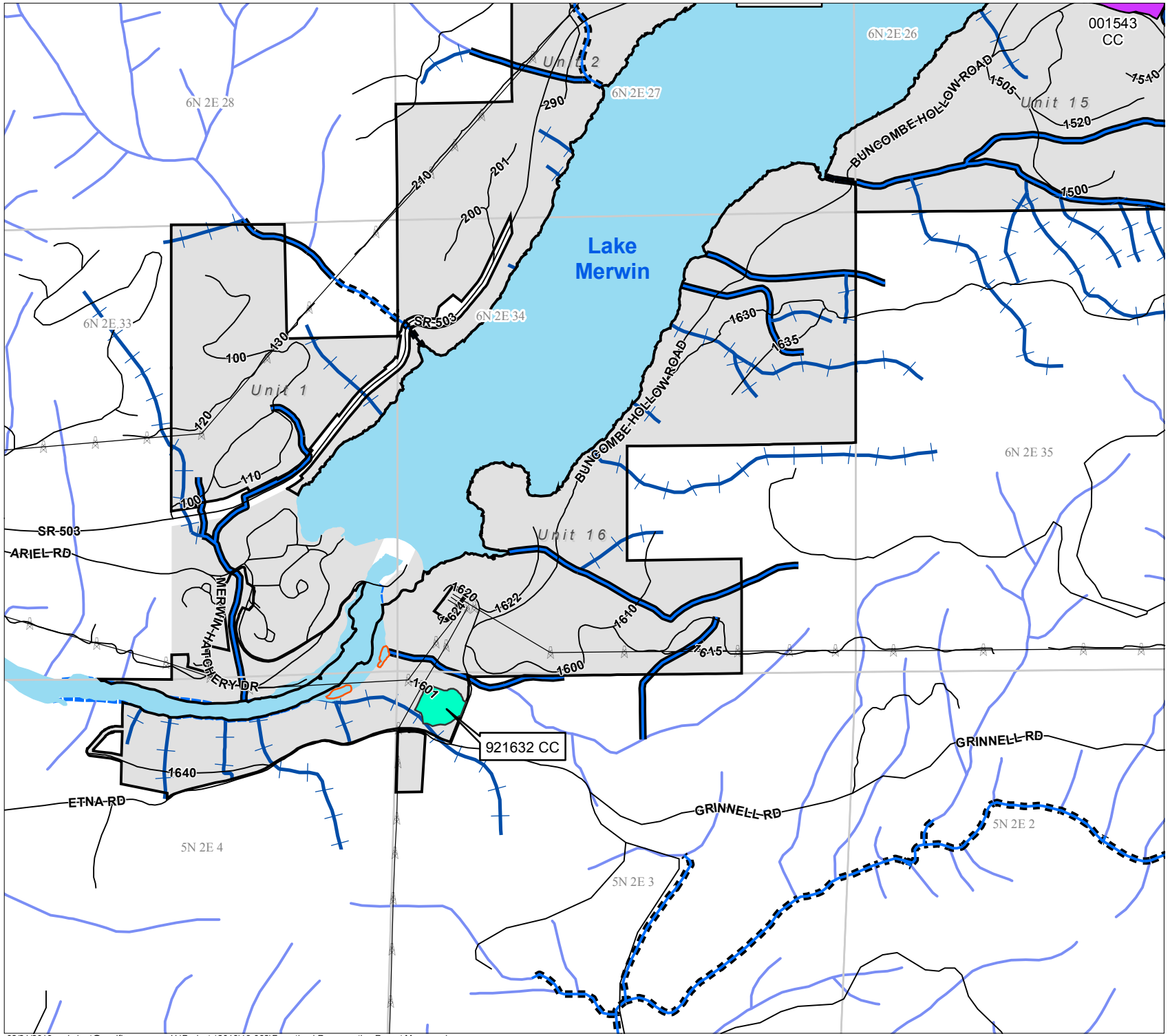
APPENDIX F
2012 REGENERATION PRACTICES MAPS



Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 1 of 14

Legend

- Oust Treatment
- Pre-Commercial Thin
- Seedling Protection
- Plant
- Oust, Plant
- Oust, Seedling
- Pruning
- PacifiCorp Transmission Pole
- PacifiCorp Transmission Line
- Management Unit
- PacifiCorp Ownership

Stream

- Fish
- Anadromous Fish
- Non-fish Perennial
- Non-fish Seasonal
- Other
- Road
- Water Body
- Wetlands

N W E S

0 500 1,000 1,500 2,000

Feet

PACIFICORP ENERGY
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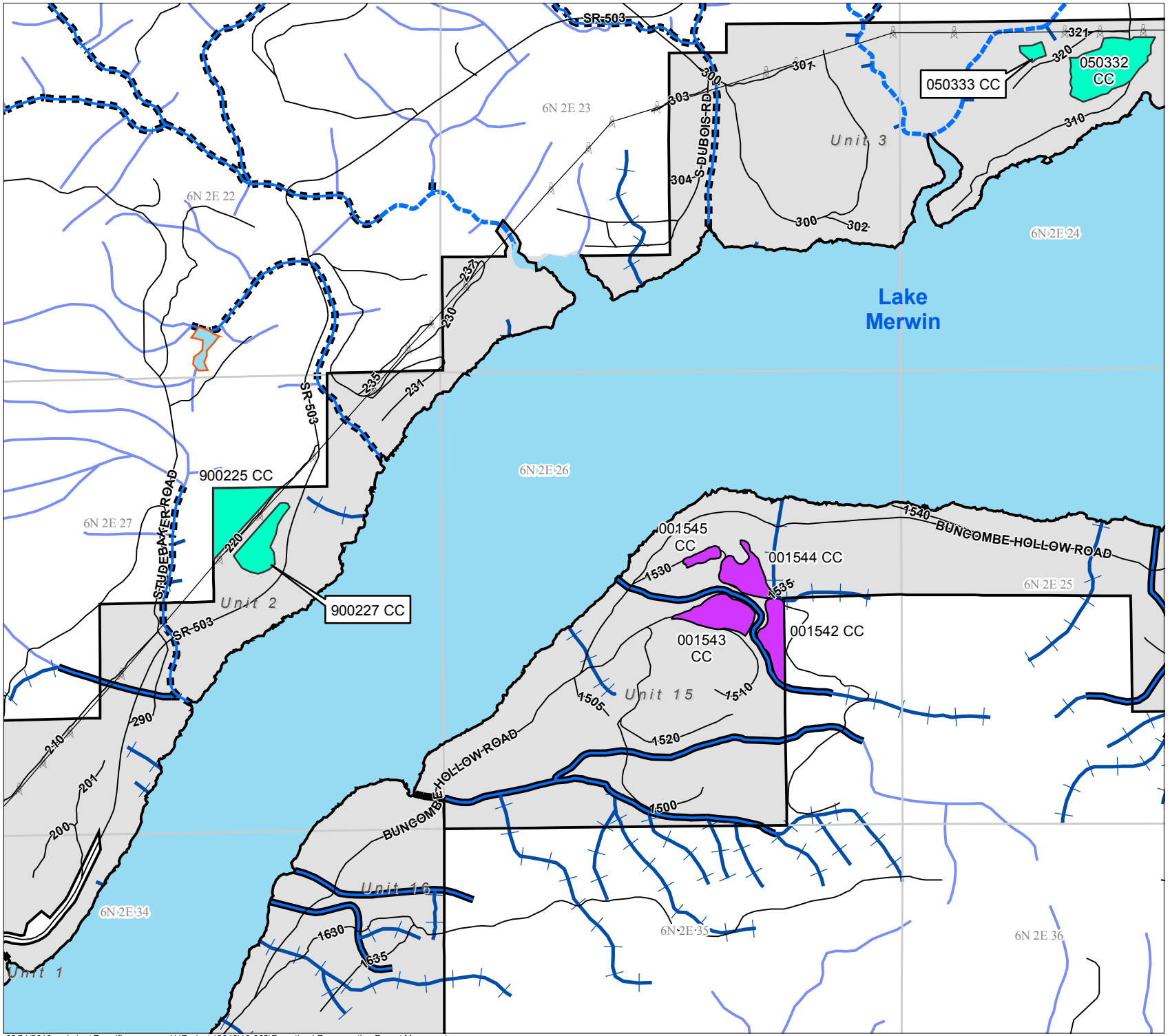
GIS Support Services
Solutions Group
gisdept@Pacificorp.com

Data are projected in UTM Zone 10, NAD83, meters.



Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 2 of 14

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- Wetlands

N W E S

0 500 1,000 1,500 2,000

Feet

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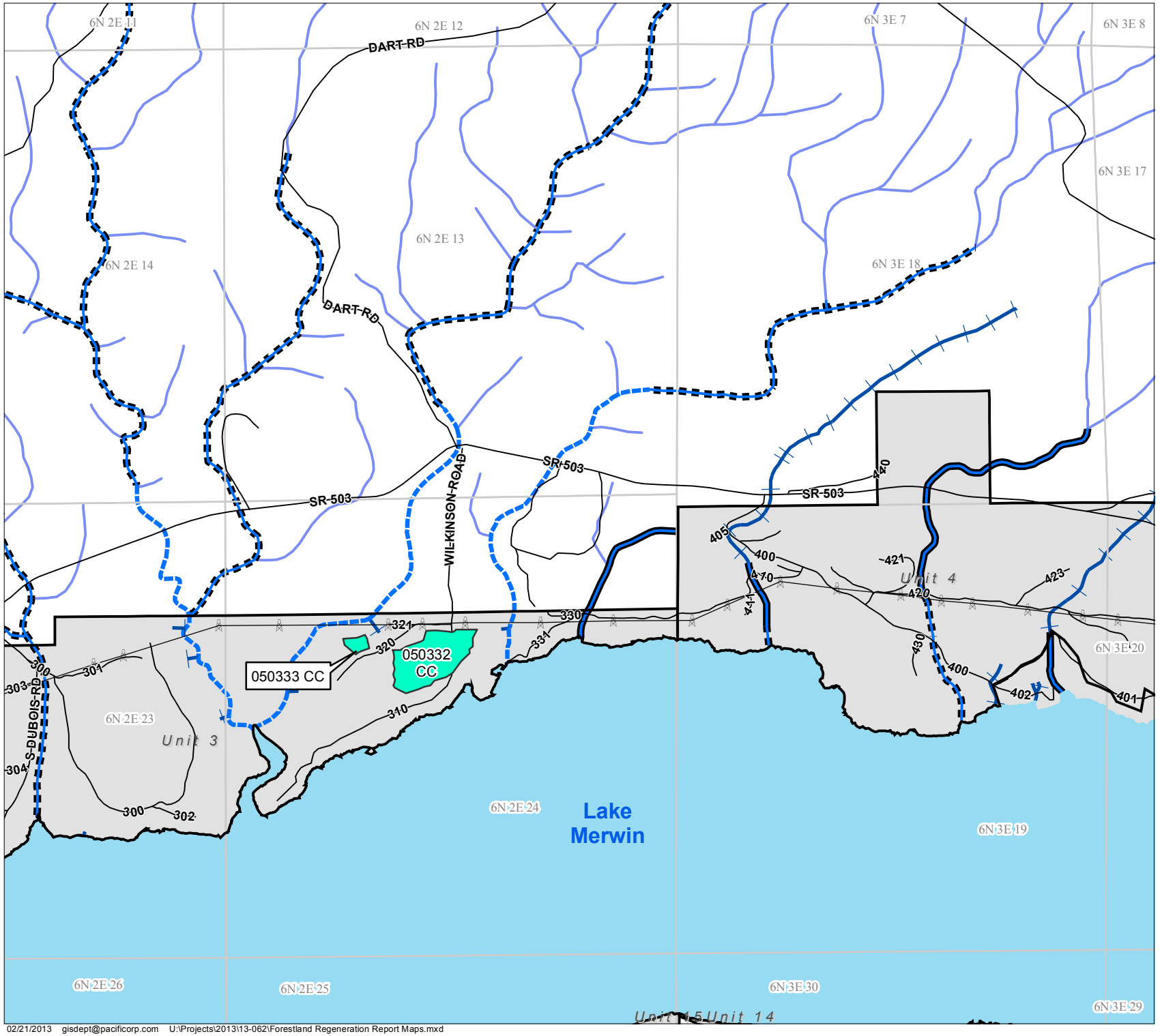

Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 3 of 14

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N W E S

0 500 1,000 1,500 2,000

Feet

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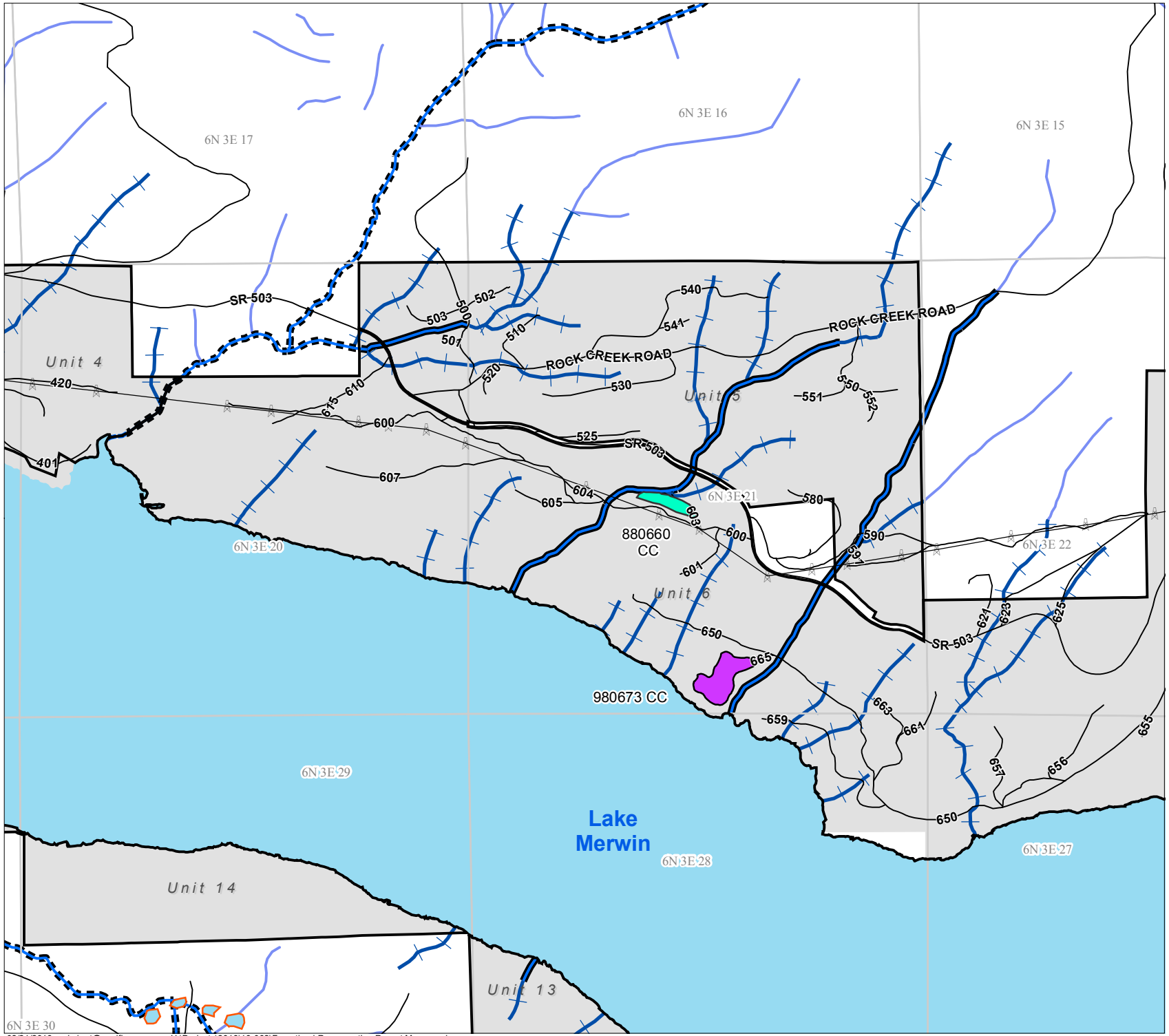

Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 4 of 14

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0 500 1,000 1,500 2,000
Feet

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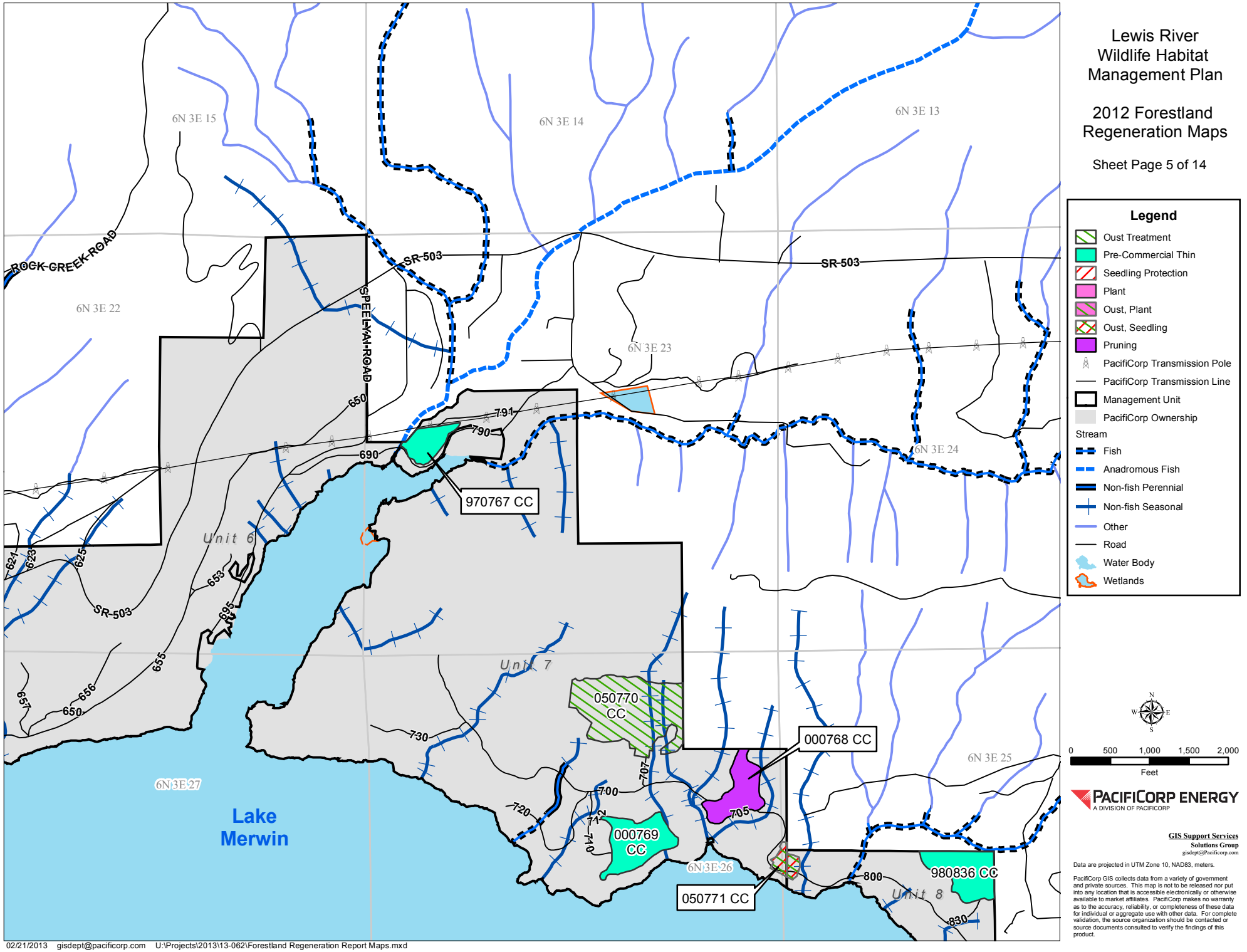

Lewis River
Wildlife Habitat
Management Plan

2012 Forestland
Regeneration Maps

Sheet Page 5 of 14

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N W E S

0 500 1,000 1,500 2,000
Feet

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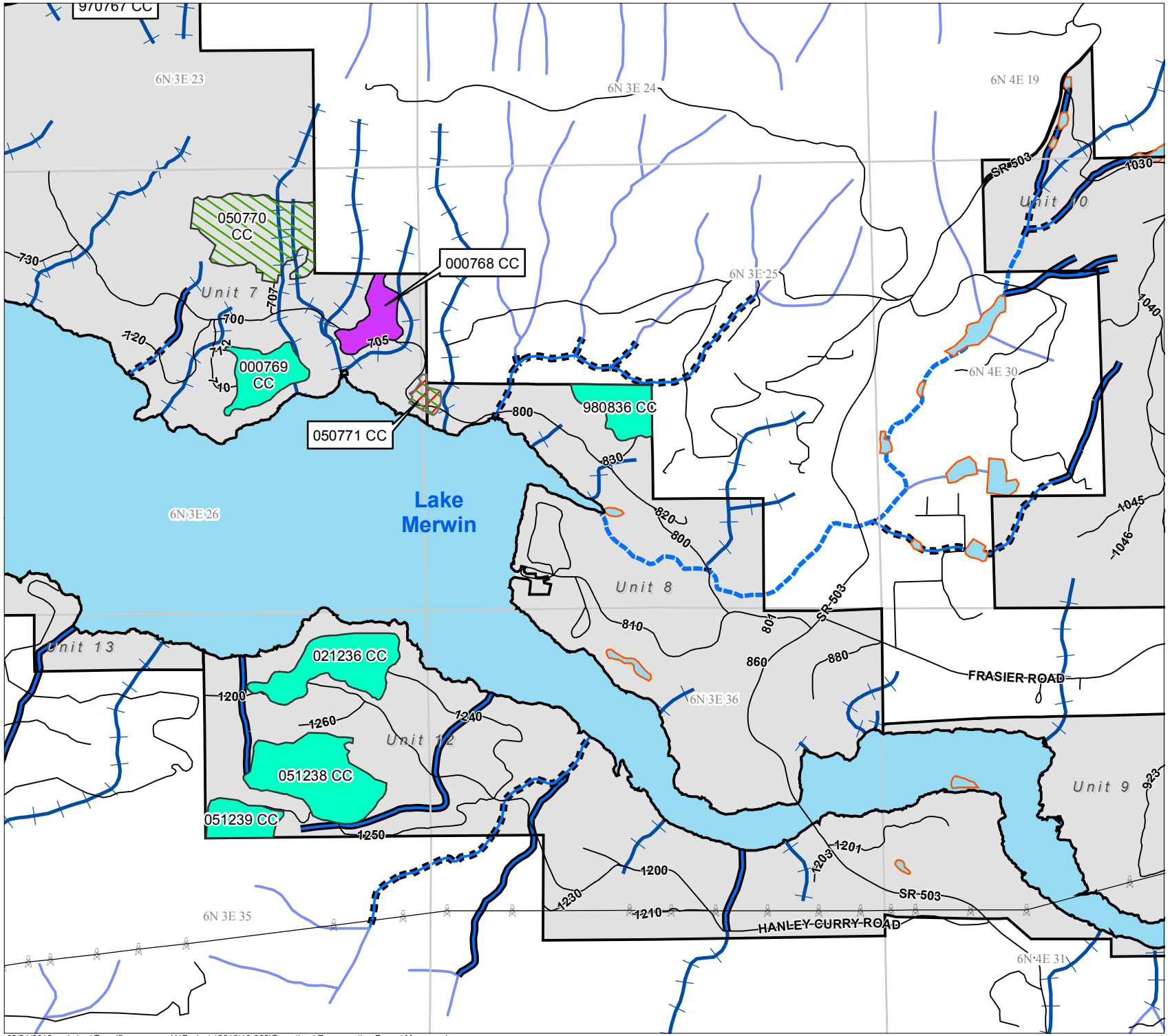

Lewis River
Wildlife Habitat
Management Plan

2012 Forestland
Regeneration Maps

Sheet Page 6 of 14

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N
W E
S

0 500 1,000 1,500 2,000
Feet

PACIFICORP ENERGY
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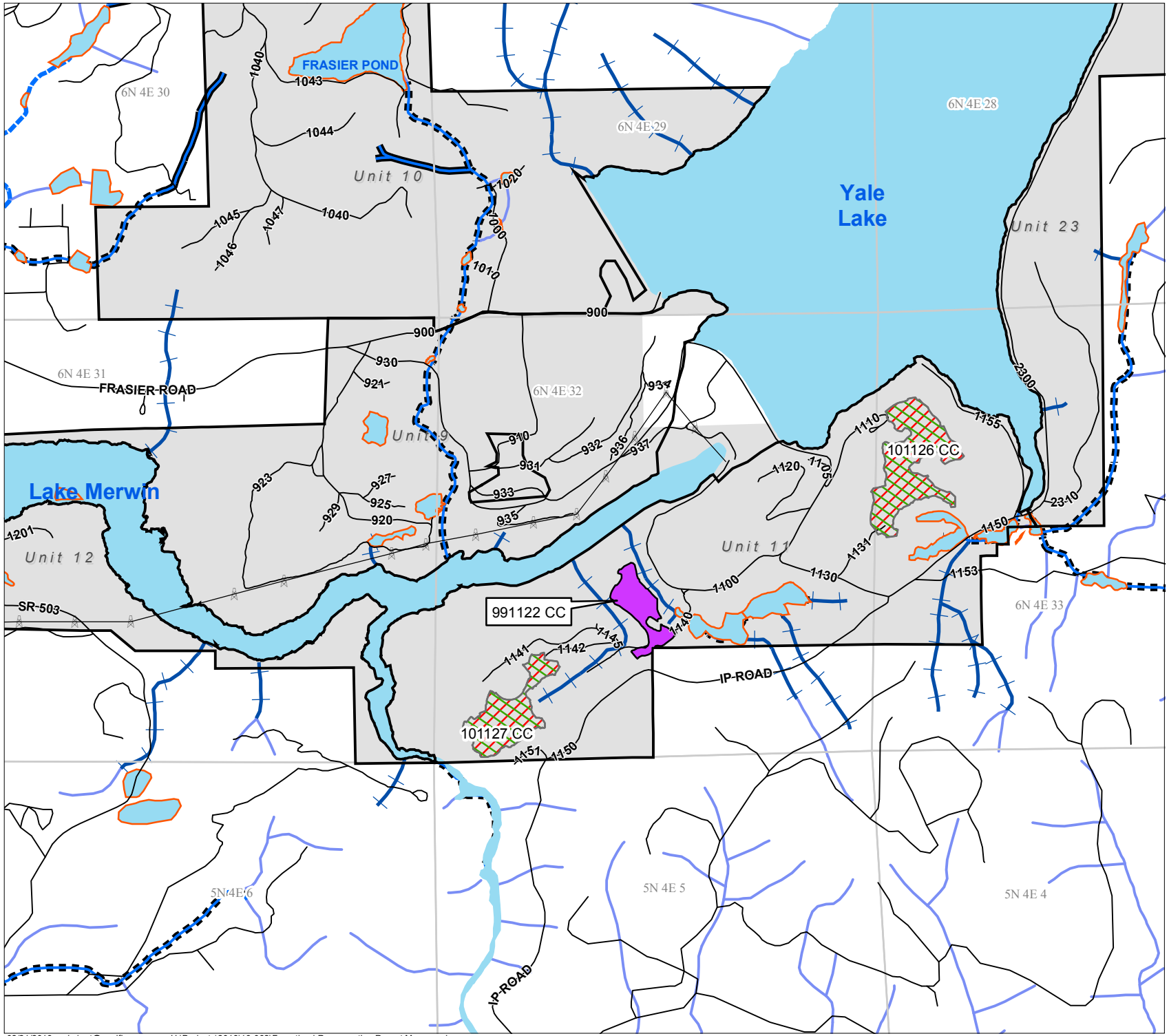

Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 7 of 14

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- Wetlands

0 500 1,000 1,500 2,000

Feet

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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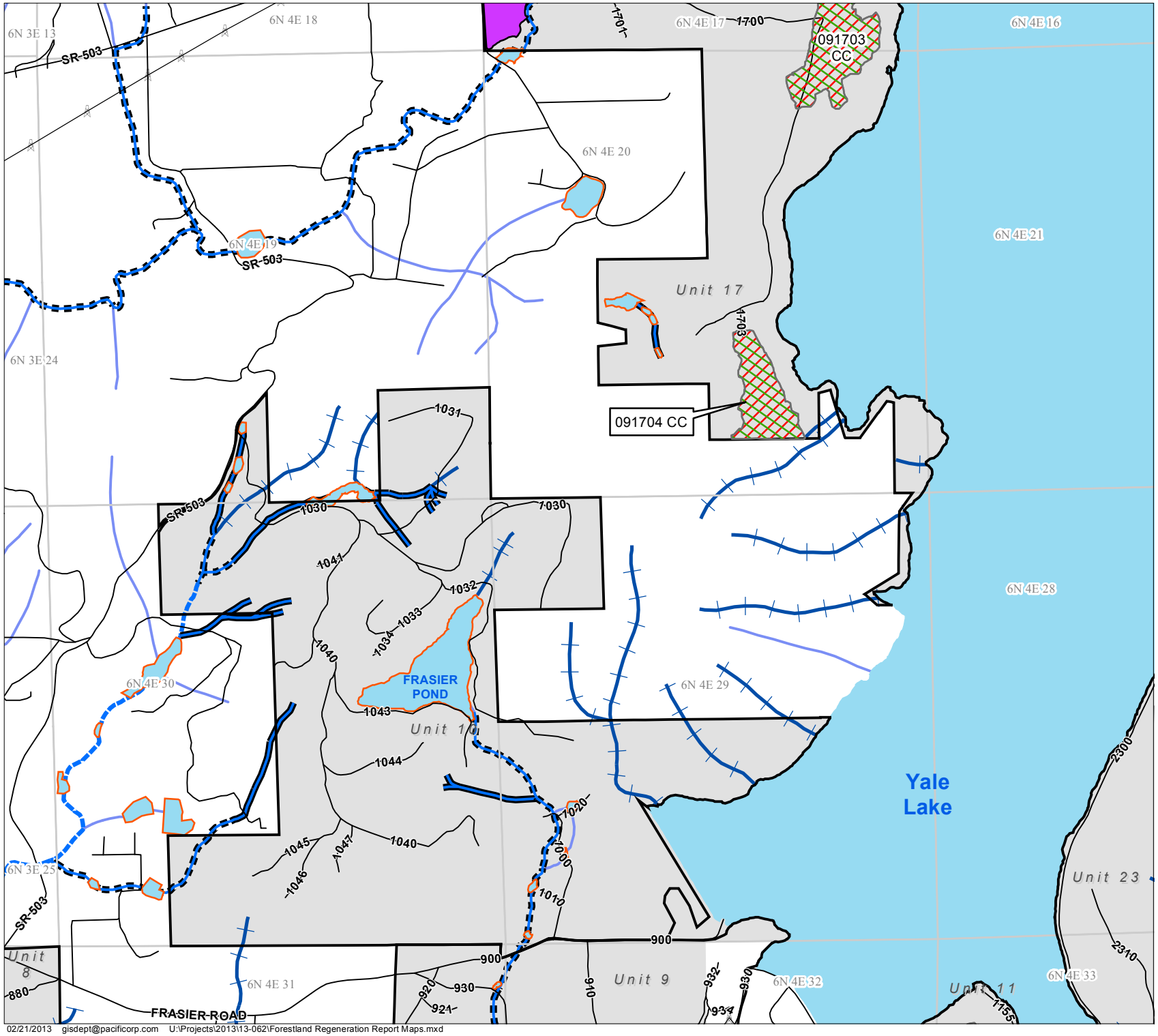

Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 8 of 14

Legend

- Oust Treatment
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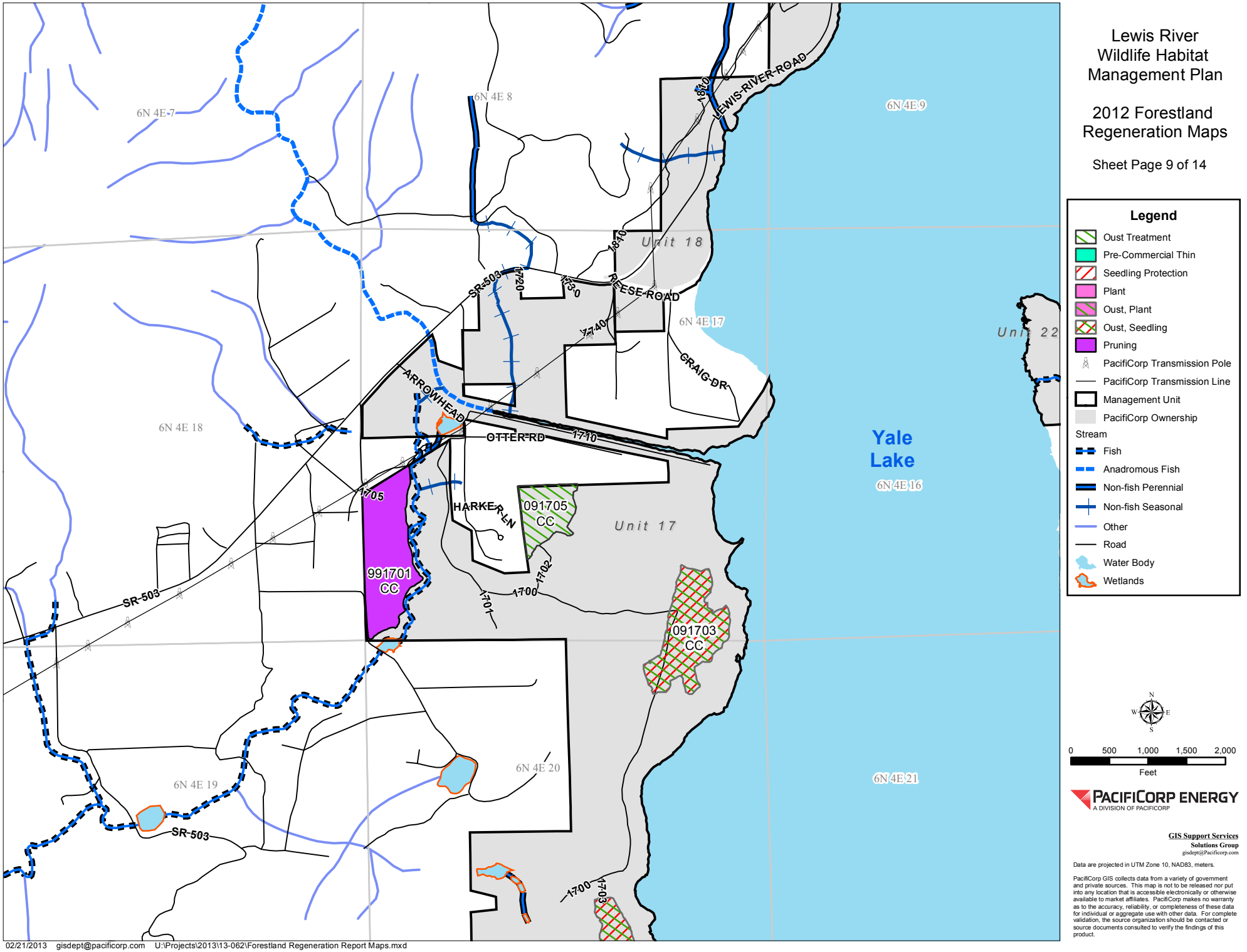
- Wetlands

0 500 1,000 1,500 2,000
Feet

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

GIS Support Services
Solutions Group
gisdept@Pacificorp.com

Data are projected in UTM Zone 10, NAD83, meters.



Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 9 of 14

Legend

- Oust Treatment
- Pre-Commercial Thin
- Seedling Protection
- Plant
- Oust, Plant
- Oust, Seedling
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- Non-fish Seasonal
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- Road
- Water Body
- Wetlands

N W E S

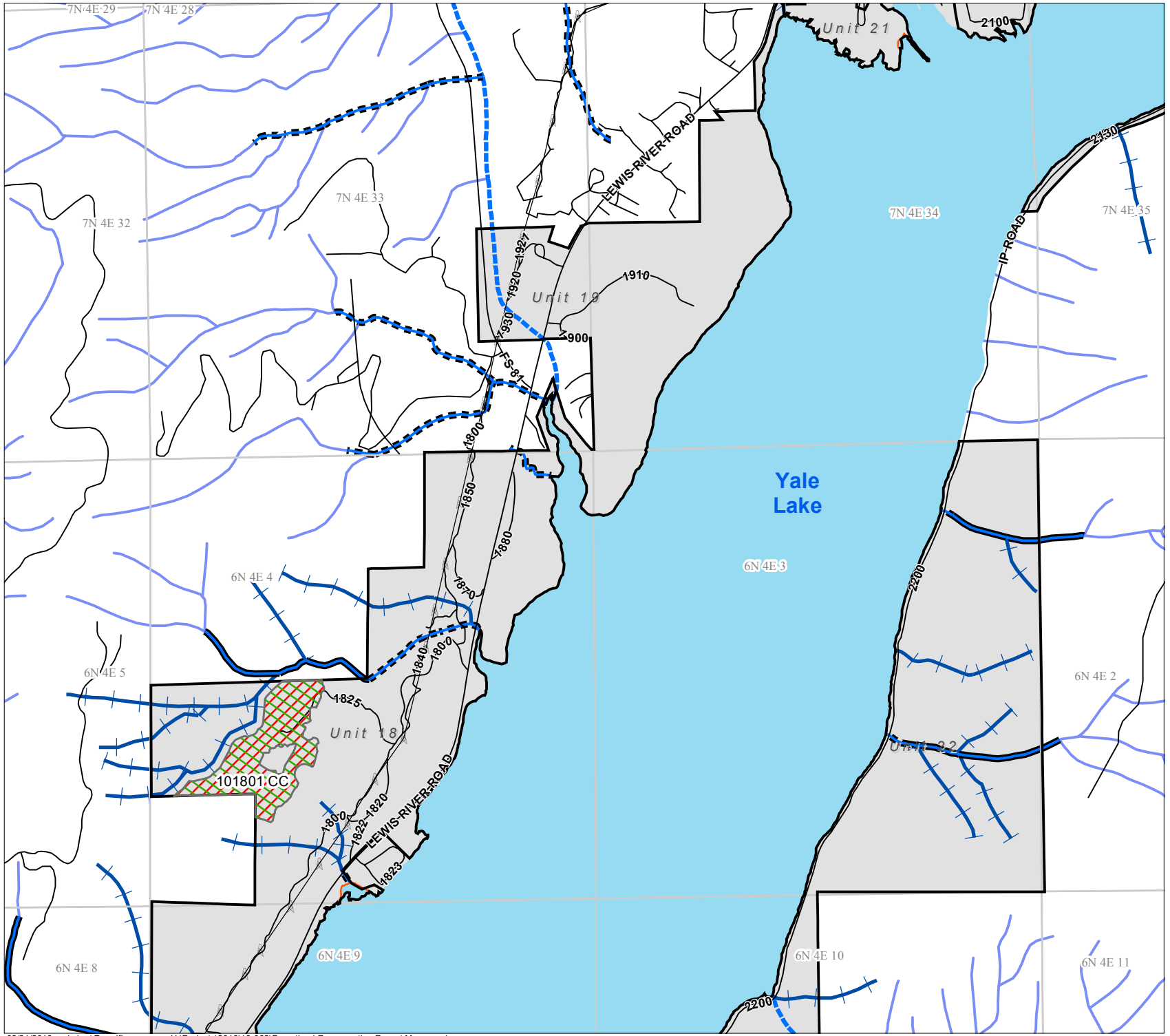
0 500 1,000 1,500 2,000

Feet

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

GIS Support Services
Solutions Group
gisdept@Pacificorp.com

Data are projected in UTM Zone 10, NAD83, meters.



Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 10 of 14

Legend

- Oust Treatment
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- Wetlands

N W E S

0 500 1,000 1,500 2,000

Feet

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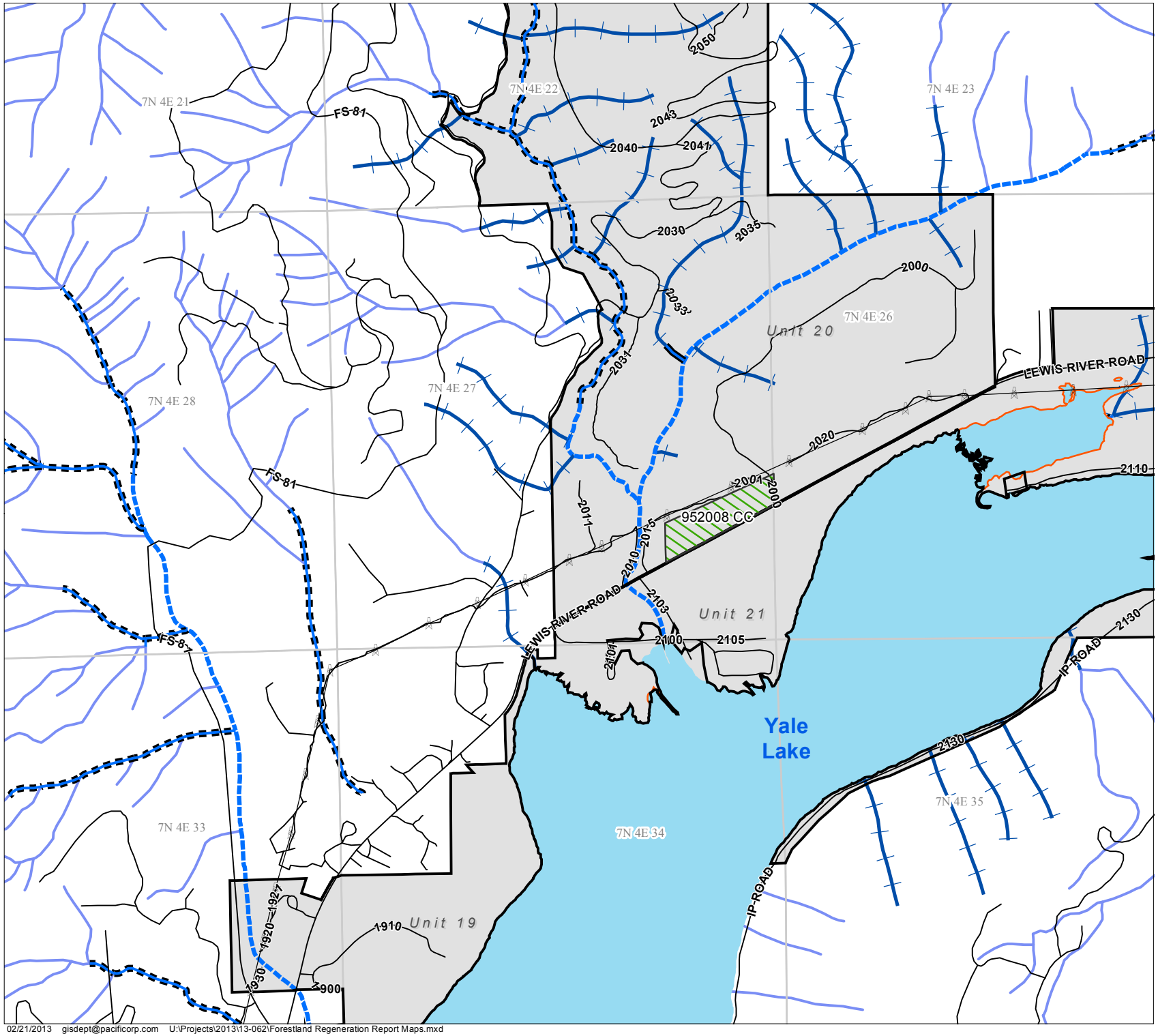
Data are projected in UTM Zone 10, NAD83, meters.



Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 11 of 14

Legend

- Oust Treatment
- Pre-Commercial Thin
- Seedling Protection
- Plant
- Oust, Plant
- Oust, Seedling
- Pruning
- PacifiCorp Transmission Pole
- PacifiCorp Transmission Line
- Management Unit
- PacifiCorp Ownership

Stream

- Fish
- Anadromous Fish
- Non-fish Perennial
- Non-fish Seasonal
- Other
- Road
- Water Body
- Wetlands

N W E S

0 500 1,000 1,500 2,000

Feet

PACIFICORP ENERGY
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GIS Support Services
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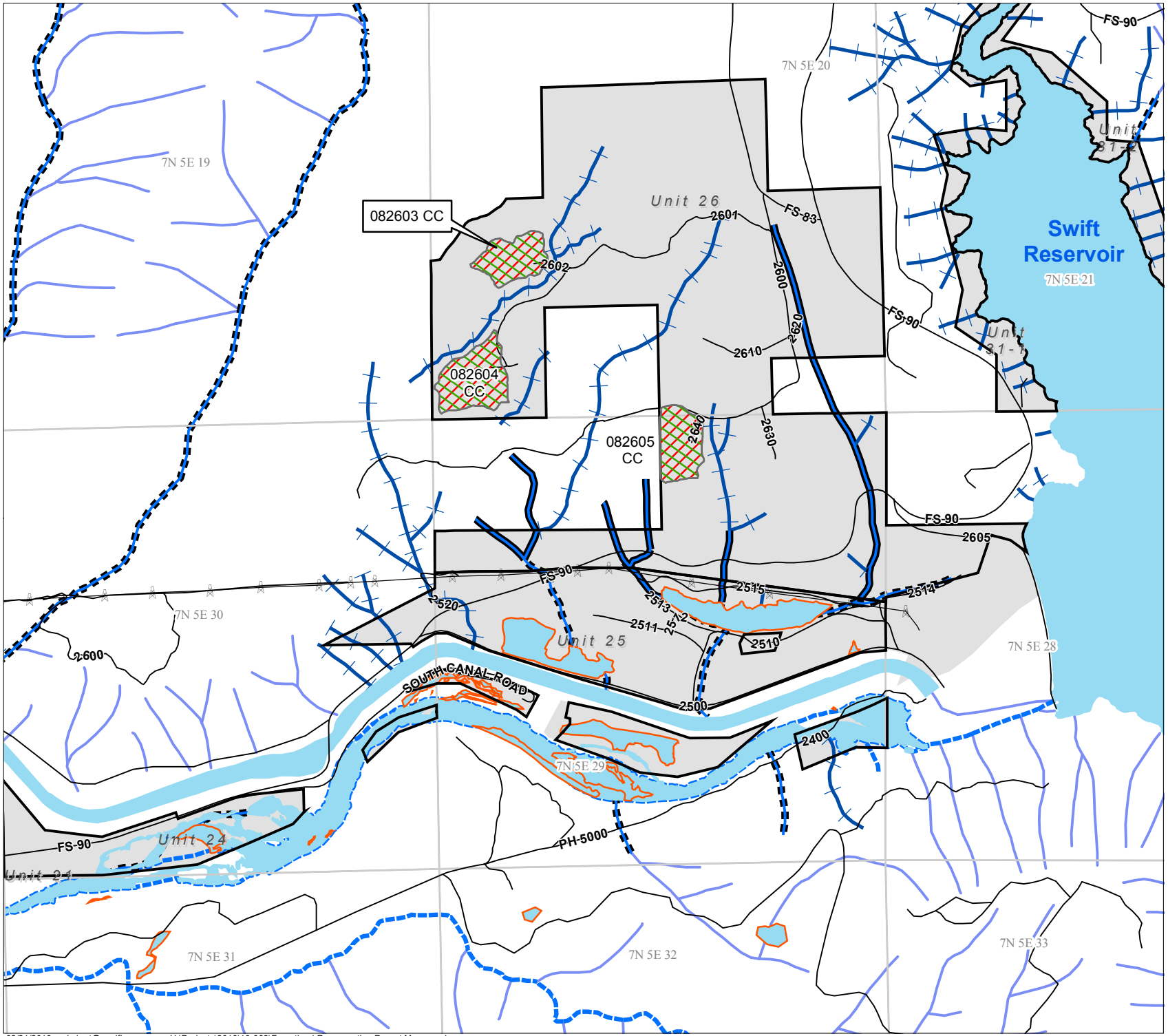
Data are projected in UTM Zone 10, NAD83, meters.



Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 12 of 14

Legend

- Oust Treatment
- Pre-Commercial Thin
- Seedling Protection
- Plant
- Oust, Plant
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Stream

- Fish
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- Non-fish Perennial
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N W E S

0 500 1,000 1,500 2,000

Feet

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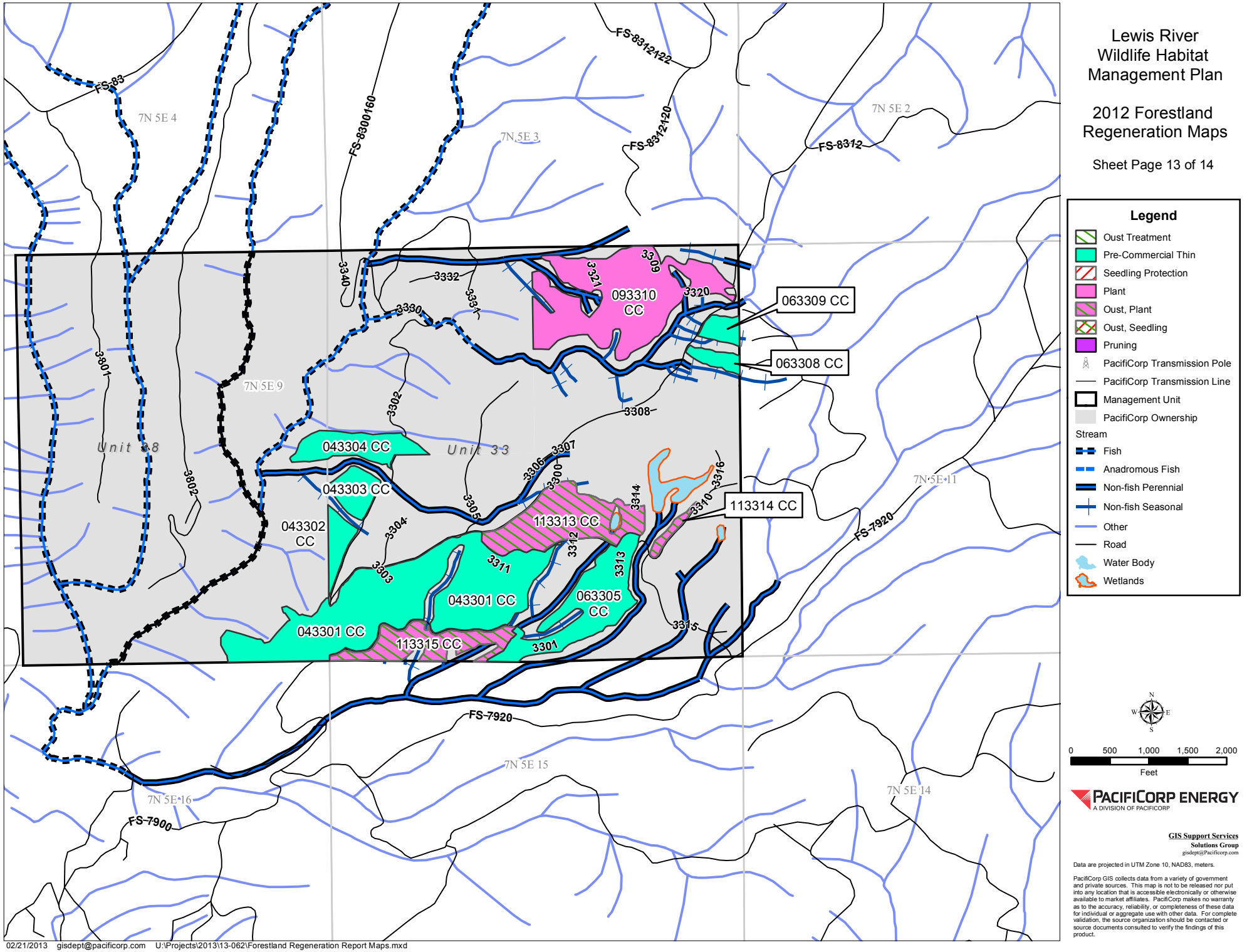
Lewis River
Wildlife Habitat
Management Plan
2012 Forestland
Regeneration Maps
Sheet Page 13 of 14
Legend
Oust Treatment
Pre-Commercial Thin
Seedling Protection
Plant
Oust, Plant
Oust, Seedling
Pruning
PacifiCorp Transmission Pole
PacifiCorp Transmission Line
Management Unit
PacifiCorp Ownership
Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Road
Water Body
Wetlands
063309 CC
063308 CC
113314 CC
093310 CC
043304 CC
043303 CC
043302 CC
113313 CC
043301 CC
063305 CC
043301 CC
113315 CC
Unit 38
Unit 33
7N 5E 4
7N 5E 3
7N 5E 2
7N 5E 9
7N 5E 11
7N 5E 15
7N 5E 16
7N 5E 14
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FS-8300160
FS-8312122
FS-8312420
FS-8312
FS-7920
FS-7900
0 500 1,000 1,500 2,000
Feet
PACIFICORP ENERGY
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GIS Support Services
Solutions Group
gisdept@Pacificorp.com
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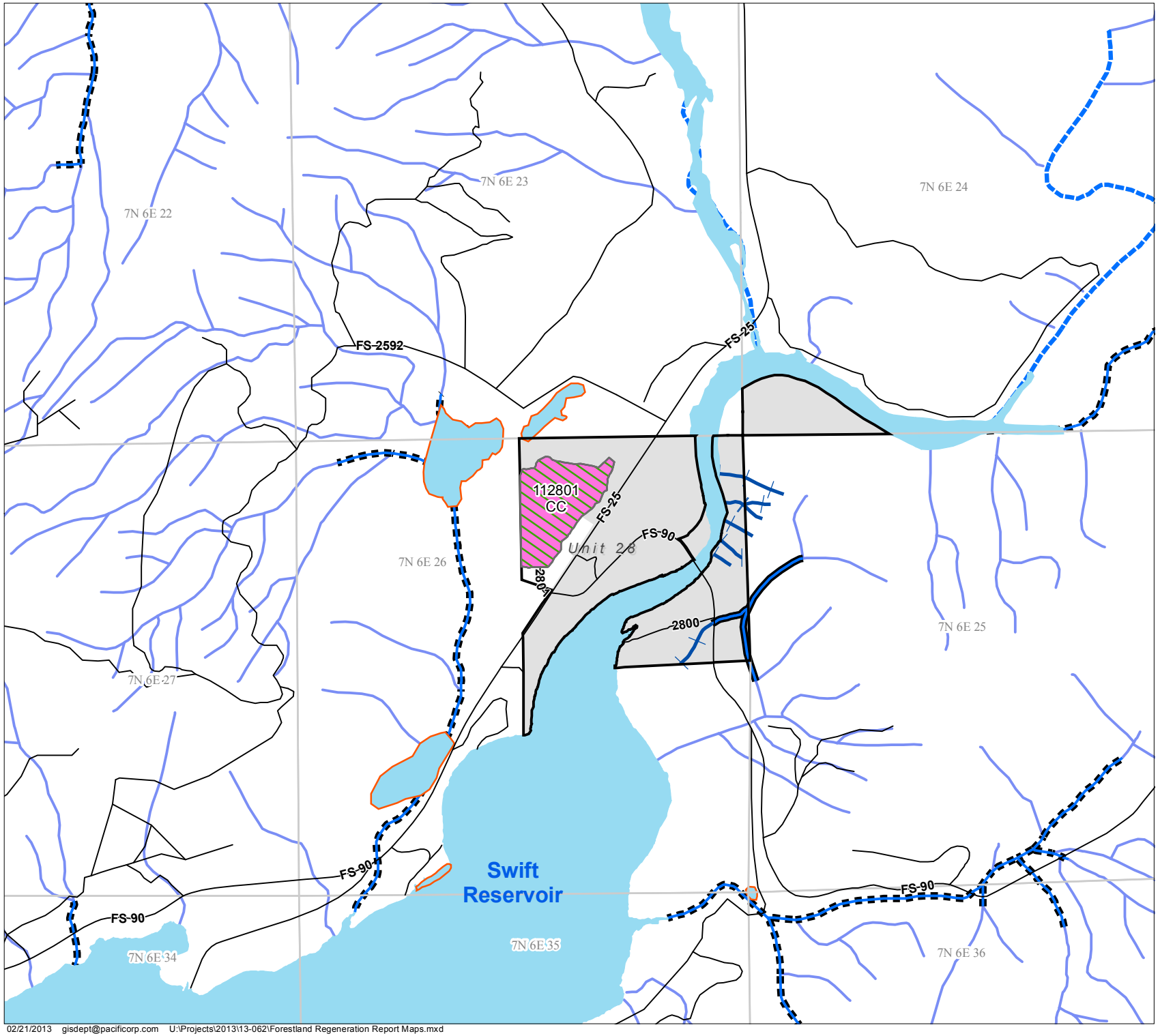

Lewis River Wildlife Habitat Management Plan

2012 Forestland Regeneration Maps

Sheet Page 14 of 14

Legend

- Oust Treatment
- Pre-Commercial Thin
- Seedling Protection
- Plant
- Oust, Plant
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- PacifiCorp Transmission Pole
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- Management Unit
- PacifiCorp Ownership

Stream

- Fish
- Anadromous Fish
- Non-fish Perennial
- Non-fish Seasonal
- Other
- Road
- Water Body
- Wetlands

N W E S

0 500 1,000 1,500 2,000

Feet

PACIFICORP ENERGY
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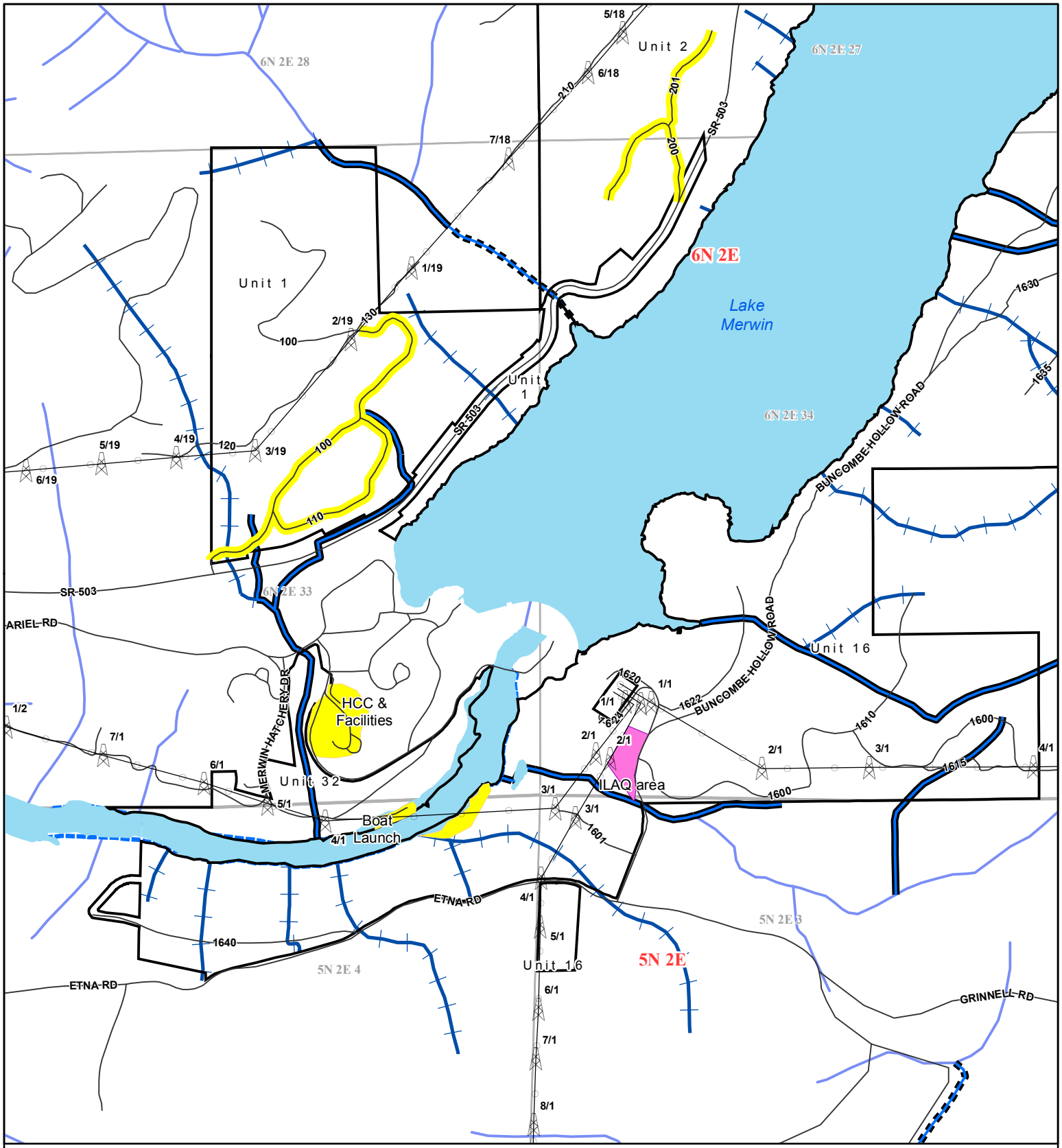
Data are projected in UTM Zone 10, NAD83, meters.

APPENDIX G
2012 INVASIVE PLANT SPECIES CONTROL MAPS



Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

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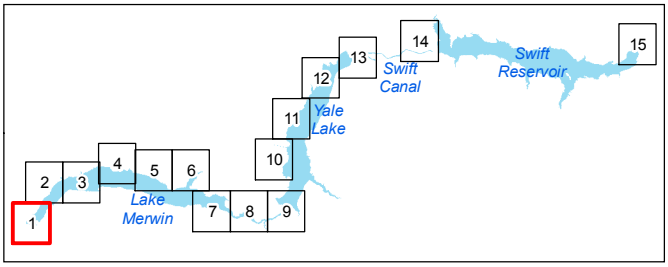
Sheet 1 of 15



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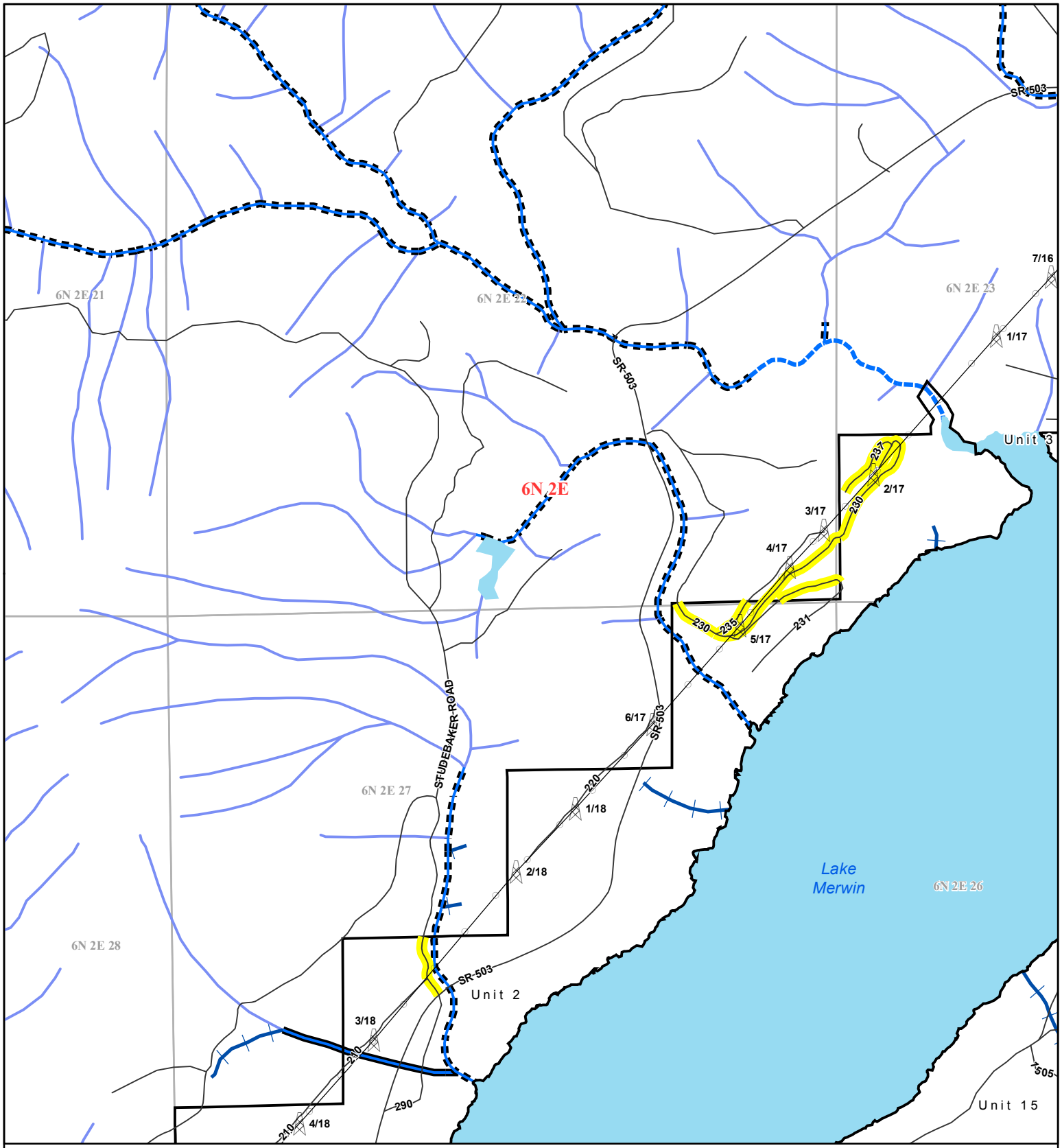

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A	**Stream**
Class B	Fish
Class C	Anadromous Fish
Not Classified	Non-fish Perennial
Transmission Pole	Non-fish Seasonal
Transmission Line	Other
Road	Water Body
Farm Field	Township/Range
Management Unit	Section

PACIFICORP ENERGY
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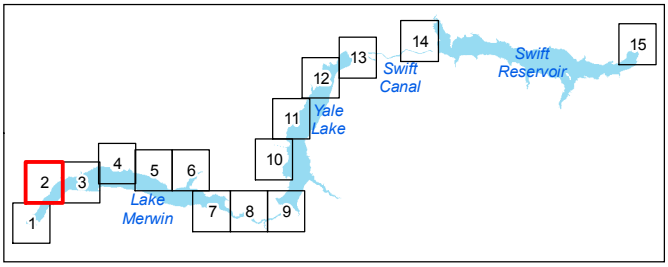
Sheet 2 of 15



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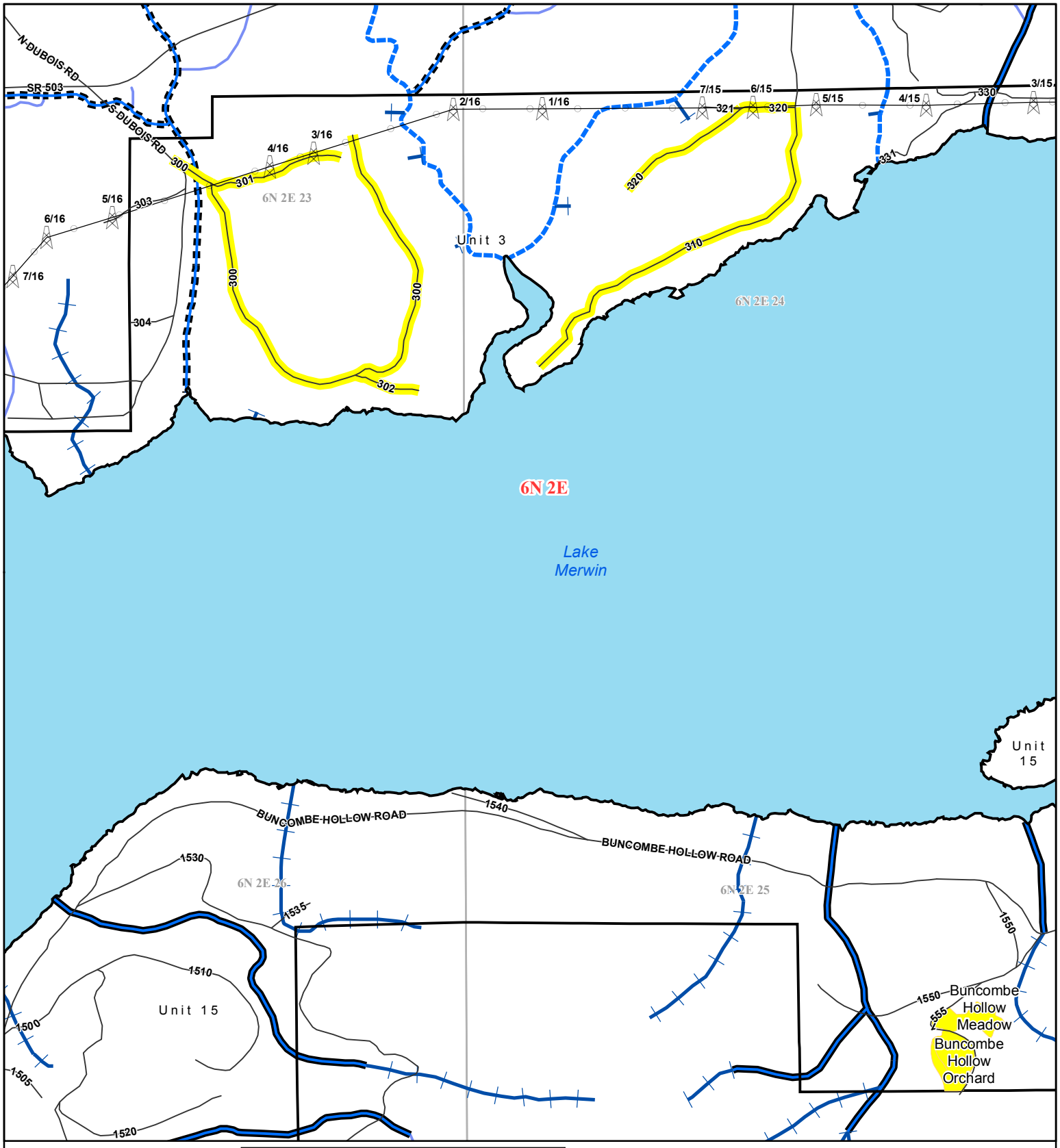


Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

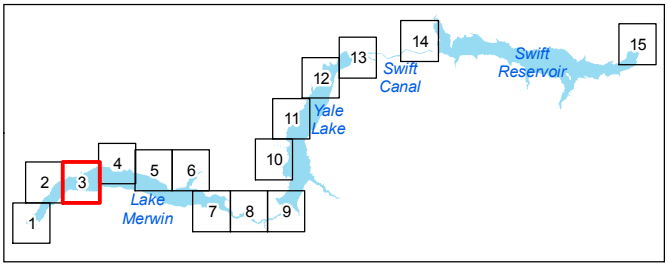
Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Sheet 3 of 15



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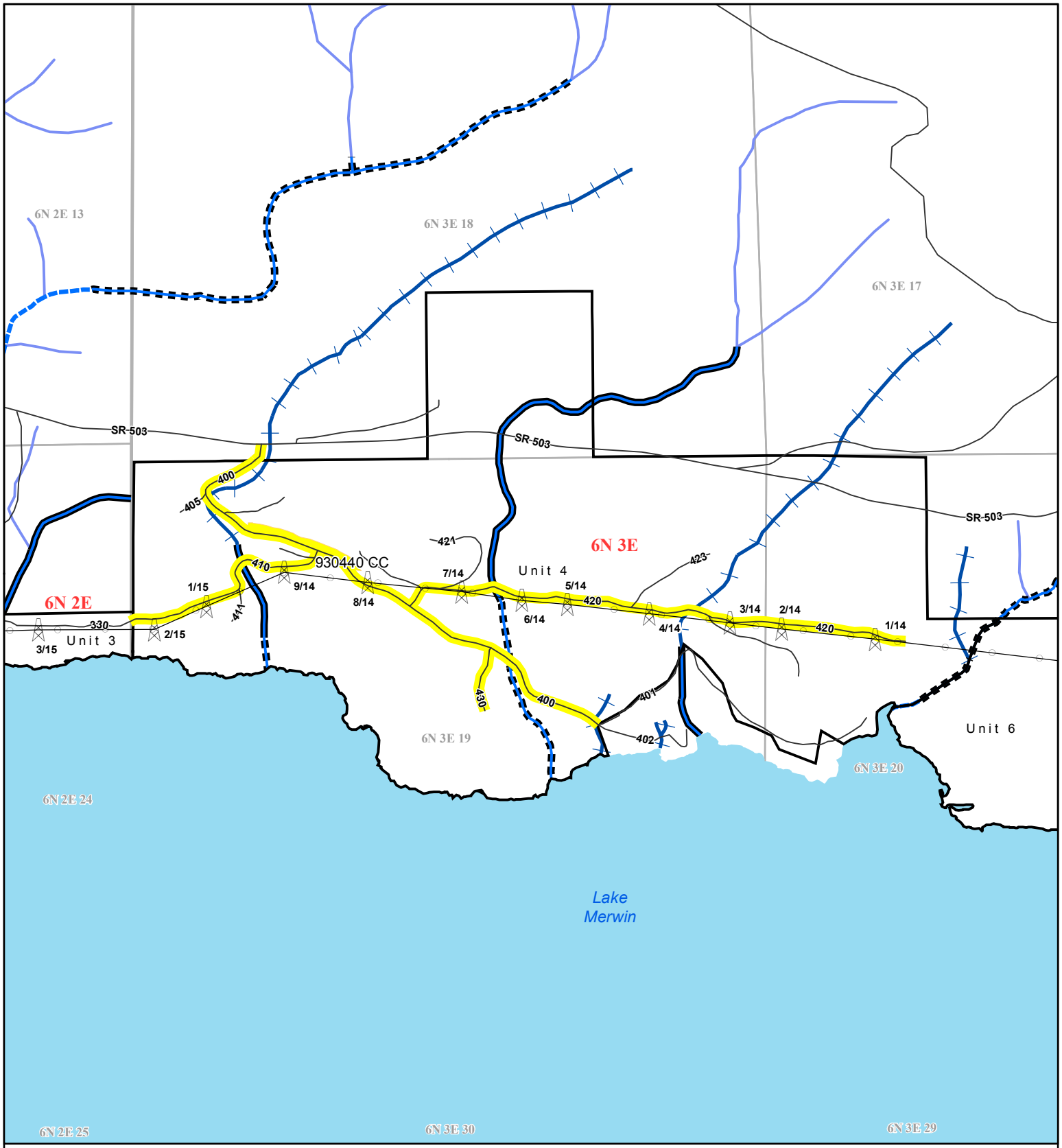


Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

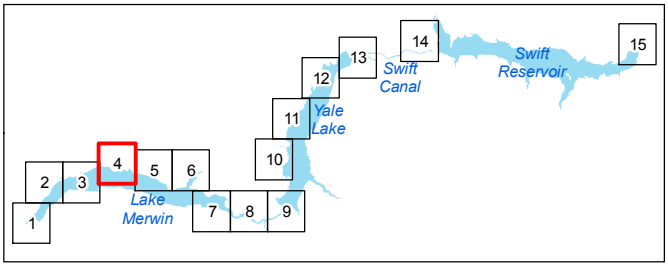
Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream

Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Sheet 4 of 15



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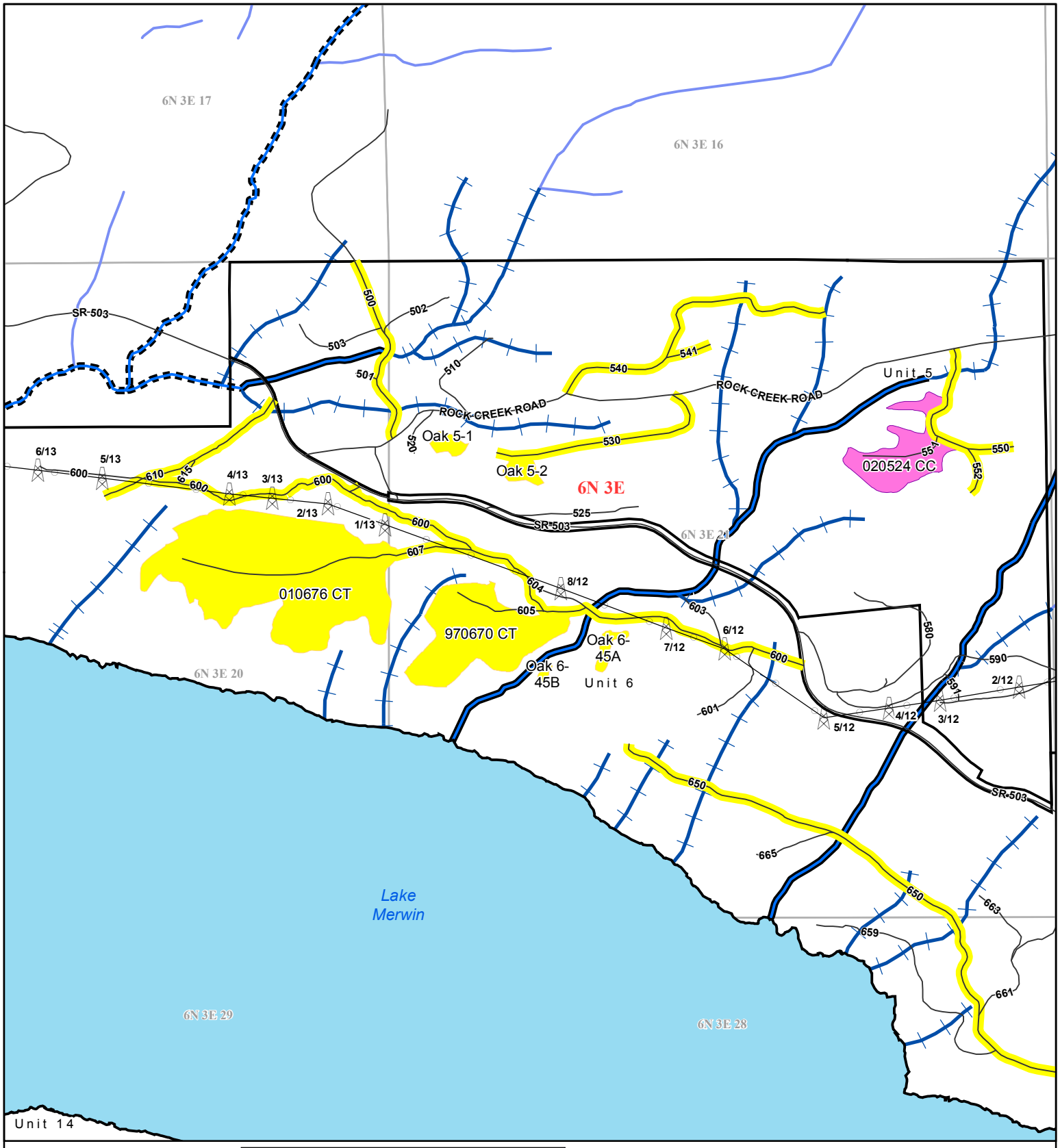

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A	Stream
Class B	Fish
Class C	Anadromous Fish
Not Classified	Non-fish Perennial
Transmission Pole	Non-fish Seasonal
Transmission Line	Other
Road	Water Body
Farm Field	Township/Range
Management Unit	Section

PACIFICORP ENERGY
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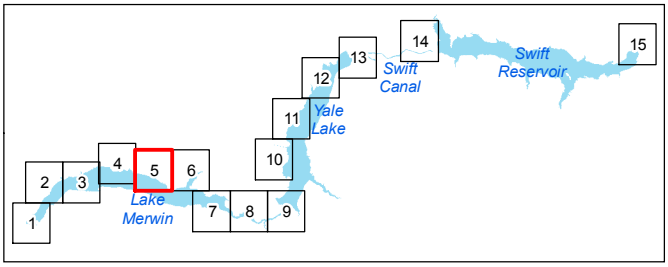
Sheet 5 of 15



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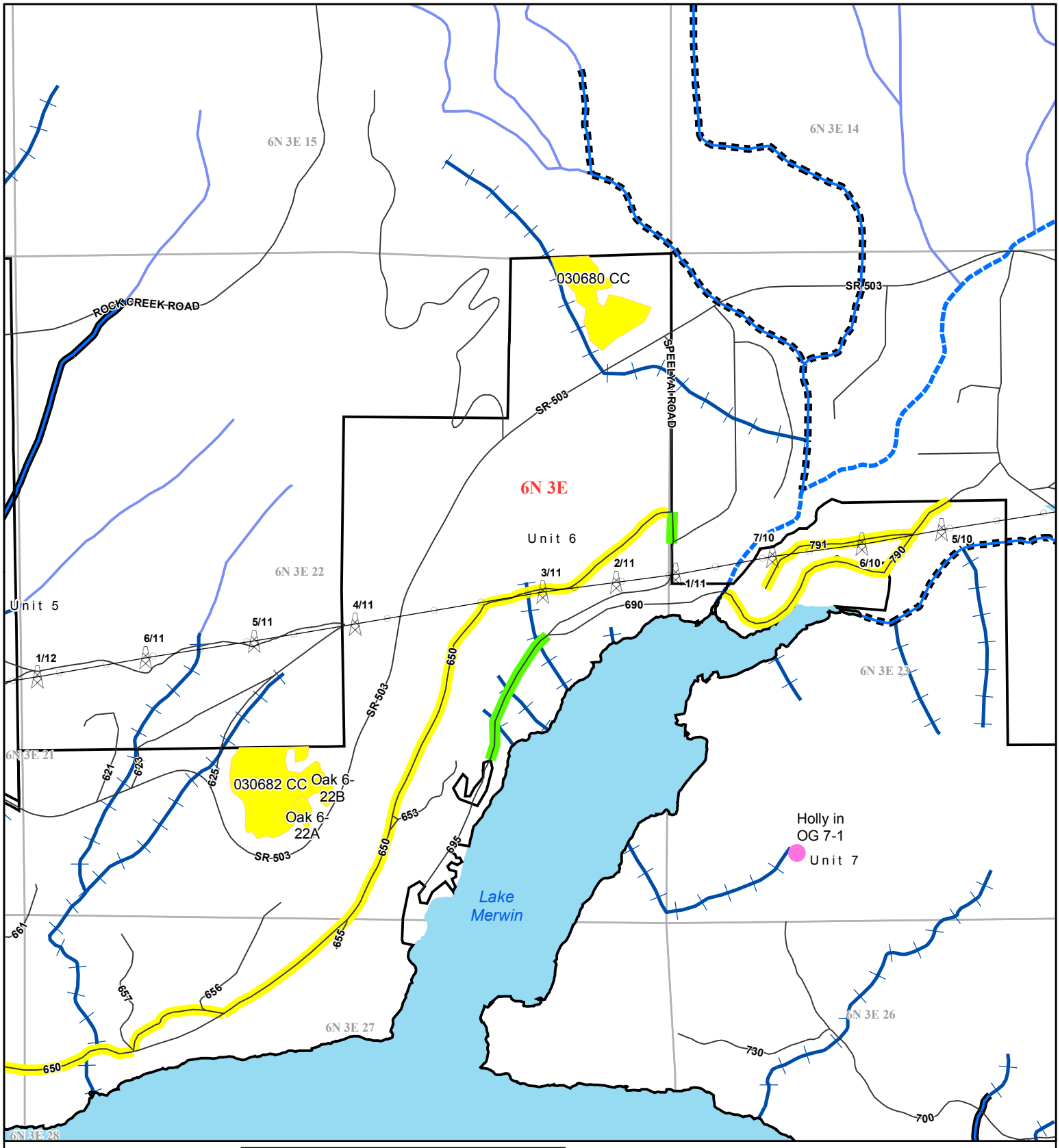

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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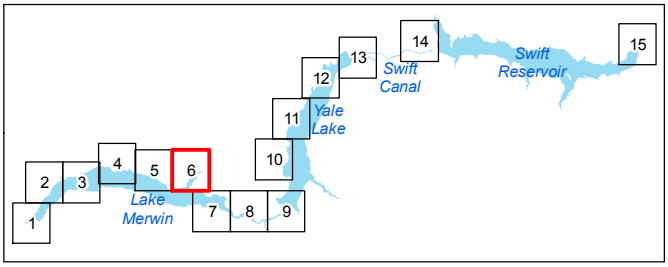

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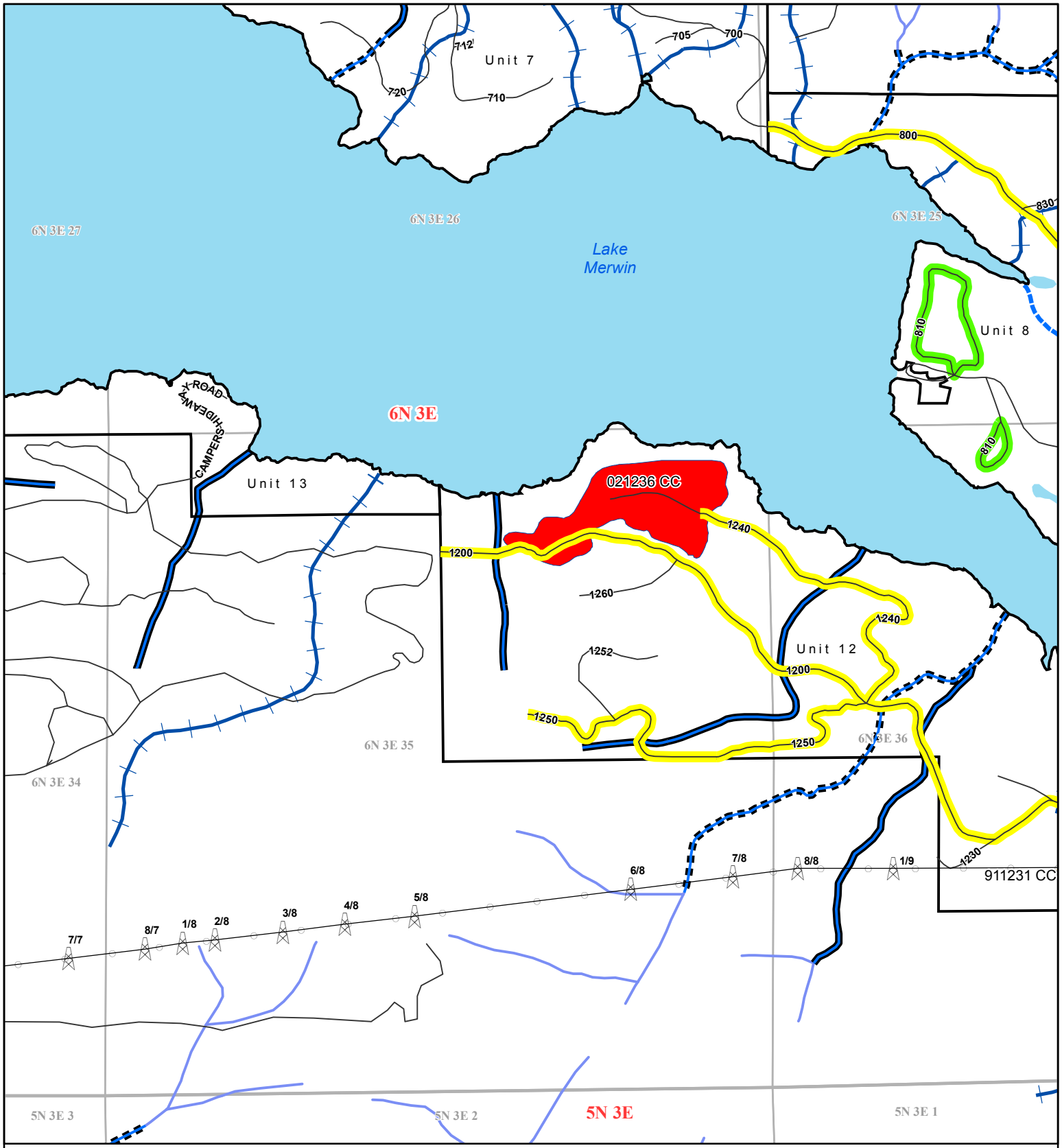

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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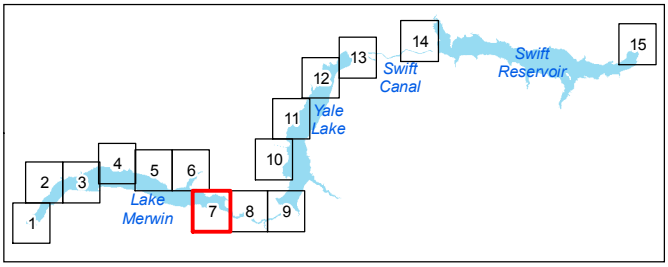

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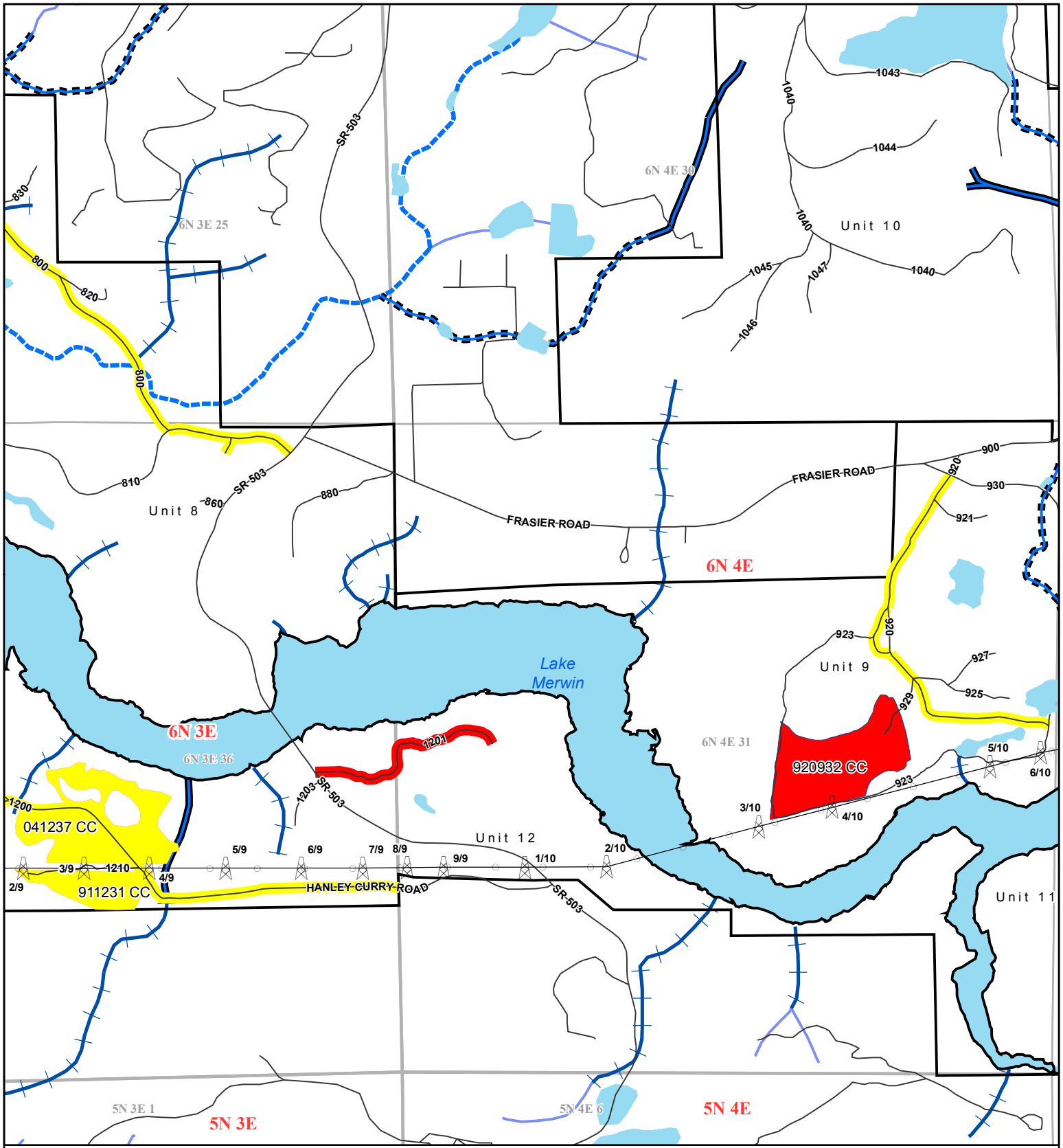


Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

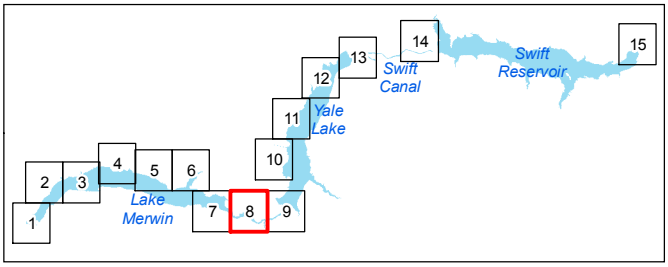
0 500 1,000

Feet

Class A	**Stream**
Class B	Fish
Class C	Anadromous Fish
Not Classified	Non-fish Perennial
Transmission Pole	Non-fish Seasonal
Transmission Line	Other
Road	Water Body
Farm Field	Township/Range
Management Unit	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Sheet 8 of 15



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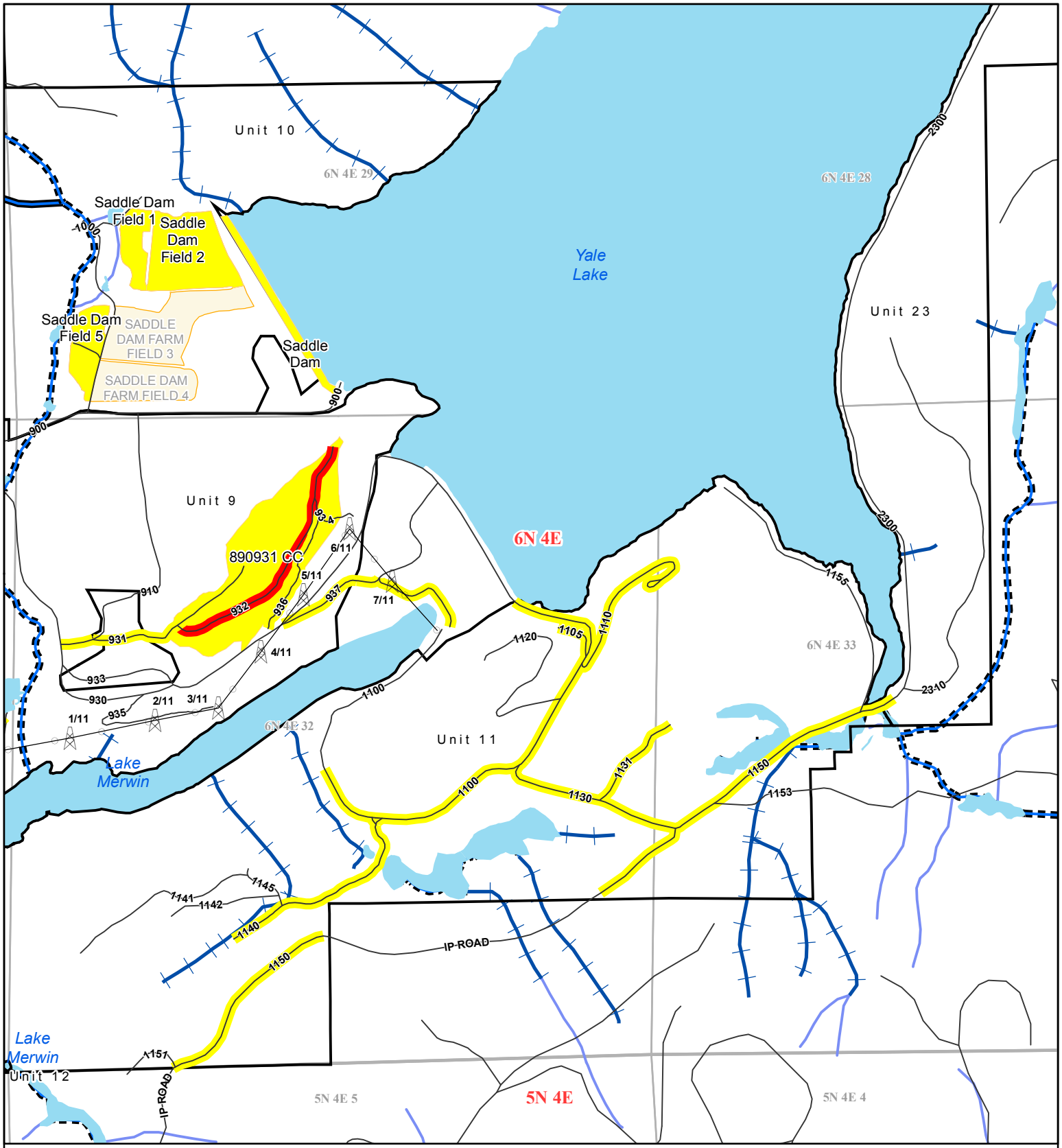

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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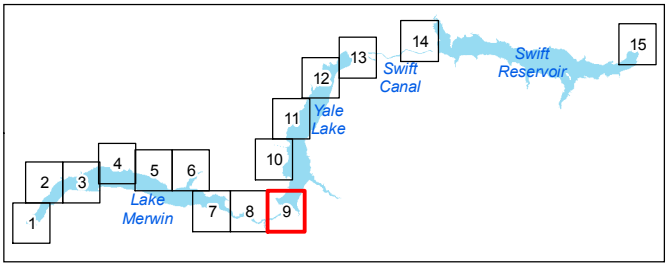

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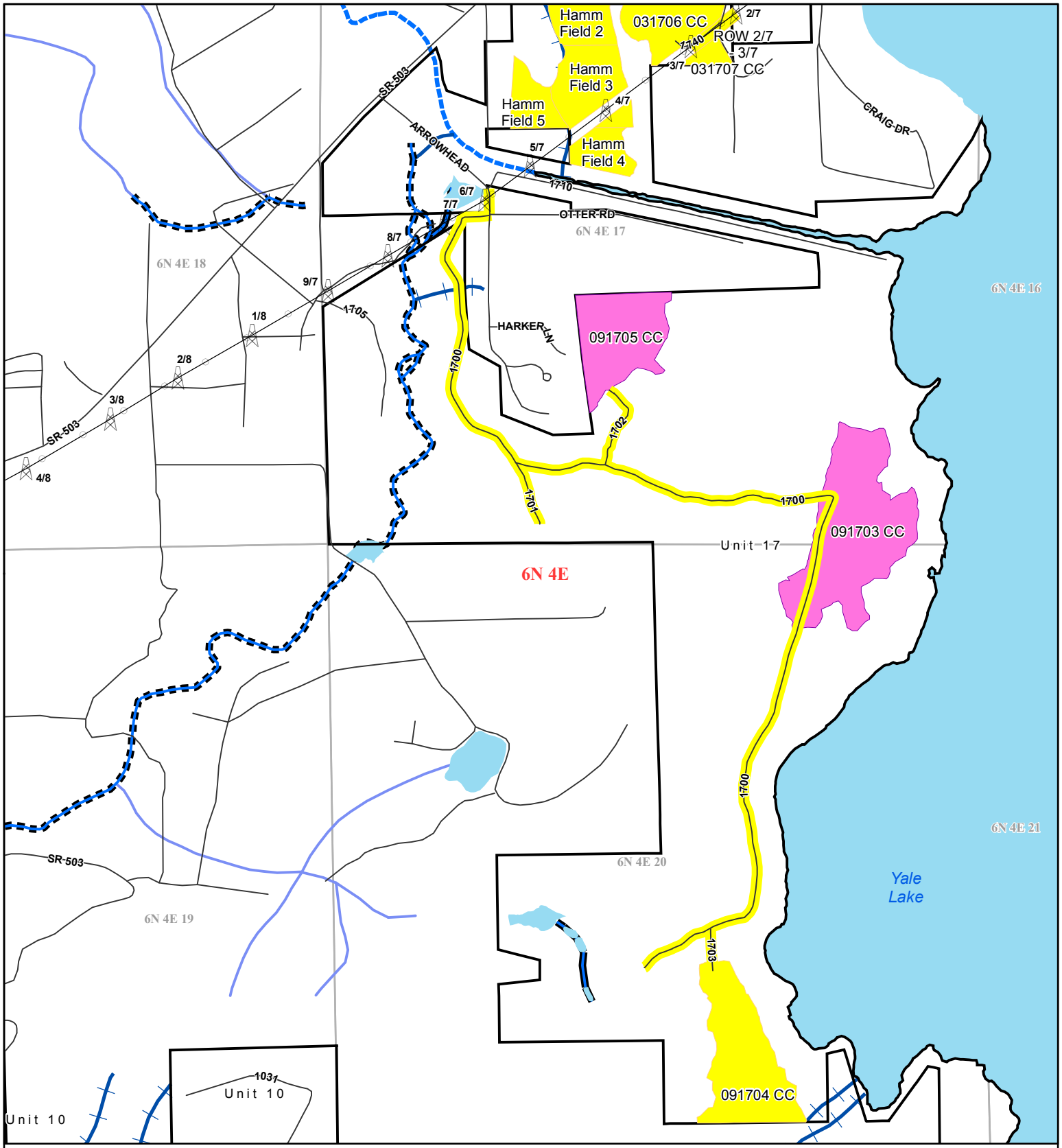


Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

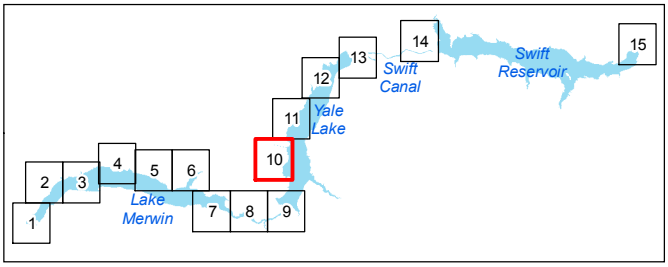
0 500 1,000

Feet

Class A	**Stream**
Class B	Fish
Class C	Anadromous Fish
Not Classified	Non-fish Perennial
Transmission Pole	Non-fish Seasonal
Transmission Line	Other
Road	Water Body
Farm Field	Township/Range
Management Unit	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Sheet 10 of 15



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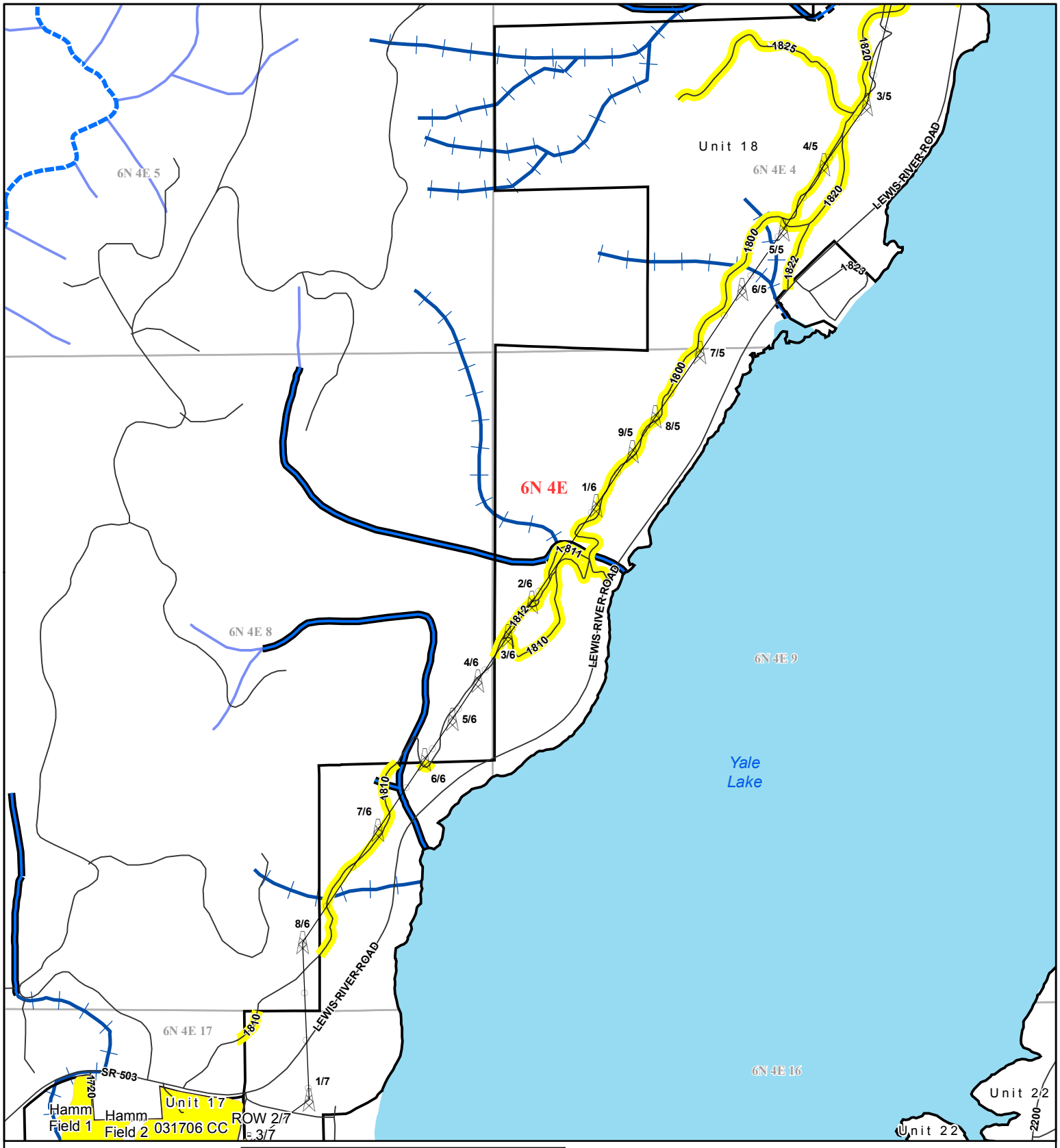


Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

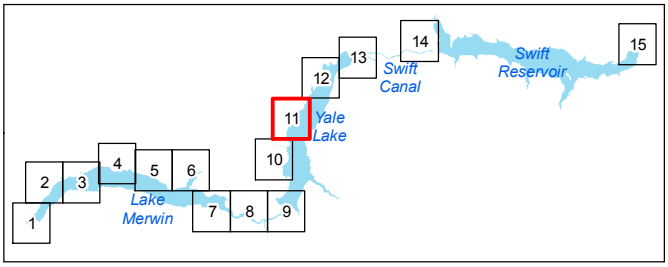
Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Sheet 11 of 15



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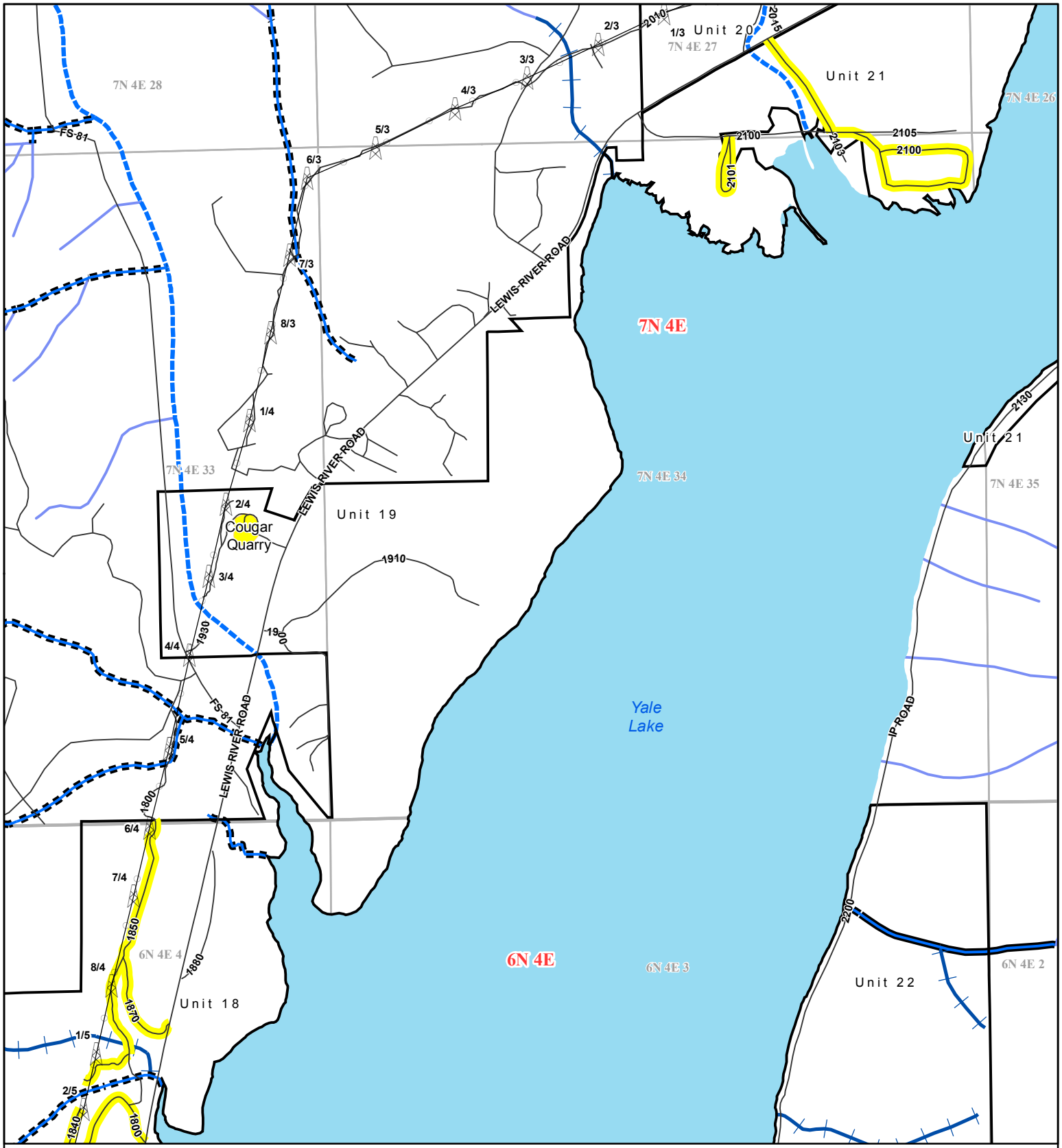

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
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Anadromous Fish
Non-fish Perennial
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Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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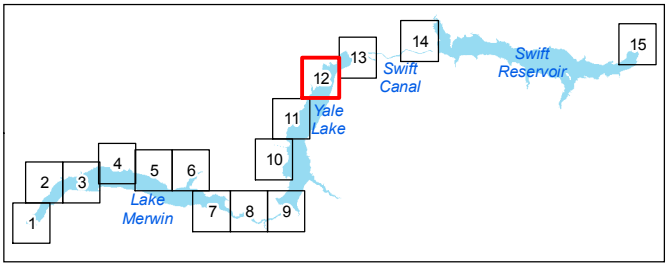

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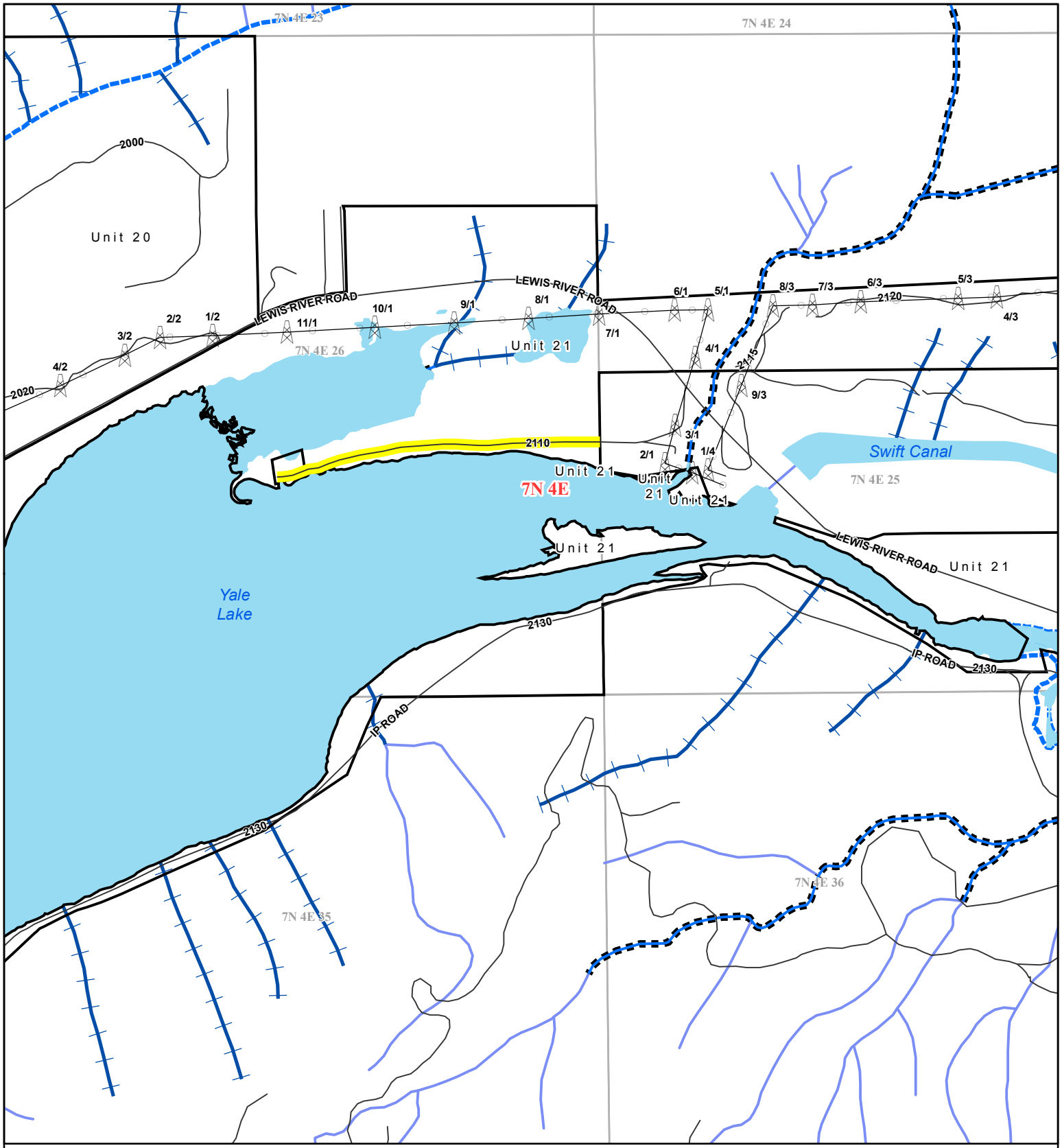

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A	Stream
Class B	Fish
Class C	Anadromous Fish
Not Classified	Non-fish Perennial
Transmission Pole	Non-fish Seasonal
Transmission Line	Other
Road	Water Body
Farm Field	Township/Range
Management Unit	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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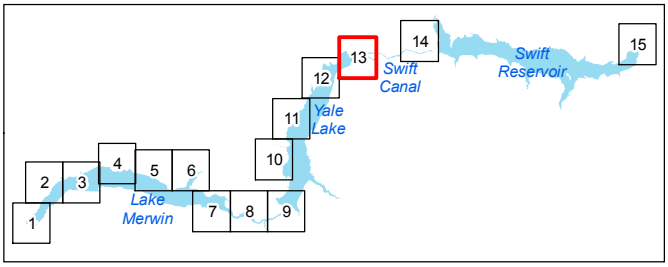

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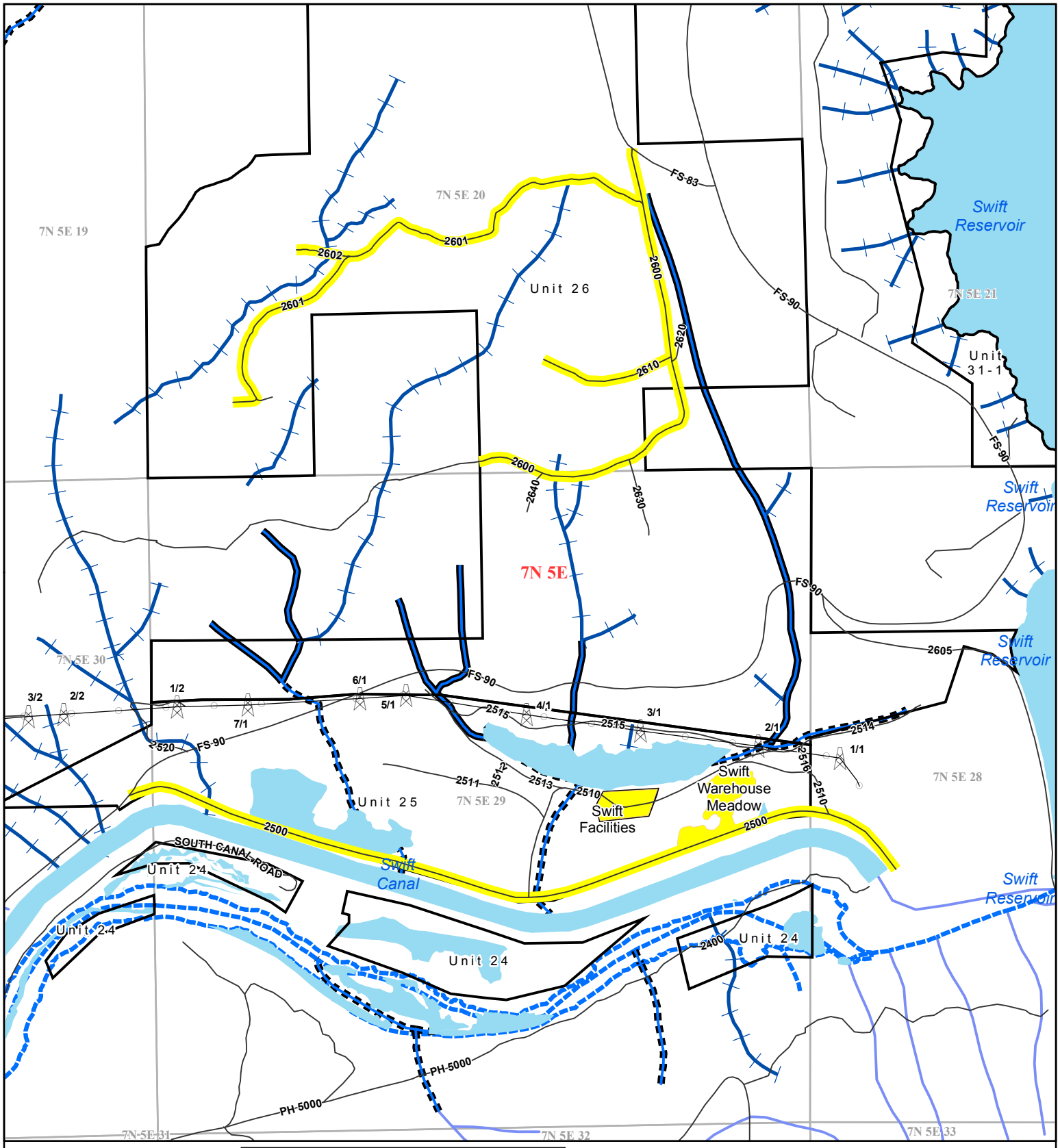

Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

Feet

Class A
Class B
Class C
Not Classified
Transmission Pole
Transmission Line
Road
Farm Field
Management Unit

Stream
Fish
Anadromous Fish
Non-fish Perennial
Non-fish Seasonal
Other
Water Body
Township/Range
Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

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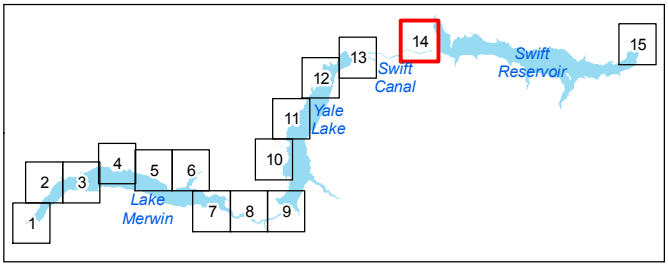

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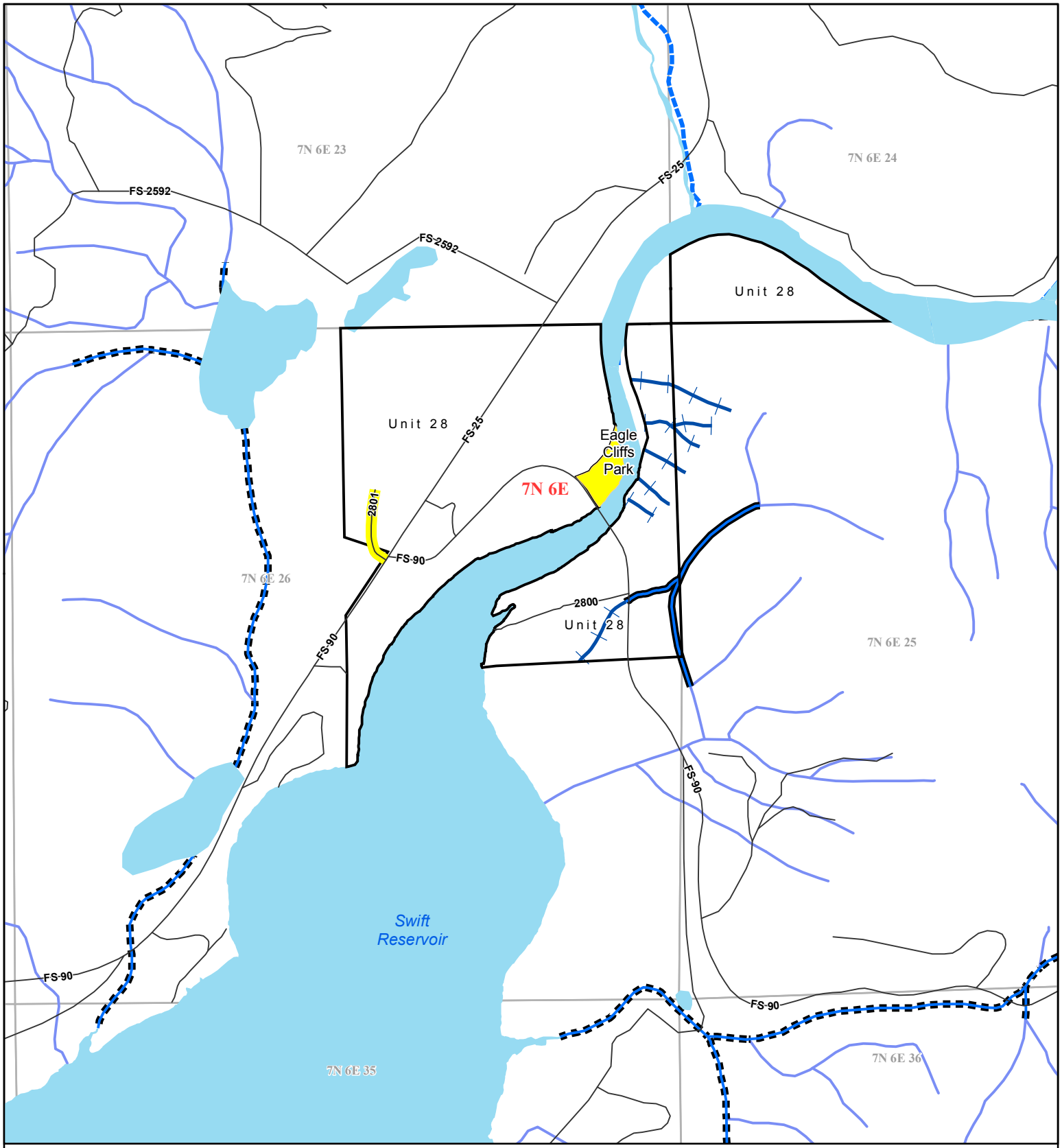


Lewis River

Wildlife Habitat Management Plan

2012 Invasive Plant Species Control Maps

0 500 1,000

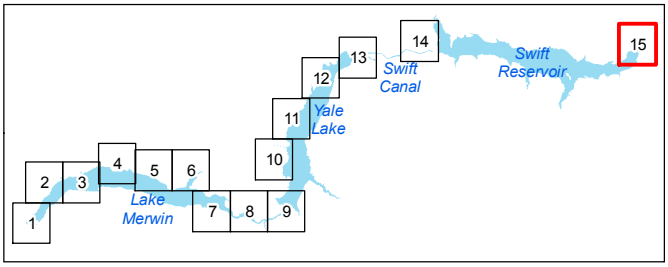
Feet

N W E S

Class A	**Stream**
Class B	Fish
Class C	Anadromous Fish
Not Classified	Non-fish Perennial
Transmission Pole	Non-fish Seasonal
Transmission Line	Other
Road	Water Body
Farm Field	Township/Range
Management Unit	Section

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Sheet 15 of 15



02/22/2013 gisdept@pacificorp.com U:\Projects\2013\13-062\Invasive Plant Species Report Maps.mxd

APPENDIX H
2012 RAPTOR NEST AND NORTHERN GOSHAWK BROADCAST ACOUSTICAL SURVEY MAPS

Lewis River

Wildlife Habitat Management Plan
Accipiter Survey

Unit 4
2013 Proposed Timber Harvest

Legend

- Accipiter Survey Stations
- Active Raptor Nests
- Streams
- 500m Harvest Buffer
- Harvest Area
- Timber Management Unit

0 200 400 Meters

N W E S

PACIFICORP ENERGY
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Data is projected in UTM Zone 10N, NAD83, meters.

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Lewis River

Wildlife Habitat Management Plan
Accipiter Survey

Unit 6 - 600 Road
2012 Timber Harvest

Legend

- Accipiter Survey Stations
- Active Raptor Nests
- Streams
- 500m Harvest Buffer
- Harvest Area
- Timber Management Unit

0 200 400 Meters

N W E S

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Data is projected in UTM Zone 10N, NAD83, meters.

Lewis River

Wildlife Habitat Management Plan
Accipiter Survey

Unit 6 - Speelyai
2012 Timber Harvest

Legend

- Accipiter Survey Stations
- Active Raptor Nests
- Streams
- 500m Harvest Buffer
- Harvest Area
- Timber Management Unit

0 200 400 Meters

N W E S

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Data is projected in UTM Zone 10N, NAD83, meters.

Lewis River

Wildlife Habitat Management Plan
Accipiter Survey

Unit 15
2012 Timber Harvest

Legend

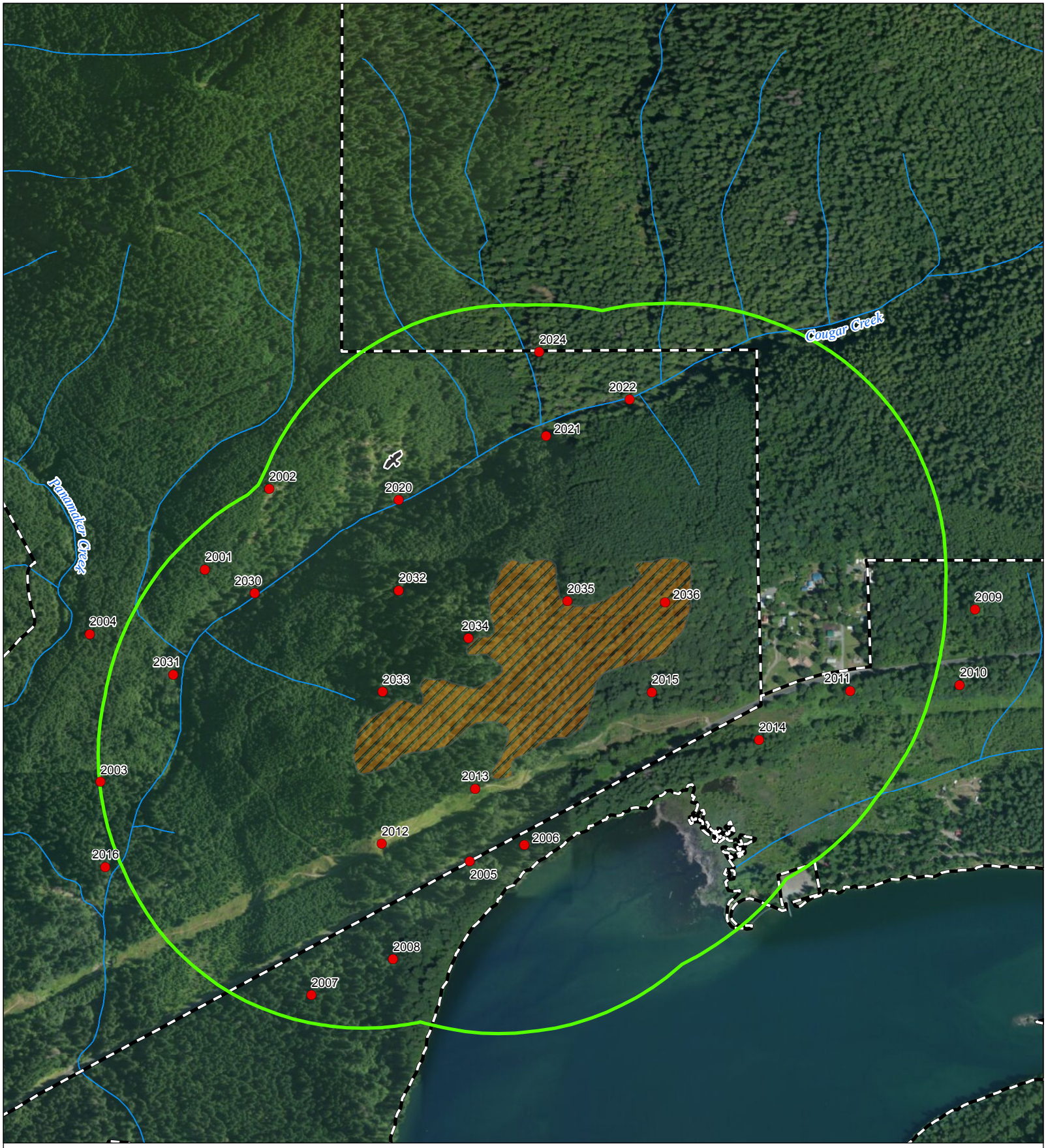
- Accipiter Survey Stations
- Active Raptor Nests
- Streams
- 500m Harvest Buffer
- Harvest Area
- Timber Management Unit

0 200 400 Meters

N W E S

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Data is projected in UTM Zone 10N, NAD83, meters.



Lewis River

Wildlife Habitat Management Plan
Accipiter Survey

Unit 20
2013 Proposed Timber Harvest

Legend

- Accipiter Survey Stations
- Active Raptor Nests
- Streams
- 500m Harvest Buffer
- Harvest Area
- Timber Management Unit

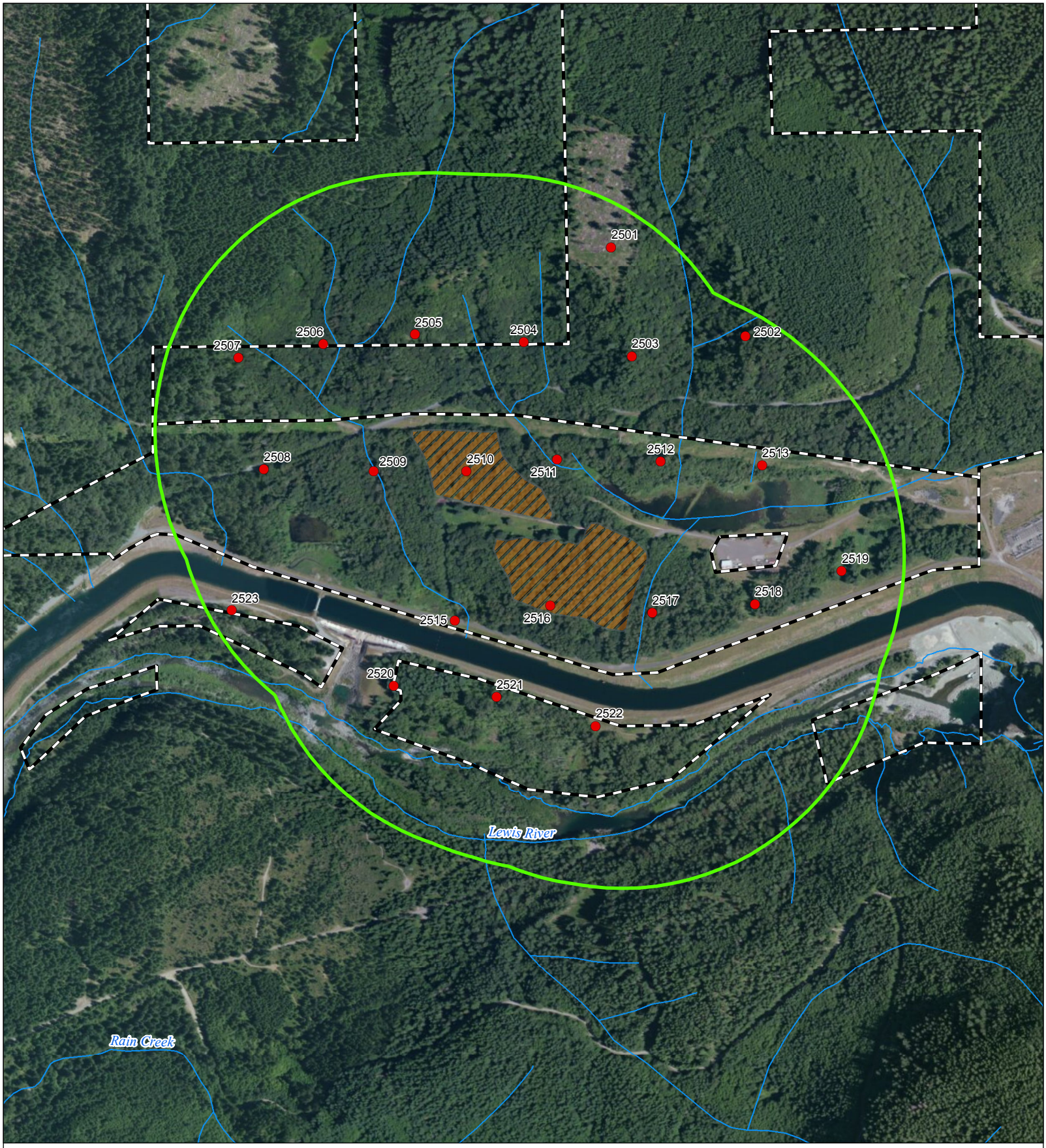
0 200 400 Meters

N W E S

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Data is projected in UTM Zone 10N, NAD83, meters.

02/25/2013 gisdept@pacificorp.com U:\Projects\2013\13-062\Accipiter Survey Report Maps.mxd



Lewis River

Wildlife Habitat Management Plan
Accipiter Survey

Unit 25
2012 Timber Harvest

Legend

- Accipiter Survey Stations
- Active Raptor Nests
- Streams
- 500m Harvest Buffer
- Harvest Area
- Timber Management Unit

0 200 400 Meters

N W E S

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Data is projected in UTM Zone 10N, NAD83, meters.

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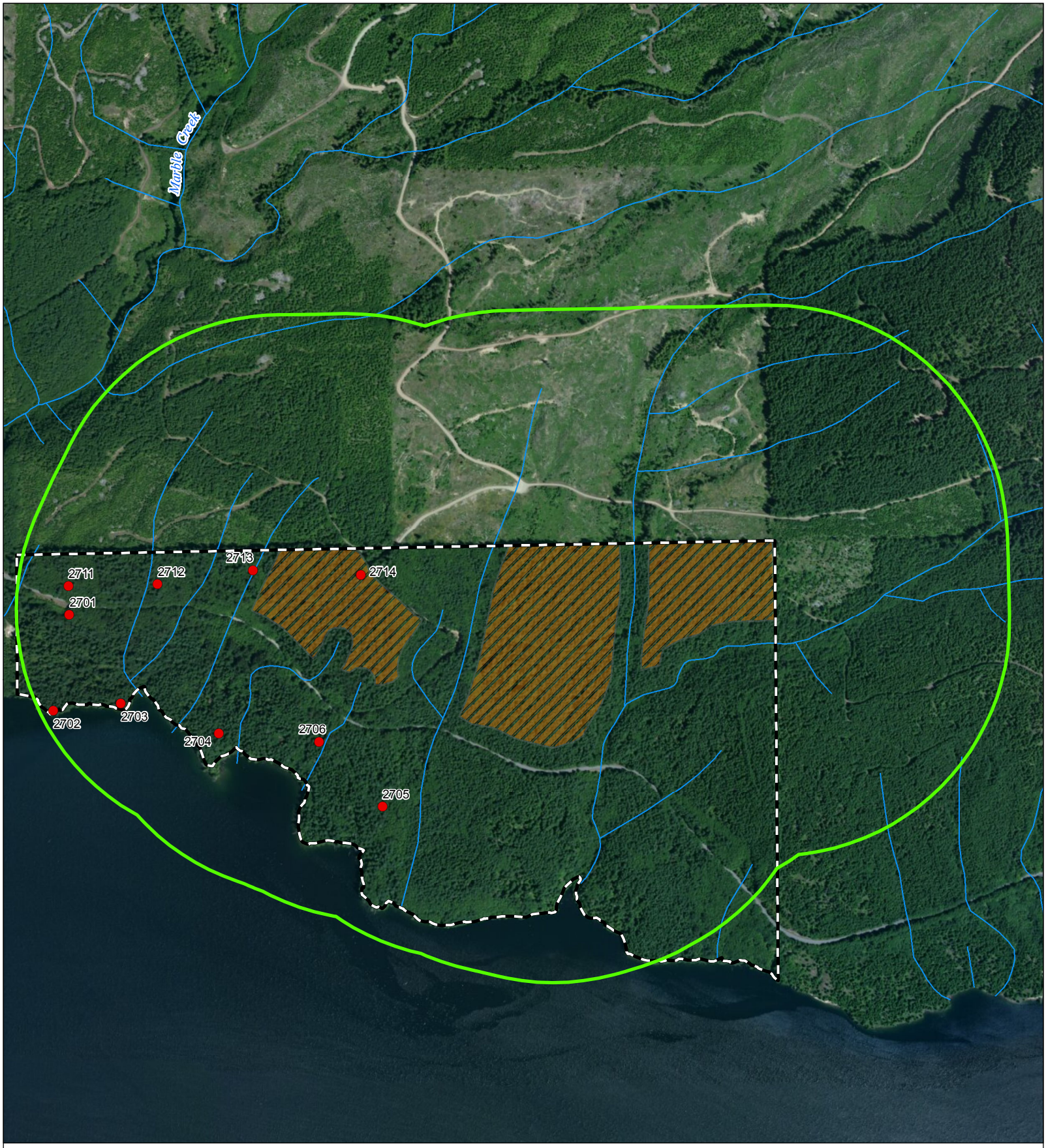

Lewis River

Wildlife Habitat Management Plan
Accipiter Survey

Unit 27
2013 Proposed Timber Harvest

Legend

- Accipiter Survey Stations
- Active Raptor Nests
- Streams
- 500m Harvest Buffer
- Harvest Area
- Timber Management Unit

0 200 400 Meters

N W E S

PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Data is projected in UTM Zone 10N, NAD83, meters.

2012 Raptor Nest Occupancy Maps – CONFIDENTIAL

Available on request with appropriate authorization