Lewis River Wildlife Habitat Management Plan

FERC Project Nos. 935, 2071, and 2111



2013 Annual Plan

Annual Plan for Operations Phase 2013



April, 2013

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ACRONYMS & ABBREVIATIONS

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

ac acre

ATV all-terrain vehicle

FERC Federal Energy Regulatory Commission

ft foot

GIS Geographic Information System

ha hectare

IP International Paper

m meter

RMAP Road Maintenance and Abandonment Program

ROW Right-of-way

TCC Terrestrial Coordination Committee

THA timber harvest area TPA Tree per acre

WDFW Washington Department of Fish and Wildlife WDNR Washington Department of Natural Resources

WHMP Wildlife Habitat Management Plan

1.0 Introduction

This Annual Plan fulfills PacifiCorp's obligations for the license's Article 403 and Settlement Agreement 10.8.3 (Federal Energy Regulatory Commission [FERC] 2008a, FERC 2008b, FERC 2008c, PacifiCorp et al. 2004). The objective of this plan is to detail the terrestrial protection, mitigation, and enhancement measures that are planned to be implemented on Lewis River Wildlife Habitat Management Plan (WHMP) lands in the following operational year (i.e., January 1 to December 31, 2013) (PacifiCorp 2008). This plan also provides details on available WHMP funding, outlines proposed costs, and demonstrates consistency with the Lewis River WHMP goals and objectives, and state and Federal regulations.

Appendix A provides a Gantt chart that lists each of the WHMP's habitat management and planwide goals inspections and management actions that are scheduled to occur in 2013. This chart is to be used as a baseline for scheduling inspections and management actions, which are discussed in further detail in the subsequent sections. The 2013 tasks that are described in this plan are identified in the chart as scheduled.

2.0 Wildlife Habitat Management Plan Funding

Settlement Agreement 10.8.2.1 describes the annual funding for PacifiCorp lands managed under the WHMP as \$27 (in 2003 dollars, Adjusted for Inflation) per acre owned in fee simple and \$13.50 (in 2003 dollars, Adjusted for Inflation) per acre for other Interests in Land (e.g. conservation easements) (PacifiCorp et al. 2004). As of December 31, 2012 PacifiCorp has 13,134 acres (5,315 ha) of WHMP lands owned in fee simple and has 16 acres (6.5 ha) of Interests in Lands. The 2013 WHMP budget as of January 1, 2013 dollars will be \$450,105.85 including the \$14,047.79 from the remaining 2012 WHMP budget and interest. Appendix B provides the overall 2013 budget as well as the budgets for administration, management areas, and plan-wide goals. To accurately reflect costs, the 2013 budget is based on cost expended in 2012 and differs from original estimates in the WHMP (PacifiCorp 2008).

3.0 Land Acquisition

In accordance with the Settlement Agreement 10.1, 10.2, and 10.3, PacifiCorp has established the Yale Land Acquisition and Habitat Protection Fund, the Swift No. 1 and Swift No. 2 Land Acquisition and Habitat Protection Fund, and the Lewis River Land Acquisition and Habitat Protection Fund, which are referred to as the Yale, Swift, and the Lewis River funds

respectively. Article 403 in the Yale and Swift 1 licenses require that the annual plan describe how the funds are to be used and the lands proposed to be acquired under these funds.

The Yale Fund was fully expended as of December 31, 2010 for the 2010 land acquisitions. No further contributions are scheduled. The purchases were accomplished with additional funding supplied from the Lewis River Fund with the Terrestrial Coordination Committee (TCC) approval.

The Swift Fund is currently \$28,733.98 as of December 31, 2012 following the purchases made in June 2012. There are no acquisitions pending for 2013 although the TCC, with support from the Rocky Mountain Elk Foundation continues to look at opportunities available.

The Lewis River Fund had contributions of \$1,580,429.64 in 2010 that were committed to the Yale land purchase (Saddle Mountain) to make up for the shortfall of the Yale Funds. The Lewis River Fund was to be funded by six months following the fourth year of the FERC licenses for Yale and Swift No. 1 Projects, or by December 26, 2012. PacifiCorp agreed with TCC approval to fund the amount of the shortfall for the Yale purchase using the Lewis River Fund prior to the actual time the dollars were to be committed. The next addition to this fund is scheduled for December 2014.

4.0 Administration

4.1 Terrestrial Coordination Committee

Settlement Agreement Section 14.2.5 requires that the TCC meet at least annually and during the development of the WHMP the TCC met at least monthly. Since the WHMP has been completed and is entering into the fifth year of the implementation phase, it is anticipated that the TCC meetings may be reduced to every other month or quarterly. TCC meetings for 2013 are currently scheduled for monthly but may occur on an as-needed-basis.

4.2 Annual Report

An Annual Report describing the terrestrial protection, mitigation, and enhancement measures that occurred on WHMP lands during 2012 was submitted to the TCC for the 30-day review on March 5, 2013.

4.3 Annual Plan

TCC members were provided a draft of this report on March 4, 2013 to review and provide comments within 30 days or by April 4, 2013. These comments were either incorporated into this report or if not, an explanation has been provided and included in Appendix C. In

accordance with the Settlement Agreement 14.2.6, this report was submitted to the FERC no later than 30 days, or by April 12, 2013, after the close of the TCC's comment period.

4.4 Restoration Plans

No lands were identified as significantly damaged by anthropogenic processes in 2012; therefore no restoration plan is required in 2013.

5.0 Old-growth Habitat Management

5.1 Inspections

Old-growth aerial surveys will be conducted concurrently with the aerial osprey (*Pandion haliaetus*) and bald eagle (*Haliaeetus leucocephalus*) nest surveys. Due to the difficulty in differentiating between the costs for each survey, the funds budgeted for the osprey and bald eagle nest survey include the cost of the old-growth aerial survey.

5.2 Management Actions

Old-growth connectivity evaluations work began in 2012 by developing a Geographic Information Systems (GIS) model to identify mature stands that are a priority to old-growth connectivity. A priority ranking was assigned to all mature stands that scored an 8 or better in the model. This identified 19 stands for a total of 227.71 acres or 29% of the stands. Any stand that scored less than 8 was considered non-priority to old-growth connectivity. These stands totaled 556.06 acres or 71% of the total mature stand acres. This model will be submitted to the TCC for review and stands identified as a priority that have not been field verified in prior surveys will be field verified using the same methods in the initial evaluations.

6.0 Wetland Habitat Management

6.1 Inspections

The initial evaluations began in 2011 and will continue in 2013. The newly acquired in lands in Units 34, 35, and 38 will be evaluated to determine where, if any, wetlands exist. The annual inspection will be completed with the initial evaluations where feasible. No 2012 wetland management actions require a post-treatment inspection in 2013.

6.2 Management Actions

Management actions scheduled to occur in 2013 include the stop log removal/replacement for bullfrog (*Rana catesbeiana*) management and high winter flows, continue to monitor the Pumphouse Pond dike, and review the Washington Department of Natural Resources Heritage Database.

7.0 Riparian Habitat Management

7.1 Inspections

Riparian Mixed Forest Stand Evaluations that began in 2010 will be completed in 2013. There are seven stands remaining to be evaluated that total the majority of the acres (130.97 ac [53 ha] of the 181 ac [73 ha]).

7.2 Management Actions

The riparian habitat management actions that are expected to occur in 2013 include:

- Establishing buffers as necessary around the 2013 timber harvest activities,
- Developing water type modifications as necessary for 2013 and 2014 forestry activities,
- At least 3 water type modifications are expected for the newly acquired lands in Unit 34 and 35.
- Implementing pre-commercial thinning in older (>15 years) timber harvest areas that overlap the WHMP riparian buffers,
- Plant riparian buffer in Unit 15 where road was removed in 2012.

The 2013 proposed timber harvests in Management Unit 4 requires a 300-foot (91-m) stream buffer (or height of two site potential trees) from Rock Creek and two 100-foot (31-m) stream buffers for smaller seasonal non-fish streams. THA 130448 has a proposed road that crosses approximately 50 feet of a buffer to a seasonal non-fish stream. No trees will be removed along the road right-of-way. This location was preferred as the shortest route available and eliminated the need for a cut and fill on steeper slopes. The location will be reviewed with the TCC. The road is located on the proposed THA map in Appendix D.

The 2012 timber harvest in Management Unit 15 (THA 121547) removed a stream-parallel road as part of the proposed management. This road-bed will be replanted with red alder (*Alnus rubra*) and Douglas-fir (*Pseudotsuga menziesii*) in 2013 when the adjacent timber harvest is replanted. The gate for this old road will remain in place until the area is sufficiently re-vegetated.

THAs that will be pre-commercially thinned and have portions of their boundaries within the designated riparian buffer will have the buffers marked prior to conducting the work. These THAs are identified in Table 5 (Section 13.0) and total approximately 174.0 acres (65.1 ha) of riparian buffer. Although the WHMP does not specify objectives for management of riparian buffers that are within existing THA boundary, it is expected that increasing the tree spacing and retaining hardwoods where feasible will improve the overall diversity by enhancing both shrub and larger conifer development.

8.0 Shrubland Habitat Management

8.1 Inspections

Shrubland 4-6b and 4-6d will be inspected between April 15 and October 31.

8.2 Management Actions

According to the Shrubland Initial Inspection Report Shrubland 4-6d will need red alder removal and heavy pruning.

9.0 Farmland, Idle Areas, and Meadows Habitat Management

9.1 Inspections

The annual spring inspections and fall inspections will be conducted at each of the actively managed farmland, idle fields, and meadows. The findings from the 2010 initial evaluation will be documented in a report in 2013. The annual spring and fall inspections will occur as scheduled in the WHMP in 2012.

9.2 Management Actions

Regularly scheduled annual management actions will occur in 2013 and will include:

- Annual spring mowing will occur at the Saddle Dam farmland fields and Hamm Meadows 1, 2, and 3 to reduce the thatch.
- Lower Winter Creek meadow will be treated for scotch broom (*Cytisus scoparius*) in 2013

- Hamm Meadow 4 and 5 Himalayan blackberry and snowberry were mowed in 2011 and the new Himalayan blackberry (*Rubus armeniacus*) and snowberry (*Symphoricarpos albus*) shoots were sprayed. This area will be evaluated in late spring to see if needs additional herbicide.
- Buncombe Hollow Meadow near Buncombe Hollow Orchard was expanded in 2012 from 1.0 acre (0.4 ha) to approximately 2.9 acres (1.2 ha) by removing red alder from an adjacent area and burning the slash. This was completed as part of the Management Unit 15 timber harvest. In 2013 the area will be re-grading to level the ground and removing exposed rocks and tree roots remains, and followed with disking and re-seeding.
- As part of the timber harvest activities in Unit 20 a small meadow will be created to provide long term big game forage. This will likely include grading, disking, and seeding the area.
- Shrubs, such as black hawthorn (*Crataegus douglasii*), red-osier dogwood (*Cornus canadensis*), and ocean spray (*Holodiscus discolor*) will be planted along the HWY 503 spur and Hamm Meadow 1 to provide a screen faster than the conifer trees can.
- Annual fall mowing at:
 - Saddle Dam farmland fields
 - o Upper and Lower Hanley-Curry
 - o Speelyai
 - o Bridge
 - o Upper and Lower McKee
 - Upper and Lower Winter Creek
 - o Rhododendron
 - Swift Warehouse
 - o Reese
 - o Buncombe Hollow
 - o Hamm 1, 2, 3, 4, and 5
- Soil testing will be conducted at:
 - o Bridge
 - o Buncombe Hollow
 - o Hamm 1, 2, and 3
 - Upper and Lower McKee
 - o Speelyai
 - Saddle Dam farmland fields 1 and 2
 - o Unit 20 meadow (name to be determined)
- Annual fall fertilizing will be conducted at:
 - o Saddle Dam farmland fields
 - o Upper and Lower Hanley-Curry
 - o Speelyai
 - Buncombe Hollow
 - o Bridge
 - Upper and Lower McKee
 - o Upper and Lower Winter Creek
 - o Rhododendron

- Swift Warehouse
- o Reese Meadow
- o Hamm meadows 1, 2, 3, 4, and 5

10.0 Orchard Management

10.1 Inspections

Annual winter inspections will occur in 2013 at:

- Saddle Dam #1
- Saddle Dam #3
- Saddle Dam Road

Annual summer inspections will occur in 2013 at:

- Saddle Dam #1
- Saddle Dam #3
- Saddle Dam Road
- Yale Dam
- ROW 5/12-6/12
- ROW 7/12-8/12
- ROW 8/12-1/13
- ROW 4/13-5/13
- ROW 3/14-4/14
- ROW9/14-1/15
- ROW 1/15-2/15
- ROW 1/17-2/17
- ROW 5/17-6/17
- ROW 6/17-1/18
- ROW 2/18-3/18

The ROW orchard trees will be inspected to insure compliance with PacifiCorp's vegetation management specifications for vegetation line clearance (PacifiCorp 2012). For a 230kV line is any tree within 62.5 ft. of the center line that is within 30 ft. of the lowest sag point of the line.

All orchard tree sites will be inspected during the summer to determine the feasibility and desirability of expanding the number of trees.

10.2 Management Actions

Dormant pruning is scheduled to occur at:

- Saddle Dam #1
- Saddle Dam #3
- Saddle Dam Road

The apple trees at Hamm Meadows 1, Upper Hanley-Curry and Rhododendron meadows have not been pruned in several years. If funds allow, then these trees will be pruned this year to increase light to the larger branches and reduce the overall height.

A Douglas-fir tree near Speelyai Bay orchard tree SB13 will be pruned back to release SB13. A bigleaf maple and red alder will be pruned to allow more light to two plum trees in Saddle Dam 1 orchard.

Several trees exclosures will have the wire repair and vegetation cleared and matting replaced Four trees have grown to more than twice the height to the exclosures, so the wire will be removed to allow the tree to grow freely and allow browse.

Three trees will be replaced in Saddle Dam #3 orchard to replace young sapling trees that have died.

Buconmbe Holllow, Lower Hanley-Curry, and Speelyai orchards will be mowed in August to maintain big game forage.

A small patch of periwinkle (*Vinca minor*) exists in the Buncombe Hollow orchard. Periwinkle is on the monitor list for the Washington State Noxious Weeds because it can be very invasive and difficult to control. Therefore to be preemptive we are going to treat this patch before it becomes too big of a problem.

11.0 Transmission Line Right-of-Way Habitat Management

11.1 Inspections

The annual inspection and initial evaluation report, which was not completed in 2012, will be completed in 2013. It is expected that post-treatment inspections will be required at sites that have hazard tree, invasive plant species, or transmission line structure work.

In 2012 the transmission line standards for reliability were revised to require utilities to maintain a active transmission ROW width for 230kV H frame lines (i.e., Speelyai, Cougar, and Lake lines) be maintained at 62.5 feet from the center line or 125 ft. width (PacifiCorp 2012). The transmission ROWs are assumed to be largely compliant with this clearing limit, but numerous trees were discovered and removed along portions of the Speelyai ROW during the 2012 timber harvest activities. As a result PacifiCorp's Vegetation Management is currently conducting an inventory of trees to determine where additional trees or shrubs encroach on this clearing limit. This will be shared with PacifiCorp biologists when it is completed to coordinate any tree removal activities and to maintain the goals and objectives of the WHMP.

11.2 Management Actions

Transmission Line Right-of-Way (ROW) management actions that are scheduled to occur in 2013 are the annual mowing at Speelyai Bay, Woodland Park West, and Wilkinson ROW forage areas.

Invasive Plant Species Control will occur at:

- Speelyai Line 2/4-4/4 for butterfly bush (*Buddleja davidii*) and Himalayan blackberry
- Speelyai Line 2/7-3/7 for Scotch Broom
- Speelyai Line 4/1-7/1 for Scotch Broom
- Speelyai Line 3/18-7/18 for Scotch Broom
- Speelyai Line 6/17-7/18 for Scotch Broom

The current visual screen at Woodland Park Road (Speelyai ROW 8/14 to 9/14) requires constant maintenance to reduce the hazard potential. Therefore PacifiCorp will plant a screen of lower growing shrubs and trees within or near the current screen to eventually replace the current trees.

12.0 Unique Area/Habitat Management

12.1 Inspections

The annual inspections for oak stands 6-45, 6-45b, 6-45c, 6-45d, and 6-58 will occur in 2013 and no other inspections actions are expected to occur.

12.2 Management Actions

Oak site management actions planned for 2013 include:

- Oak Stand 5-1: The scotch broom will be treated again in 2012. Remove 2 small Douglas-firs below oak tree 13 and prune the large tree that is adjacent the oak tree.
- Oak Stand 5-2: Pull all Douglas fir seedlings within the oak site. There is large Douglas-fir in the center of the oak site that is shading several trees. This tree should be pruned to remove any limbs that area shading the oak trees.

13.0 Forestland Habitat Management

13.1 Inspections

The annual spring and fall THA inspections (i.e., reforestation inspections) will occur in 2013.

13.2 Management Actions

13.2.1 <u>2013 Proposed Forestland Practices</u>

Approximately 59.0 acres (23.9 ha) are proposed for even-age (clear-cut) forest management in Management Units 4 and 20 (Appendix D). An additional 31.9 acres (12.9 ha) are proposed for commercial thinning in a 27 year-old conifer stand (Management Unit 15) and approximately 142.0 acres (57.5 ha) in Management Unit 10 that was acquired in 2010 (Saddle Mountain). These commercial thins were planned in 2012 but were not conducted due to acquisition of additional property at Swift and priorities being readdressed to manage those areas. These areas are described separately below. The pre-harvest evaluation forms located in Appendix D provide additional information on existing stand conditions and maps. The 2012 WHMP Plan had identified an additional harvest area in Management Unit 27. Most of this area has been dropped from consideration in 2013 due to numerous streams that were identified during 2012 field surveys. Additional field work is planned in that area to develop Water Type Modification maps and determine if some area is still available for commercial thinning at another time.

Management Unit 4

Three separate harvest sites are proposed for forest management (12.0 acres [4.9 ha], 1.8 acres [0.7 ha], and 15.0 acres [6.1 ha]). All three sites are proposed for clear-cutting overmature red alder and to generate additional temporary forage where forage is declining in older THA's. The older THA's are also being pre-commercially thinned and pruned in 2013 as part of routine forage enhancement practices. No permanent forage is planned as the management unit already has 15.7 acres (6.4 ha) of ROW that has portions mowed and fertilized annually. One of the proposed THA's is adjacent a housing lease on PacifiCorp property (Woodland Park). Pole conifer adjacent these homes were evaluated due to recent hazard tree issues (windfall and decay) and it was determined that harvesting the conifer and reestablishing trees and forage would be the best recommendation. The smallest THA (1.8 acres) is proposed adjacent to the Woodland Park Road. This area is targeted to remove the decadent red alder and establish a permanent conifer screen between the road and transmission ROW.



Figure 1. Proposed harvest area in Management Unit 4.

Management Unit 20

Approximately 30.0 acres (12.1 ha) of overmature red alder and bigleaf maple (*Acer macrophyllum*) are proposed for harvest. No harvests have occurred in this management unit for 17 years and forage habitat is declining with an existing cover/forage ratio of approximately 70:30. As identified in the WHMP (PacifiCorp 2008), the recommended cover/forage ratio is 60:40 and the management unit is approximately 1.0 acre short of having the recommended 5% permanent forage (currently 15.1 acres [6.1 ha.]) in ROW. At least 1 acre is proposed to be developed as permanent forage within the proposed harvest area and there are several opportunities to retain and enhance shrubs within the harvest area.

Management Unit 10

Approximately 142.0 acres (57.5 ha) of the Saddle Mountain property purchased in 2010 is proposed for commercial thinning to reduce the overstocked, even aged 39 year-old conifer

stands. Current tree density is approximately 400 trees/acre (TPA) with little understory shrub or forage species. The management intent is to encourage understory development of early seral vegetation and to improve forest health and stand longevity. Thinning will also encourage better root growth which will provide for a more wind-firm and healthier tree. Thinning is proposed at a spacing of 14 to 18 feet (4.3 to 5.5 m) or 130 to 220 TPA. The tighter spacing would be in stands with consistently smaller diameters.



Figure 2. Access road and dense trees proposed for thinning.

13.2.2 2013 Forestland Planning

Forestland planning in 2013 will include mapping vegetation cover types on recently acquired properties (Swift), continuing pre-cut surveys for both 2013 and 2014 proposed forest plan areas, continuing to investigate treatment for tree diseases identified at the end of 2012, continuing plans for roads and forage management in Management Units 33, 34, 35 and 38, and developing forest plans for 2014 and beyond. The TCC will be shown plans for forest management proposed in Management Units 4 and 20 as well as planning for commercial thins,

and past forest management areas. Administratively, new contracts will be bid for logging, habitat management labor and for consulting forestry.

Table 1. Timber harvest areas to be reviewed for 2014 commercial thinning.

Table 1. Timber harvest areas to be reviewed for 2014 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			

13.2.3 First Precut Survey

The first precut survey forms for the 2013 timber harvest areas are in Appendix D. The first precut surveys for the 2014 harvests will be completed prior to the end of fall 2012 and reported with the 2013 WHMP report.

13.2.4 Harvest Area Traverse and Geographic Information System Update

The 2013 THAs will be updated in the GIS database following TCC approval of the proposed plans and the completion of the timber harvests. The 2014 proposed timber harvest activities will be further reviewed, traversed, and entered into the GIS database to develop maps for review with the TCC. Field work will begin on reviewing the vegetation cover types on recently acquired properties and these will be entered into the GIS database.

13.2.5 Second Precut Survey

The second precut survey for the 2013 timber harvests will be completed in the spring or early summer of 2013 following TCC review of the sites. Appendix D maps show the 2013 timber harvest areas delineated boundaries, roads, riparian and wetland buffers, and the proximity of northern spotted owl (*Strix occidentalis*) management circles. These surveys will ensure that compliance is maintained with resource plans.

13.2.6 Terrestrial Coordination Committee

The TCC on site meetings to review the proposed 2013 timber harvest areas has been tentatively scheduled during April and May 2013. The TCC will receive regular updates and coordination throughout 2013 regarding forestland activities.

13.2.7 <u>Timber Harvest Area Inspections</u>

A biologist and/or forester will conduct weekly inspections during the logging operations to ensure that the operations are compliant with WHMP best management practices, contract conditions, State Forest Practices Act, and industry standards.

13.2.8 <u>Regeneration Practices</u>

Regeneration practices include management actions that promote tree regeneration following timber harvests and maintaining or establishing big game forage and cover. The 2013 timber harvest areas will be site prepped for forage seeding and tree planting by piling residual slash and site-prepping soils with a tractor-mounted brush blade. The roughly 60 acres (24 ha) in Management Unit 33 that were proposed for broadcast burning in 2011/12 will be scarified this year and seeded in fall with an appropriate forage mix prior to replanting in 2014. Planting, vegetation control, and pre-commercial thin practices are described in the following sections.

Planting and Maintenance:

The 2013 planting and seedling maintenance activities will include planting the 2012 timber harvest areas (Management Units 6, 15 and 25) and installing seedling protection in areas that have high seedling browse from big game. Vexar® tubes will be used on western red cedar (*Thuja plicata*) and western hemlock (*Tsuga heterophylla*) seedlings in areas where there is significant seedling loss or damage due to big game browse. Plantskydd®, a cost effective and environmentally safe animal repellent, will also be sprayed on young seedlings to prevent further browse damage as necessary. All timber harvest areas that require seedling maintenance or planting in 2013 are listed in Table 2 and locations are mapped in Appendix E.

Table 2. 2013 tree planting

	·	
Timber Harvest Area	Acres (hectares)	Action ¹
120684CC	12.9 (5.2)	Plant 3,600 PSME
120685CC	23.5 (8.0)	Plant 6,600 PSME
120686CC	5.0 (2.0)	Plant 1,500 PSME, 200 THPL
121547CC	15.4 (6.2)	Plant 1,000 PSME, 3,000 ALRU
122501CC	6.7 (2.7)	Plant 2,000 PSME
122502CC	9.8 (3.9)	Plant 3,000 PSME
Total	69.5 (28.1)	17,700 PSME, 2,000 PIST, 200 THPL

PSME= Douglas-fir, THPL = western red cedar, ALRU = red alder

Vegetation Control:

New tree seedlings compete for moisture with grasses and legumes that are seeded as forage on the entire THA. To reduce this moisture competition, the existing grasses are killed by using a pre-emergent herbicide, such as Sulfometuron (Oust®) or Surflan with glyphosate, which is sprayed in an 18-in (45-cm) radius around all seedlings. Surflan is a selective pre-emergence herbicide for control of annual grasses and many broadleaf weeds. It is used along with glyphosate (to kill existing grasses) instead of Oust® on western red-cedar because Oust® was noted to negatively affect cedar. All timber harvest areas that require treatment in 2013 are listed in Table 3 and locations are identified in Appendix E. Spring surveys will likely determine other THA's that require additional vegetation control so this will likely change.

Table 3. 2013 seedling maintenance and protection (spraying, Vexar® tube).

Timber Harvest Area	Total Acres (hectares)	Action
120686 CC ¹	5.0 (2.0)	Spray OUST
120684 CC	12.9 (5.2)	Spray OUST
120685 CC	19.7 (8.0)	Spray OUST
050771CC	2.3 (0.9)	Spray THPL w/ Plantskydd, re-tube THPL ²
101126 CC	18.3 (7.4)	Spray OUST, Rodeo-Pendulum; retube THPL
101127 CC	11.7 (4.7)	Spray OUST, Rodeo-Pendulum; retube THPL
121547 CC	15.4 (6.2)	Spray OUST
101801CC	27.5 (11.1)	Spray THPL w/ Plantskydd; re-tube THPL
122501 CC	6.7 (2.7)	Spray OUST
122502 CC	9.8 (1.1)	Spray OUST
Total Acres	133.1 (53.9)	

^{1.} CC = clear-cut. 2. THPL = western redcedar

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. Treatments may include both chemical and manual methods. All timber harvest areas that will have vegetation control in 2013 are listed below in Table 4 (acres are THA acres and do not necessarily represent the total acres treated) and locations are identified in Appendix F. The anticipated acres are less than half of what was necessary in 2012, but is likely to change with spring surveys.

Table 4. 2013 Timber Harvest Area vegetation control treatments

THA	ACRES (ha)	Target Species ¹ (Classification ²)
020232 CC	9.2 (3.7)	Spray CYSC (B) in North THA
030447 CC	24.6 (10.0)	Spray PTAQ (nc)
030679 CC	7.4 (3.0)	Spray PTAQ (nc), RUAR (C), CYSC (B)
030680 CC	5.8 (2.3)	Spray PTAQ (nc), RUAR (C)
030681 CC	0.6 (0.2)	Spray PTAQ (nc), RUAR (C)
871214 CC	6.3 (2.6)	Spray RUAR (C)
021236 CC	18.4 (7.4)	Spray PHAR (C)
921631 CC	8.6 (3.5)	Spray RUAR (C)
091704 CC	14.4 (5.8)	Spray PTAQ (nc)
091705 CC	11.3 (4.6)	Spray PTAQ (nc)
021706 CC	12.0 (4.9)	Spray PTAQ (nc)
112801 CC	21.0 (8.5)	Spray PTAQ (nc), CYSC (B)
TOTAL	139.6 (56.5)	

¹ CYSC = scotch broom, , PTAQ = bracken fern, RUAR = Himalayan blackberry,

Pre-commercial Thinning:

Pre-commercial thinning and/or pruning are conducted on timber harvest areas that are generally less than 5.0 -7.0 feet (1.5 - 2.1 m) in height and are required to maintain big game forage. All 2013 pre-commercial thinning or pruning is listed in Table 5 and locations are identified in Appendix E.

Table 5. 2013 Pre-commercial Thinning and pruning treatments

Timber Harvest Area	Acres (hectares)	Slash PCT	Hack & Squirt PCT	Pruning	THA includes Riparian Buffer
752001CC	22.4 (9.1)		X		
020523CC	22.6 (3.7)	Slash ALRU only			X
040527CC	16.3 (6.6)	Slash PCT and slash ALRU			Х
040528CC	5.1 (2.1)	X			X
960668CC	6.1 (2.5)	X			
030678CC	7.9 (3.2)	X			
030679CC	7.4 (3.0)	Slash ALRU only			X
050770CC	24.9 (10.1)	Slash PCT and slash ALRU			Х
043301CC	69.9 (28.3)	Slash PCT and slash ALRU			
063308CC	23.5 (9.5)	X			X

²Noxious Weed Classification = (A) = Class A, (B) = Class B, (Bd) = Class B designated region 8, (C) = Class C, (nc) = not classified

Table 5. 2013 Pre-commercial Thinning and pruning treatments (continued)

Timber Harvest Area	Acres (hectares)	Slash PCT	Hack & Squirt PCT	Pruning	THA includes Riparian Buffer
063309CC	42.2 (17.1)	X			X
053801CC	40.0 (16.2)	Slash PCT and slash ALRU			
053802CC	52.4 (21.2)	Slash PCT and slash ALRU			
010443 CC	13.2 (5.3)			X	X
010444 CC	4.9 (2.0)			X	X
010445 CC	9.3 (3.8)			X	X
980836 CC	9.5 (3.8)			X	
001541 CC	4.6 (1.9)			X	X
Total Acres	382.2 (154.7)				

14.0 Invasive Plant Species Management

14.1 Prevention

In 2013 it will be assumed that there are no sites that will require a pre-ground evaluation.

14.2 Detection

The Washington State and County noxious weed lists will be updated as they become available.

14.3 Treatment

Several areas have been identified for invasive plant species treatment and are discussed in their corresponding habitat management sections (i.e., Forestland Management, Farmland, Idle Areas, and Meadows Management, and Transmission Line Right-of-Way Management). It is assumed that an additional 100 ac (32 ha) of upland habitat and 5 ac (8 ha) within the ordinary high water mark will have invasive plant species treated in 2013. This would include unidentified infestations that need immediate treatment or areas that do not directly fall under a habitat management area, such as roads, recreation sites, and secondary management areas and treated in 2013.

14.4 Monitoring

Most of the areas that were treated for invasive plant species will be monitored during other annually scheduled WHMP inspections. For example: Himalayan blackberry sprayed at Hamm Meadows 4 and 5 can be evaluated for success during the Spring Farm Inspection or roads and THAs will be evaluated during the spring timber harvest area inspection. However areas that are not regularly inspected and/or inspections occur too late in the season to effectively monitor will be evaluated in 2013. The table below lists the areas that will be monitored in 2013.

Table 6. 2013 Invasive Plant Species Control Monitoring Sites

Area	Target Species (Classification) ^{1,2}	Area Treated	Control Method
991702CC	PHAM (nc)	100 ft^2	Chemical
Cresap Campground	GELU (A)	0.3 ac	Chemical
Speelyai Road and Day Use Area	GELU (A)	0.2 ac	Chemical
Speelyai Park	ALPE (A)	0.2 ac	Hand Pulled
Road 300	VIMI (nc)	200 ft ²	Chemical
Cougar Quarry	POCU (B), BUDA (B)	0.5 ac	Chemical
Merwin Boat Ramp	IMGL (B)	0.2 ac	Hand Pull
Eagle Cliff	CYSC (B)	1.0 ac	Chemical

¹ ALPE= garlic mustard, BUDA = Butterfly bush, GELU = shiny geranium, IMGL= Policeman's helmet, PHAM= American pokeweed, POCU = Japanese knotweed, VIMI= common periwinkle

15.0 Raptor Site Management

15.1 Monitoring

Broadcast acoustical surveys for northern goshawks (*Accipiter gentilis*) will be conducted for the second season in Management Units 4, 20 and 27. The 2014 timber harvests all include commercially thinning stands that are too dense to provide nesting habitat for northern goshawks, therefore no raptor first season goshawk surveys will be required in 2013. The aerial bald eagle and the osprey nest surveys will occur in 2013.

15.2 Habitat Enhancement

Proximity to raptor nest was one of the factors included in the old-growth connectivity model (See Section 5.2). This model and field surveys will identify which mature stands identified as a priority to old-growth connectivity may also be a priority to improving raptor habitat quality.

Noxious Weed Classification = (A) = Class A, (B) = Class B, (Bd) = Class B designated region 8, (C) = Class C, (nc) = not classified

15.3 Best Management Practices

Best management practices for general raptors, northern spotted owls, and bald eagles will be implemented per the WHMP.

16.0 Public Access Management

16.1 Inspections

The annual road closure and trail inspections will be completed per the WHMP.

16.2 Management Actions

It is anticipated that at least three sites will require unauthorized motorized vehicle access to be controlled in 2013. Additional sites for gating or blocking roads will be selected based on the annual surveys, new land acquisitions or as needed and will be dependent on available resources (e.g. budget), severity of trespass, and feasibility. Currently, there are two access roads to Management Unit 38 (purchased in 2012) that begin on Washington State Department of Natural Resources (WDNR) property via easements. PacifiCorp will contact DNR to determine if gates can be established on their property or if the gates will be placed on the PacifiCorp property line. All other access roads onto the new properties were gated in 2012. PacifiCorp will work closely with Washington Department of Fish and Wildlife (WDFW) law enforcement regarding all-terrain vehicle (ATV) activity and unauthorized access.

PacifiCorp will continue to implement road and culvert maintenance projects under the Washington Department of Natural Resources (WDNR) Road Maintenance and Abandonment Plan (RMAP). Although these projects are not funded by WHMP dollars, they benefit WHMP lands by controlling access, reducing sediment delivery to streams and improving overall habitat. All road and culvert repair will be conducted in accordance to all Federal, state, and county regulations. This is to include, but not limited to:

- Washington Department of Fish and Wildlife Hydraulic Permit Application,
- WDNR Forest Practices Act permitting guidelines,
- Army Corp of Engineers 404 permit, and/or
- County Shoreline or Critical Areas/Habitat permits as necessary.

PacifiCorp biologists will continue to coordinate with the recreation manager on the International Paper (IP) road assessment as a potential trail as required in the Settlement Agreement. Due to the remoteness and continued ATV use in the IP road area, this area is regularly monitored by the WDFW law enforcement officer.

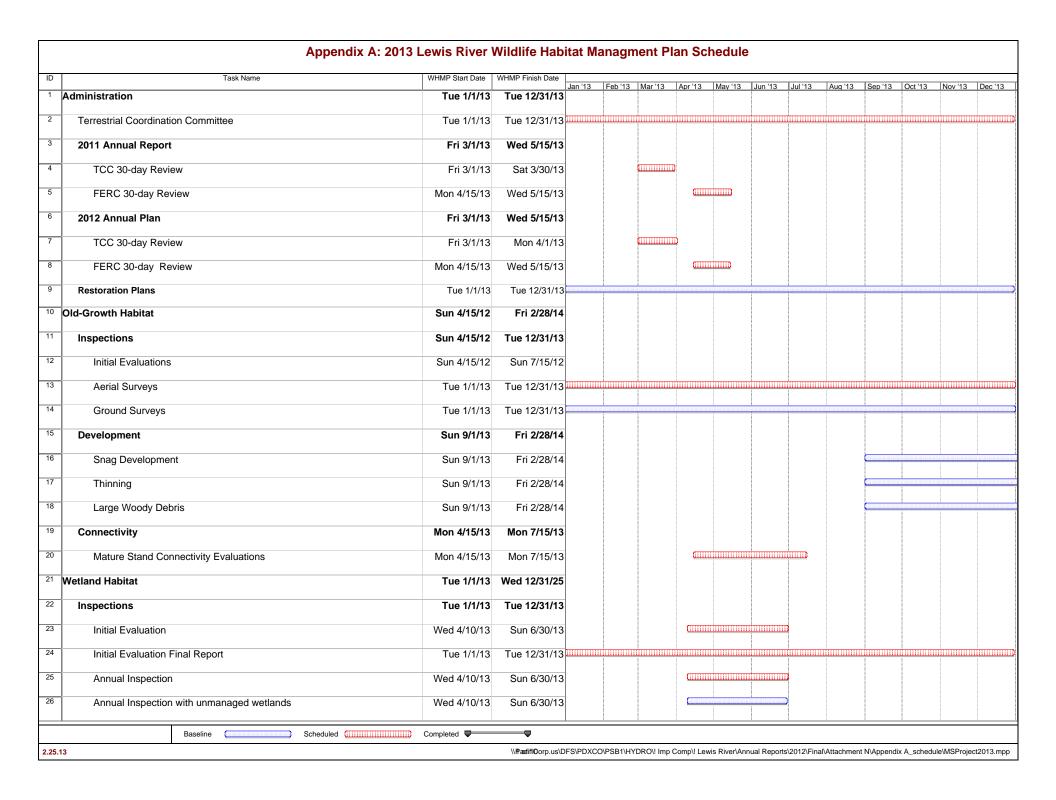
17.0 Monitoring

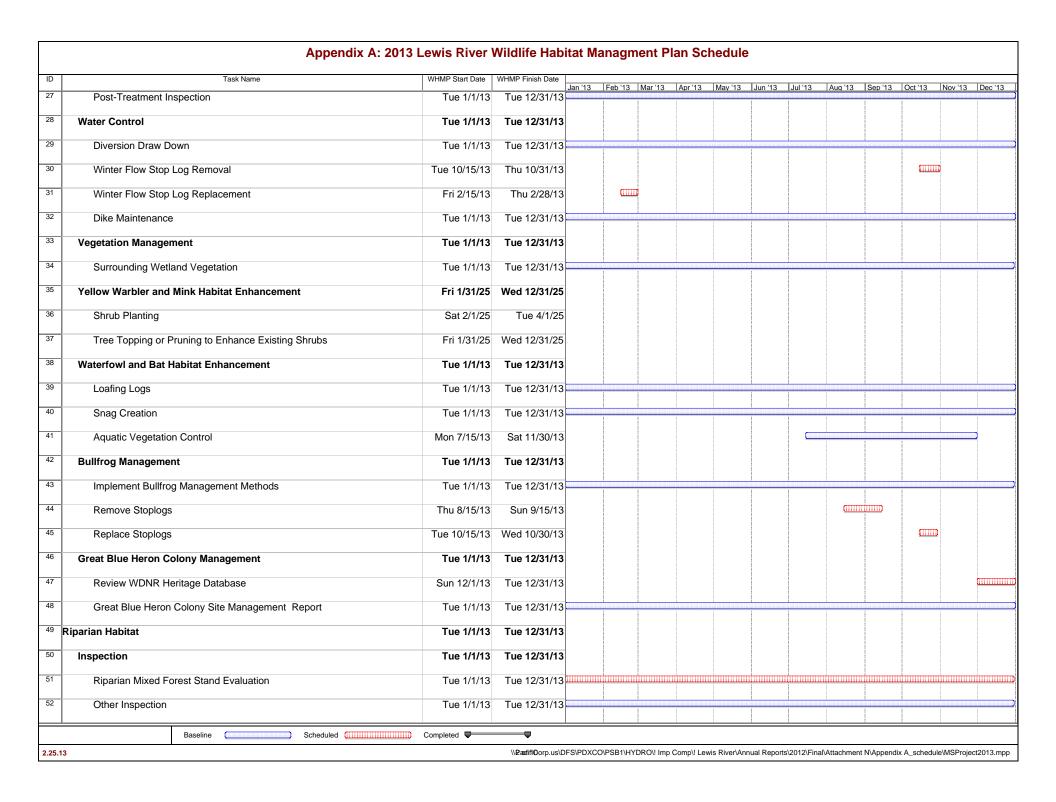
PacifiCorp applied to the Rocky Mountain Elk Foundation in 2012 for funding to establish up to eight (8) exclosures (4x4-ft) to examine forage seeding and natural shrub regeneration without herbivory. Funding of \$15,000 was approved in January 2013. PacifiCorp will conduct long term monitoring of forage projects by checking the exclosures 2 times per year over the next 10 years. Monitoring will determine preferred forage species so that adjustments can be made in future projects and to determine effects of scarification techniques on the re-establishment of native shrubs. Without exclosures, the herbivory effects are so intense and widespread it difficult to determine if a species is unsuccessful due to preferred selection or site conditions. Monitoring will simply be an ocular inspection and record of observed plants both within and outside exclosures as well as noting forage use. A budget of \$5,000.00 has also been reserved should the TCC and PacifiCorp identify specific monitoring that can coincide with blacktail deer studies and WHMP management objectives.

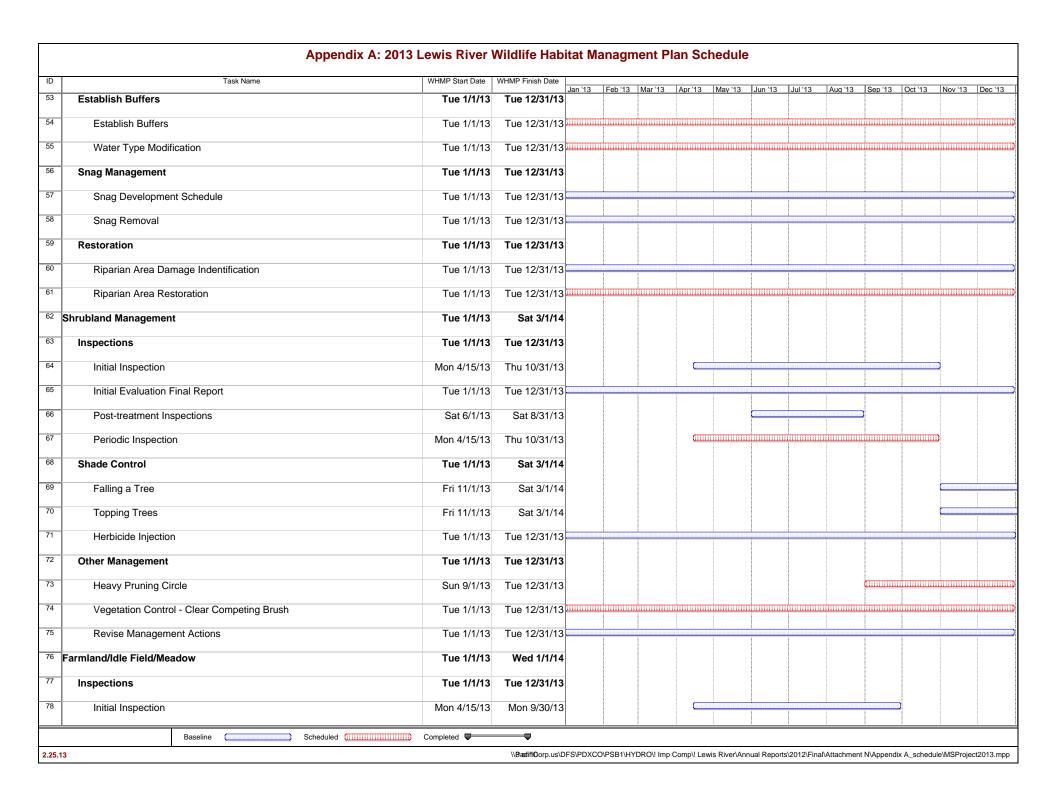
18.0 References

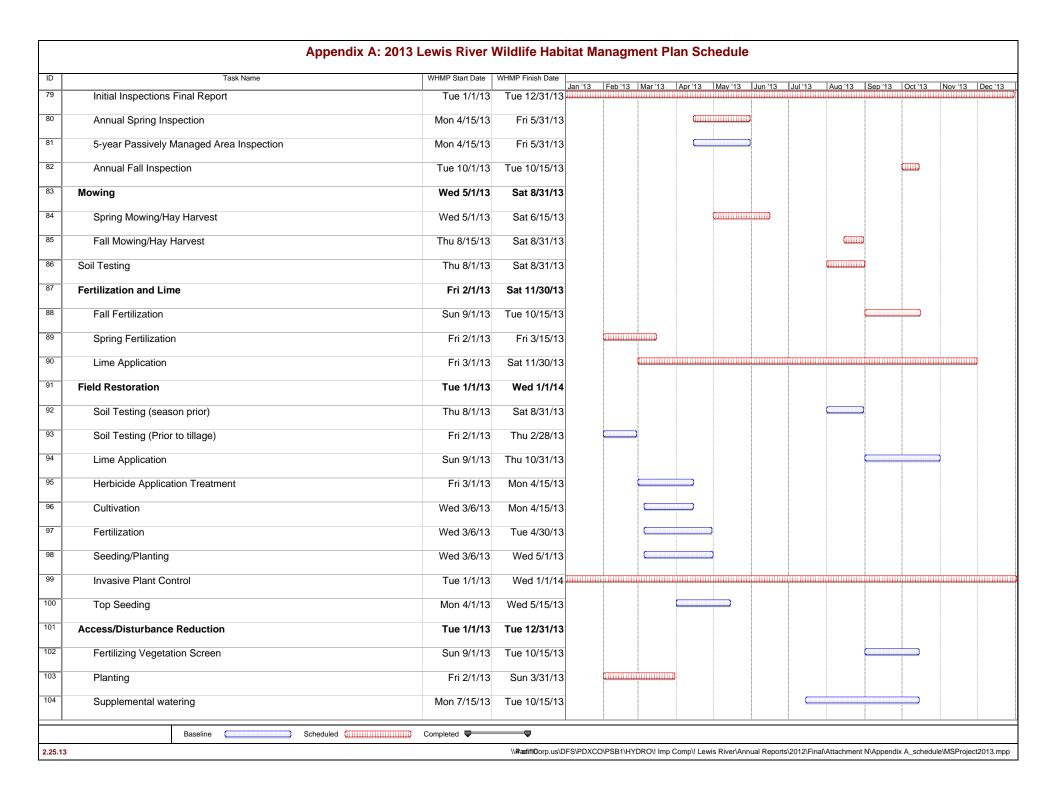
- Federal Energy Regularly Commission. 2008a. PacifiCorp Merwin Hydroelectric License FERC Project No. P-935. June 26, 2008.
- Federal Energy Regularly Commission. 2008b. PacifiCorp Yale Hydroelectric License FERC Project No. P-2071. June 26, 2008.
- Federal Energy Regularly Commission. 2008c. PacifiCorp Swift No. 1 Hydroelectric License FERC Project No. P-2111. June 26, 2008.
- PacifiCorp, Public Utility District No. 1 of Cowlitz County, National Marine Fisheries Service, National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, USDA Forest Service, Confederated Tribes and Bands of the Yakama Nation, Washington Department of Fish and Wildlife, Washington Interagency Committee for Outdoor Recreation, Cowlitz County, Cowlitz-Skamania Fire District No. 7, North Country Emergency Medical Service, City of Woodland, Woodland Chamber of Commerce, Lewis River Community Council, Lewis River Citizens At-Large, American Rivers, Fish First, Rocky Mountain Elk Foundation, Trout Unlimited, Native Fish Society and Cowlitz Indian Tribe. 2004. Settlement Agreement Concerning the Relicensing of the Lewis River Hydroelectric Projects, FERC Project Nos. 935, 2071, 2111, and 2213, Cowlitz, Clark, and Skamania Counties, Washington. November 30, 2004.
- PacifiCorp. 2008. Lewis River Wildlife Habitat Management Plan Volume I through IV. Portland, Oregon. December 2008.
- PacifiCorp. 2012. Transmission & Distribution Vegetation Management Program Specification Manual June 15, 2012.

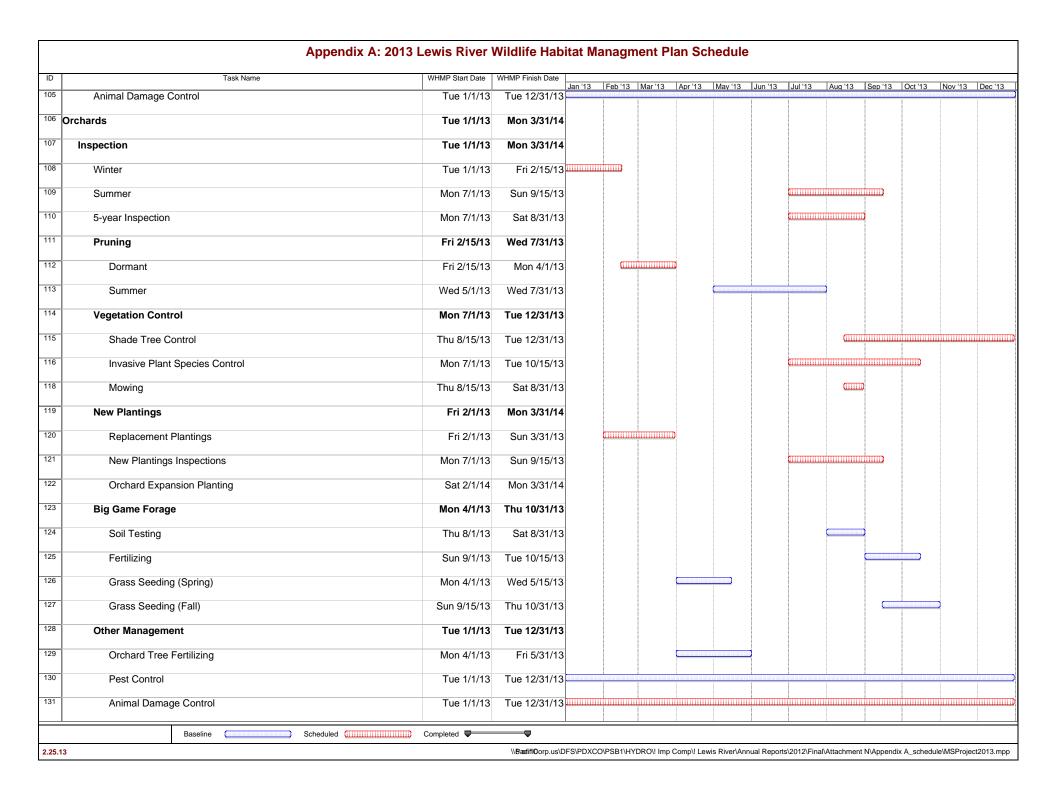
APPENDIX A 2013 WILDLIFE HABITAT MANAGEMENT PLAN BASELINE SCHEDULE

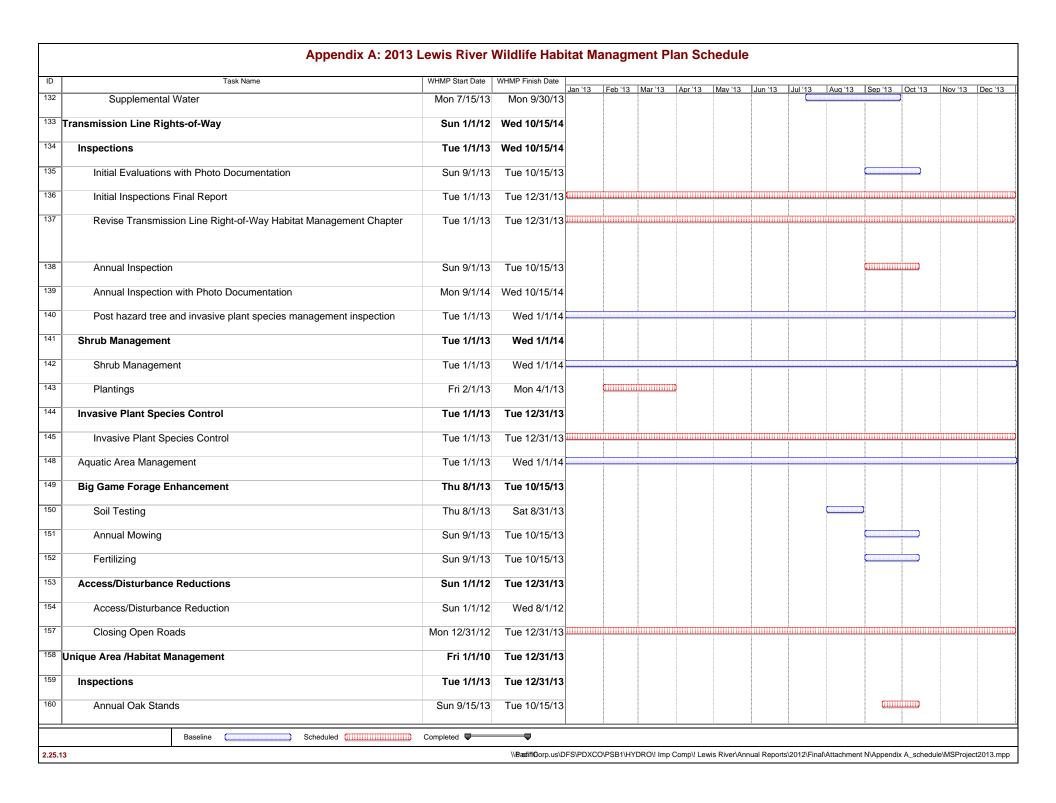


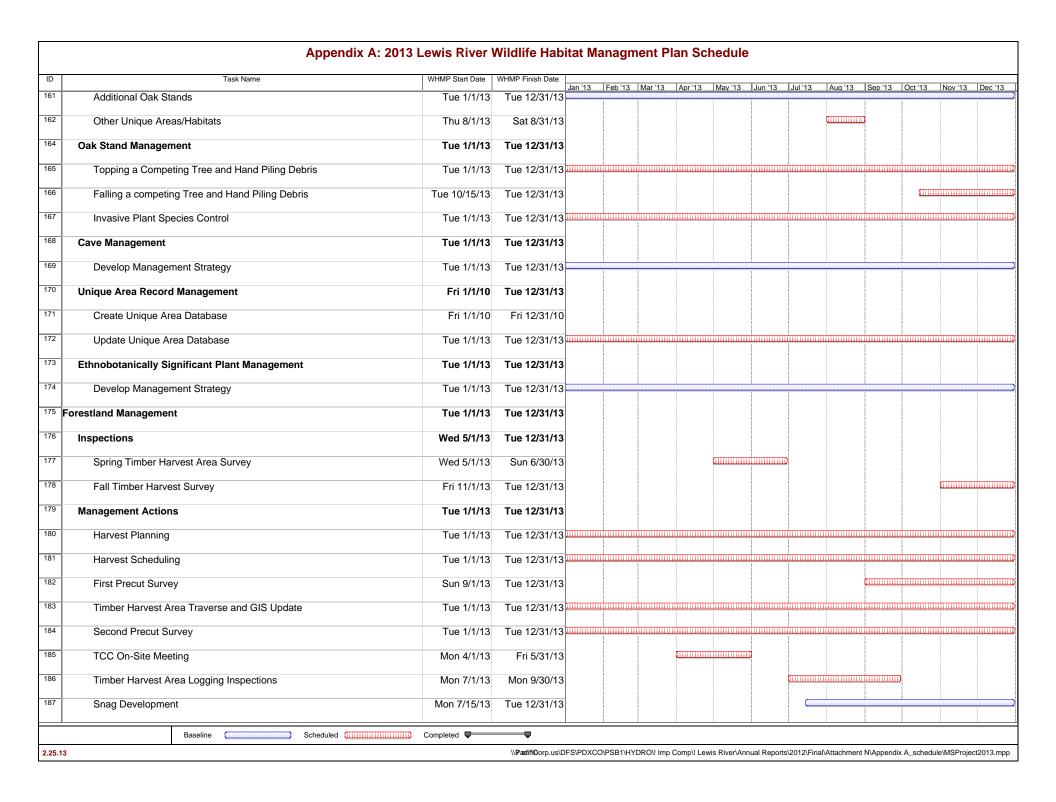


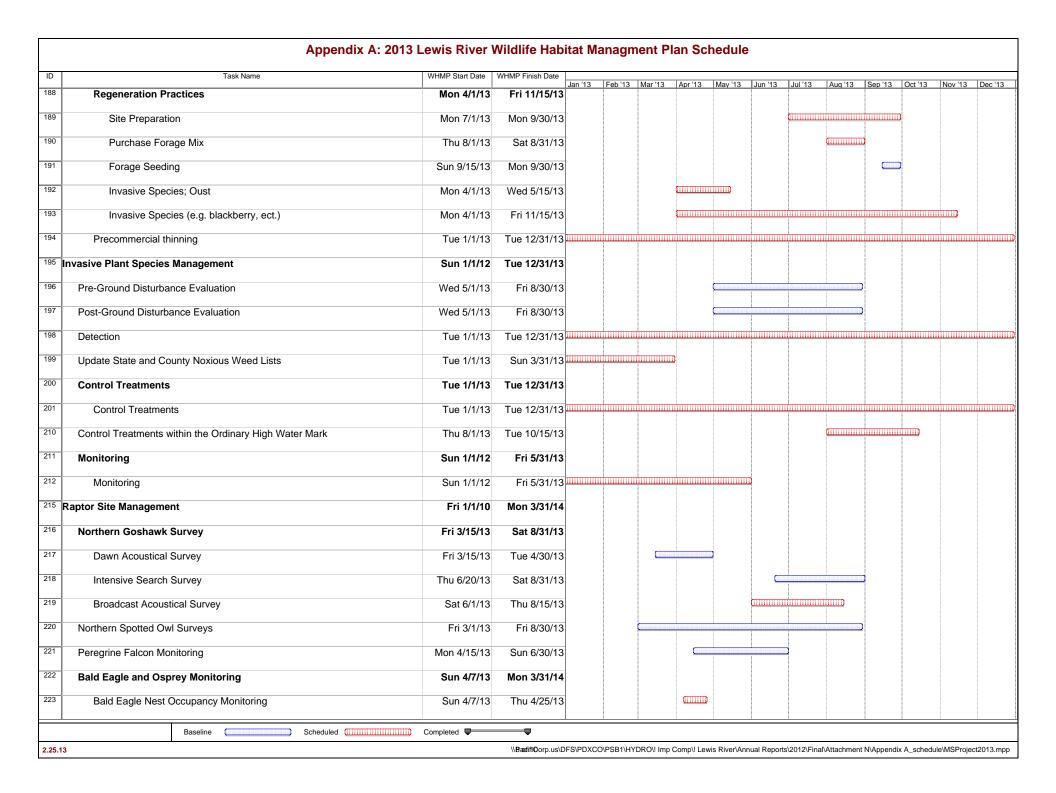


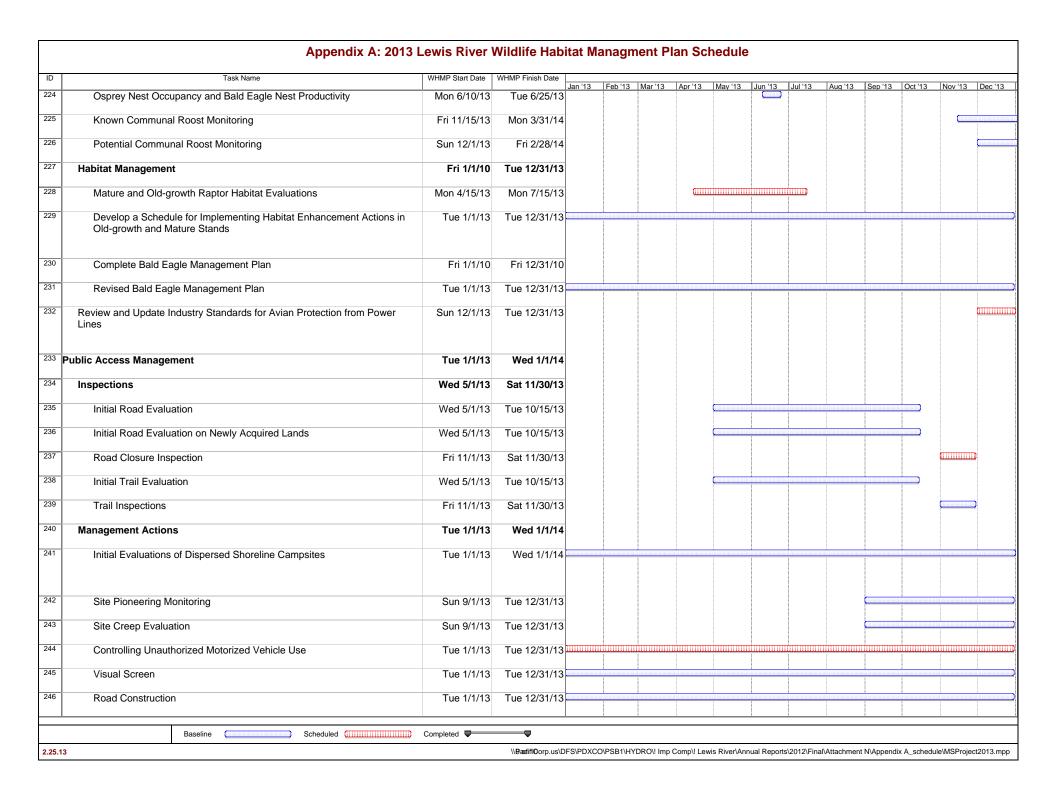












Appendix A: 2013 Lewis River Wildlife Habitat Managment Plan Schedule WHMP Start Date | WHMP Finish Date Task Name Jan '13 Feb '13 Mar '13 Apr '13 May '13 Jun '13 Jul '13 Auq '13 Sep '13 Oct '13 Nov '13 Dec '13 247 Monitoring Tue 1/1/13 Wed 12/31/25 248 Inspections Tue 1/1/13 Wed 12/31/25 249 Year 17 HEP Tue 7/1/25 Wed 12/31/25 250 Newly Acquired Lands Tue 1/1/13 Tue 12/31/13 252 **Management Actions** Tue 1/1/13 Tue 12/31/13 253 Modify the Goal and Objectives Tue 1/1/13 Tue 12/31/13 254 Revise the WHMP Tue 1/1/13 Tue 12/31/13

Baseline

Scheduled Completed

APPENDIX B
2013 BUDGET

Overall 2013 Budget

License Year 5 Calendar Year 2013 Annual WHMP Budget

Tota	Total Available Funds		2013 Funds
	Acres	11,105	13,134
Fee Simple Lands	Cost Per Acre	\$32.47	\$33.18
	SubTotal	\$360,611.00	\$435,792.62
	Acres	16	16
Interests in Lands	Cost Per Acre	\$16.24	\$16.59
	SubTotal	\$259.78	\$265.44
	Remaining Funds from 2012	\$33,093.31	\$1,724.60
Other Additional Funds	Additional HEP Funding	\$0.00	\$0.00
Other Additional Funds	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	
		Proposed	Actual	2013	
Administration	Cost	\$30,500.00	\$31,454.60	\$33,980.00	
Administration	Percent of Budget	6.78%	6.99%	7.55%	
Old-Growth	Cost	\$11,250.00	\$5,728.90	\$9,300.00	
Old-Growth	Percent of Budget	2.50%	1.27%	2.07%	
Wetlands	Cost	\$15,075.00	\$5,097.23	\$24,273.00	
wettands	Percent of Budget	3.35%	1.13%	5.39%	
Pingrian	Cost	\$13,725.00	\$2,312.19	\$18,278.00	
Riparian	Percent of Budget	3.05%	0.51%	4.06%	
Shrubland	Cost	\$2,250.00	\$7,531.07	\$3,348.00	
Siliubiand	Percent of Budget	0.50%	1.67%	0.74%	
Farmland, Meadow, Idle Areas	Cost	\$50,010.00	\$50,733.99	\$60,707.00	
Farmiand, Meadow, Idle Areas	Percent of Budget	11.11%	11.27%	13.49%	
Orchard	Cost	\$14,150.00	\$16,363.32	\$14,643.00	
Orchard	Percent of Budget	3.14%	3.64%	3.25%	
Transmission Line Dight of Way	Cost	\$24,150.00	\$17,782.79	\$22,820.00	
Transmission Line Right-of-Way	Percent of Budget	5.37%	3.95%	5.07%	
Unique Area/Habitat	Cost	\$9,900.00	\$5,144.47	\$4,836.00	
Unique Area/Habitat	Percent of Budget	2.20%	1.14%	1.07%	
Forestland	Cost	\$150,400.00	\$166,103.38	\$189,260.00	
Forestiand	Percent of Budget	33.41%	36.90%	42.05%	
Investive Plant Chasics	Cost	\$18,475.00	\$18,773.87	\$19,486.00	
Invasive Plant Species	Percent of Budget	4.10%	4.17%	4.33%	
Dantan	Cost	\$41,900.00	\$53,837.81	\$28,996.00	
Raptor	Percent of Budget	9.31%	11.96%	6.44%	
Dublic Access Management	Cost	\$11,150.00	\$11,116.09	\$15,146.00	
Public Access Management	Percent of Budget	2.48%	2.47%	3.36%	
Manitavira	Cost	\$3,000.00	\$0.00	\$5,000.00	
Monitoring	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	

Administration Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	WHMP Estimated Hours	Budgeted Hours	Cost
Annual Report	Annually	70 hours	180	\$16,740.00
Annual Plan	Optional	70 hours	180	\$16,740.00
		Labor rate per hour	\$93	3.00
		Total Labor	360	\$33,480.00
Materials				
Annual Report and Plan R	Reproduction		\$50	00.00
Other			\$0	0.00
		Total Materials	\$50	00.00

Total Labor and Materials \$33,980.00

Old-Growth Budget

License Year 5 Calendar Year 2013

Culotidal I Cul 2010				
Management Actions	Frequency	WHMP Estimated Hours	Budgeted Hours	Cost
Initial Evaluation	Within 5 years of WHMP Implementation	140 hours	0	\$0.00
Aerial Surveys	Annually	0 hours	0	\$0.00
Ground Surveys	Optional	4 hours per inspection	0	\$0.00
Snag Development	Optional	4 hours per tree	0	\$0.00
Thinning	Optional	Unknown	0	\$0.00
Large Woody Debris Placement	Optional	Unknown	0	\$0.00
Mature Stand Connectivity	Within 5 years of WHMP Implementation	225 hours	100	\$9,300.00
		Labor rate per hour	\$93	3.00
		Total Labor	100	\$9,300.00
Materials				
Other			\$0	.00
		Total Materials	\$0	.00
	•			

Total Labor and Materials \$9,300.00

Wetland Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost	
Initial Evaluation	Within 5 years of WHMP Implementation	180 hours	200	\$18,600.00	
Initial Evaluation Final Report	Within 5 years of WHMP Implementation	80 hours	0	\$0.00	
Annual Inspection	Annually	80 hours	45	\$4,185.00	
Annual Inspection with unmanaged wetlands	Every 5 years	140 hours	0	\$0.00	
Post-Treatment Inspection	Optional	4 hours per inspection	0	\$0.00	
Diversion Draw Down	Optional	3 hours per draw down	0	\$0.00	
Remove 1 to 2 stop logs for high winter flows	Annually	16 hours	8	\$744.00	
Replace 1 to 2 stop logs for high winter flows	Annually	16 hours	8	\$744.00	
Dike Maintenance	Optional	Unknown	0	\$0.00	
Surrounding wetland vegetation	Optional	4 hour per site	0	\$0.00	
Tree topping or pruning to enhance existing shrubs	Target Year 17	3 hours per tree	0	\$0.00	
Shrub Planting	Target Year 17	1 hour per planting	0	\$0.00	
Loafing log	Within 5 years of completing the initial evaluation	3 hours per tree	0	\$0.00	
Snag Creation	Within 5 years of completing the initial evaluation	3 hours per tree	0	\$0.00	
Aquatic Vegetation Control	Optional	0.5 hour per acre	0	\$0.00	
Implement Bullfrog Management Methods Identified in the Initial Evaluation	Within 5 years of completing the initial evaluation	40 hours	0	\$0.00	
Remove Stoplogs	Annually	16 hours	16	\$500.00	
Replace Stoplogs	Annually	16 hours	16	\$500.00	
Review WDNR Heritage Database	Annually	2 hours	2	\$186.00	
Great Blue Heron Colony Site Management Report	Optional	15 hours	0	\$0.00	
	Labor rate per hour Total Labor				
	261	\$24,273.00			
Materials					
Shrub Planting \$50 per planting				75.00	
Other Total Materials				\$0.00	
		\$0.00			

Total Labor and Materials \$24,273.00

Riparian Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Riparian Mixed Forest Stand Evaluations	Within 5 years of receiving the license	200 hours	100	\$9,300.00
Other Inspections	Optional	4 hours per site	0	\$0.00
Establish Buffers	Optional	1 hour per 100 ft (30 m) of stream	40	\$3,720.00
Water Type Modification form	Optional	18 hours per form	54	\$5,022.00
Snag Development Schedule	Within 1 year of completing the Riparian Mixed Forest Stand	50 hours	0	\$0.00
Snag Removal	Optional	3 hours per 1-20 in (50 cm) diameter at breast height Douglas-fir	0	\$0.00
Riparian Area Restoration	Within 5 years of identifying a damaged riparian area	To be determined	2	\$186.00
		Labor rate per hour	\$	93.00
		Total Labor	196	\$18,228.00
Materials			_	
Red alder seedlings				50.00
		Total Materials	\$	50.00

Total Labor and Materials

\$18,278.00

Shrubland Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Initial Evaluation	Within 4 years of WHMP Implementation	80 hours	0	\$0.00
Initial Evaluation Final Report	Within 1 year of completing the initial evaluation	30 hours	0	\$0.00
Periodic Inspection	Annually	50 hours	16	\$1,488.00
Success of Action	Annually	15 hours	0	\$0.00
Topping a Tree and Hand Piling Debris	Optional	4 hour per tree	0	\$0.00
Falling a tree and hand piling debris	Optional	3 hour per tree	0	\$0.00
Herbicide Injection	Optional	1.5 hours per tree	0	\$0.00
Heavy Pruning Circle	Optional	5.5 hours per planting circle	10	\$930.00
Vegetation Control - Clear Competing Brush	Optional	1.75 hour per 10 foot radius of vegetation	10	\$930.00
Revised Management Actions	Within 8 years of WHMP Implementation	100 hours	0	\$0.00
Labor rate per hour				\$93.00
Total Labor			36	\$3,348.00
Materials	-	-		
Other	-			\$0.00
	Total Materials			\$0.00

Total Labor and Materials

\$3,348.00

Farmland, Idle Fields, and Meadows Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Initial Inspection	Within 4 years of WHMP Implementation	60 hours	0	\$0.00
Initial Inspection Final Report	Within 1 year of completing the initial	60 hours	60	\$5,580.00
Annual Spring Inspections	Annually	40 hours	30	\$2,790.00
5-year Passively Managed Area Inspections	Every 5 years	80 hours	0	\$0.00
Annual Fall Inspection	Annually	40 hours	30	\$2,790.00
Spring Mowing/ Hay Harvest	Annually	2 hours per acre	40	\$3,720.00
Fall Mowing/ Hay Harvest	Annually	2 hours per acre	130	\$12,090.00
Soil Test	Annually	2 hours per site	30	\$2,790.00
Fall Fertilization	Annually	2 hours per acre	90	\$8,370.00
Spring Fertilization	Optional	2 hours per acre	0	\$0.00
Lime Application	Optional	2 hours per acre	0	\$0.00
Soil Test (Field Restoration)	Optional	2 hours per site	0	\$0.00
Lime Application (Field Restoration)	Optional	2 hours per acre	0	\$0.00
Herbicide Application Treatment	Optional	2 hours per acre	0	\$0.00
Cultivation	Optional	4 hours per acre	40	\$3,720.00
Fertilization	Optional	2 hours per acre	0	\$0.00
Seeding/planting	Optional	2 hours per acre	0	\$0.00
Invasive Plant Control	Optional	2 hours per acre	30	\$2,790.00
Top Seeding	Optional	4 hours per acre	30	\$2,790.00
Fertilizing Vegetation Screening	Optional	2 hours per screen	0	\$0.00
Planting	Optional	4 hours per planting	15	\$1,395.00
Supplemental Watering	Optional	1 hour per exclosure	4	\$372.00
Animal Damage Control	Optional	1 hour per exclosure	50	\$4,650.00
	l	_abor rate per hour		\$93.00
		Total Labor	579	\$53,847.00
Materials				
Soil Testing (Assume \$40 per test with 10 test per year) \$560.00				
Fertilizer (Assume \$100 per acre in materials)				5,500.00
Herbicide for Field Restoration (\$30 per acre treated)				\$200.00
Grass Seed				\$100.00
Exclosures for new plantings (\$100 per exclosure)			\$250.00
New plantings (\$10 per seedling	ng)			\$250.00
Other				\$0.00
Total Materials				66,860.00

Total Labor and Materials

\$60,707.00

Orchard Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Winter Inspection	Annually	16 hours	12	\$1,116.00
Summer Inspection	Annually	16 hours	0	\$0.00
Optional Inspection	Optional	8 hours	0	\$0.00
5-year Inspection	Within 5 years of WHMP Implementation	40 hours	44	\$4,092.00
Dormant Pruning	Optional	1 hour per tree	55	\$5,115.00
Summer Pruning	Optional	1 hour per tree	0	\$0.00
Shade Tree Control	Optional	2 hours per planting	2	\$186.00
Invasive Plant Species Control	Optional	2 hours per acre	2	\$186.00
Mowing	Annually	2 hours per acre	8	\$744.00
Replacement Plantings	Optional	2 hours per planting	15	\$1,395.00
New Plantings Inspection	Optional	2 hours per planting	0	\$0.00
Orchard Expansion Plantings	2014	4 hours per planting	0	\$0.00
Soil Testing	Optional	2 hours per orchard	0	\$0.00
Fertilizing	Optional	2 hours per acre	0	\$0.00
Grass Seeding	Optional	2 hours per acre	0	\$0.00
Orchard Tree Fertilizing	Optional	1 hour per tree	0	\$0.00
Pest Control	Optional	1 hour per tree	0	\$0.00
Animal Damage Control	Optional	1 hour per tree	10	\$930.00
Supplemental Watering	Optional	1 hour per tree	3	\$279.00
		Labor rate per hour	0,	\$93.00
		Total Labor	151	\$14,043.00
Materials				
Exclosures (\$100 per exclosure)			\$	300.00
New seedlings (\$30 per tree)			\$	300.00
Fertilizer (Assume \$100 per acre in materials)				\$0.00
Grass Seed (Assume \$4 per pound)				\$0.00
Other				\$0.00
		Total Materials		600.00

Total Labor and Materials

\$14,643.00

Transmission Line Right-of-Way Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Initial Evaluations with Photo Documentation	Within 5 years of WHMP Implementation	130 hours	0	\$0.00
Initial Inspections Final Report	Within 1 year of completing the initial evaluation	40 hours	60	\$5,580.00
Revise Transmission Line Rights-of-Way Habitat Management Chapter	Within 5 years of WHMP Implementation	20 hours	20	\$1,860.00
Annual Inspections	Annually	50 hours	60	\$5,580.00
Annual Inspections with Photo Documentation	Every 5 years beginning with initial inspection year	100 hours	0	\$0.00
Post hazard tree and invasive species management inspection	Within 2 months of a management actions being completed	2 hours per site	20	\$1,860.00
Shrub Management	Optional	4 hours	0	\$0.00
Plantings	Optional	4 hours per planting	0	\$0.00
Vegetation Management	Optional	2 hours per tree	0	\$0.00
Invasive Plant Species Control	Optional	4 hours per acre	40	\$3,720.00
Aquatic Area Management	Optional	Unknown	0	\$0.00
Soil Testing	Every 2 years	2 hours per site	0	\$0.00
Annual Mowing	Annual	2 hours per acre	12	\$1,116.00
Fertilization	Optional	2 hours per acre	12	\$1,116.00
Access/Disturbance Reduction	Optional	2 hours per site	16	\$1,488.00
Closing Open Roads	Within 5 years of WHMP Implementation	4 hours per site	0	\$0.00
		Labor rate per hour	\$9	3.00
		Total Labor	240	\$22,320.00
Materials				
Soil Testing (Assume \$40 per test)			\$(0.00
Fertilizer (Assume \$100 per acre in materials)			\$(0.00
Exclosures (\$200 per exclosure)			\$(0.00
Plantings (\$50 per planting)			\$50	00.00
Ecology blocks/boulders				0.00
		Total Materials	\$50	00.00

Total Labor and Materials

\$22,820.00

Unique Area/ Habitat Budget

License Year 5 Calendar Year 2013

•	alolidai 10di 201	•			
Management Actions	Frequency	Estimated Effort	Hours	Cost	
Annual Oak Stand	Annual	16 hours	20	\$1,860.00	
Additional Oak Stands	Optional	4 hours per area	0	\$0.00	
Other Unique Areas	Optional	4 hours per area	0	\$0.00	
Topping a Competing Tree and Hand Piling Debris	Optional	2 men x 1.5 hour per 1 20-in dbh Douglas- fir tree 1 hour for reporting	10	\$930.00	
Falling a Competing Tree and Hand Piling Debris	Optional	2 men x 1 hour per 1- 20 in dbh Douglas-fir tree 1 hour for reporting	10	\$930.00	
Invasive Plant Species Control	Optional	1 hour per acre	10	\$930.00	
Develop Cave Management Strategy	Optional	10 hours	0	\$0.00	
Create a Unique Area Database	Within 1 year of Implementation	8 hours	0	\$0.00	
Update Unique Area Database	Optional	2 hours	2	\$186.00	
Develop Ethnobotanically Significant Plant Management Strategy	Optional	10 hours	0	\$0.00	
Labor rate per hour				\$93.00	
		Total Labor	52	\$4,836.00	
Materials					
Other				\$0.00	
		Total Materials	•	\$0.00	
		l otal Materials			

Total Labor and Materials \$4,836.00

Forestland Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost		
Spring Timber Harvest Area Survey	Annually	50 hours	50	\$4,650.00		
Fall Timber Harvest Area Survey	Annually	140 hours	140	\$13,020.00		
Harvest Planning	Optional	80 hours	80	\$7,440.00		
Harvest Scheduling	Optional	8 hours	8	\$744.00		
First Precut Survey	Optional	1 hour per acre	50	\$4,650.00		
Timber Harvest Area Traverse and GIS Update	Optional	24 hours	24	\$2,232.00		
Second Precut Survey	Optional	2.5 hours per acre	80	\$7,440.00		
Terrestrial Coordination Committee On-Site Meeting	Optional	16 hours	16	\$1,488.00		
Timber Harvest Area Logging Inspections	Optional	80 hours	80	\$7,440.00		
Snag Development	Optional	2 hours per tree	0	\$0.00		
Site Preparation	Optional	12 hours per 10 acres plus 10 hours	142	\$15,000.00		
Forage Seeding	Optional	50 hours	50	\$4,650.00		
Invasive Plant Species - grasses	Optional	0.5 hour per acre	70	\$6,510.00		
Invasive Plant Species - competing vegetation	Optional	2.8 hours per acre	400	\$35,920.00		
Pre-commercial thinning	Optional	1.25 hour per acre	382	\$35,526.00		
		Labor rate per hour		\$93.00		
		Total Labor	1572	\$146,710.00		
Materials						
Forage seed mix				\$10,000.00		
Chemicals (\$50.00 per acre)				\$10,000.00		
Seedlings				\$1,550.00		
Seedling Protection (vexar tubes, stakes, garlic sticks etc)				\$1,000.00		
Other				\$0.00		
		Total Materials		22,550.00		
	Additional 2012 Cost					
Habitat restoration (scarify, burn slast and 2012, to grass seed, burn piles, public access control.			Ş	\$20,000.00		
P45.15 400000 00111101.						

Total Labor and Materials

\$189,260.00

Invasive Plant Species Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Pre-Ground Disturbance Evaluation	Optional	5.0 hours per site	0	\$0.00
Post-Ground Disturbance Evaluation	Optional	2.0 hours per site	0	\$0.00
Detection	Optional	0.5 hour per site	0	\$0.00
Update State and County Noxious Weed lists	Annual	2 hours per year	2	\$186.00
Control Treatments	Optional	0.5 hour per acre	40	\$3,720.00
Control treatments within the ordinary high water mark	Optional	2.0 hours per acre	40	\$3,720.00
Monitoring	Optional	0.5 hour per site	20	\$1,860.00
		Labor rate per hour		\$93.00
		Total Labor	102	\$9,486.00
Materials				
Chemicals			\$1	0,000.00
Other				•
		Total Materials	\$1	0,000.00

Total Labor and Materials \$19,4

\$19,486.00

Raptor Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Dawn Acoustical Survey for Northern Goshawk	Optional	5 hours per survey station (18 ac [7 ha])	0	\$0.00
Intensive Search Survey for Northern Goshawk	Optional	20 hours per 25 ac (10 ha)	0	\$0.00
Broadcast Acoustical Survey for Northern Goshawk	Optional	8 hours per 494 acres (200 ha)	110	\$10,230.00
Northern Spotted Owl Surveys	Optional	4 hours per 10 survey stations	0	\$0.00
Peregrine Falcon Monitoring Protocol	Optional	15 hours per potential nest site	0	\$0.00
Aerial Survey for Bald Eagle Nest Occupancy	Annually	24 hours	20	\$1,860.00
Aerial Survey for Osprey Nest Occupancy and Bald Eagle Nest Productivity	Annually	24 hours labor	20	\$1,860.00
Known Communal Roost Monitoring	Optional	5 hours per survey per observer	0	\$0.00
Potential Communal Roost Monitoring	Optional	6 hours per survey per observer	0	\$0.00
Evaluate Mature and Old-growth Stands for Raptor Habitat Quality and Potential Enhancement	Within 5 years of WHMP Implementation	2 hours per ac (0.4 ha) time is accounted for in Old-growth	0	\$0.00
Develop a Schedule for Implementing Habitat Enhancement Actions in Old-growth Stands and Mature Stands	Within 1 year of Completing Mature and Old-growth Stands Evaluations	20 hours	20	\$1,860.00
Complete Bald Eagle Management Plan	Within 3 years of WHMP Implementation	80 hours	0	\$0.00
Revise Bald Eagle Management Plan to include new nest and roost sites	As Needed Within 1 Year of Discovery	10 hours	0	\$0.00
Review and Update Industry Standards for Avian Protection from Power lines	Annually	2 hours	2	\$186.00
		Labor rate per hour		93.00
Marketale		Total Labor	172	\$15,996.00
Materials Helicopter flight \$6,500 per flight 2 flight	ahte per vear	ı	¢ 12	000 00
Helicopter flight \$6,500 per flight 2 flights per year Other		\$13,000.00 \$0.00		
Total Materials				
Total Lahor and Materials				996 00

Total Labor and Materials

\$28,996.00

Public Access Budget

License Year 5 Calendar Year 2013

Management Actions	Frequency	Estimated Effort	Hours	Cost
Initial Road Evaluation	Within 5 years of Wildlife Habitat Management Plan Implementation	2.0 hour per mile of road	0	\$0.00
Initial Road Evaluation on Newly Acquired Lands	Within 1 year of acquiring lands	2.0 hour per mile of road	16	\$1,488.00
Road Closure Inspection	Annually	60 hours	40	\$3,720.00
Initial Trail Evaluation	Within 5 years of Wildlife Habitat Management Plan Implementation	16 hours	0	\$0.00
Trail Inspection	Annually	12 hours	12	\$1,116.00
Initial evaluations of Dispersed Shoreline Campsites	Within 1 year of receiving a new license	50 hours	0	\$0.00
Site Pioneering Monitoring	Annually	10 hours	16	\$1,488.00
Site Creep Evaluation	Every 4 years	40 hours	0	\$0.00
Controlling unauthorized motorized vehicle use	Optional	5 hours per site	30	\$2,790.00
Visual Screen	Optional	4 hours per site	0	\$0.00
Road Construction	Optional	8 hours per site	8	\$744.00
		Labor rate per hour		\$93.00
		Total Labor	122	\$11,346.00
Materials				
Exclosures (\$200 per exclosure)				\$0.00
Plantings (\$50 per planting)				\$0.00
Signs (\$300 per 100 vinyl purchase every 3 years)				\$0.00
Heavy Equipment Rate (\$200 per hour)				1,900.00
Road Barriers (blocks, rocks, etc)			\$1,900.00	
Other			\$0.00	
		Total Materials	\$:	3,800.00

Total Labor and Materials

\$15,146.00

Monitoring Budget

License Year 5 Calendar Year 2013

Management Action	Frequency	Estimated Effort	Hours	Cost
Year 17 Habitat Evaluation Procedure	Target Year 17	estimated 4 hours per plot plus a total 100 hours for analysis	0	\$0.00
Newly Acquired Lands	Estimated to be completed by year 6	estimated 4 hours per plot plus a total 25 hours for analysis	40	\$5,000.00
Modify the Goal and Objectives	Optional	10 hours	0	\$0.00
Revise the Wildlife Habitat Management Plan	Optional	10 hours	0	\$0.00
		Labor rate per hour	\$	93.00
		Total Labor	40	\$5,000.00
Materials				
Other: RMEF PAC funding for purchasing vegetation exclosures and installing			9	0.00
		Total Materials	9	0.00

Total Labor and Materials

\$5,000.00

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	Complete
Woodland Police Department (council chambers).	3/21/13

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

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

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

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	Pending
Proposal.	

Parking lot items from February 12, 2013 Meeting	Status
Cowlitz PUD: Schedule a field tour of the Devil's Backbone management	Pending for
unit	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
	Acres	11,105	13,134
Fee Simple Lands	Cost Per Acre	\$32.47	\$33.18
	SubTotal	\$360,611.00	\$435,792.62
	Acres	16	16
Interests in Lands	Cost Per Acre	\$16.24	\$16.59
	SubTotal	\$259.78	\$265.44
	Remaining Funds from 2012	\$33,093.31	\$1,724.60
Other Additional Funds	Additional HEP Funding	\$0.00	\$0.00
Other Additional Funds	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
		Proposed	Actual	tual 2013
Administration	Cost	\$30,500.00	\$31,454.60	\$33,980.00
Administration	Percent of Budget	6.78%	6.99%	7.55%
Old-Growth	Cost	\$11,250.00	\$5,728.90	\$9,300.00
old olonal	Percent of Budget	2.50%	1.27%	2.07%
Wetlands	Cost	\$15,075.00	\$5,097.23	\$24,273.00
2000000000	Percent of Budget	3.35%	1.13%	5.39%
Riparian	Cost Percent of Budget	\$13,725.00 3.05%	\$2,312.19 0.51%	\$18,278.00 4.06%
	9			- 137
Shrubland	Cost Percent of Budget	\$2,250.00 0.50%	\$7,531.07 1.67%	\$3,348.00
	9			
Farmland, Meadow, Idle Areas	Cost Percent of Budget	\$50,010.00 11.11%	\$50,733.99 11,27%	\$60,707.00 13.49%
	9	\$14,150.00	\$16,363.32	
Orchard	Cost Percent of Budget	3.14%	3.64%	\$14,643.00 3,25%
	Cost	\$24.150.00	\$17.782.79	\$22.820.00
Transmission Line Right-of-Way	Percent of Budget	5.37%	3.95%	5.07%
Mary Confirm Location in the Sand State Confirm	Cost	\$9,900.00	\$5,144,47	\$4.836.00
Unique Area/Habitat	Percent of Budget	2.20%	1.14%	1.07%
A PERSONAL PROPERTY AND A STATE OF THE STATE	Cost	\$150,400.00	\$166,103,38	\$189,260.00
Forestland	Percent of Budget	33.41%	36.90%	42.05%
- 100 - 100	Cost	\$18,475.00	\$18,773.87	\$19,486.00
Invasive Plant Species	Percent of Budget	4.10%	4.17%	4.33%
5	Cost	\$41,900.00	\$53,837.81	\$28,996.00
Raptor	Percent of Budget	9.31%	11.96%	6.44%
Public Assess Management	Cost	\$11,150.00	\$11,116.09	\$15,146.00
Public Access Management	Percent of Budget	2.48%	2.47%	3.36%
Monitoring	Cost	\$3,000.00	\$0.00	\$5,000.00
Monitoring	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

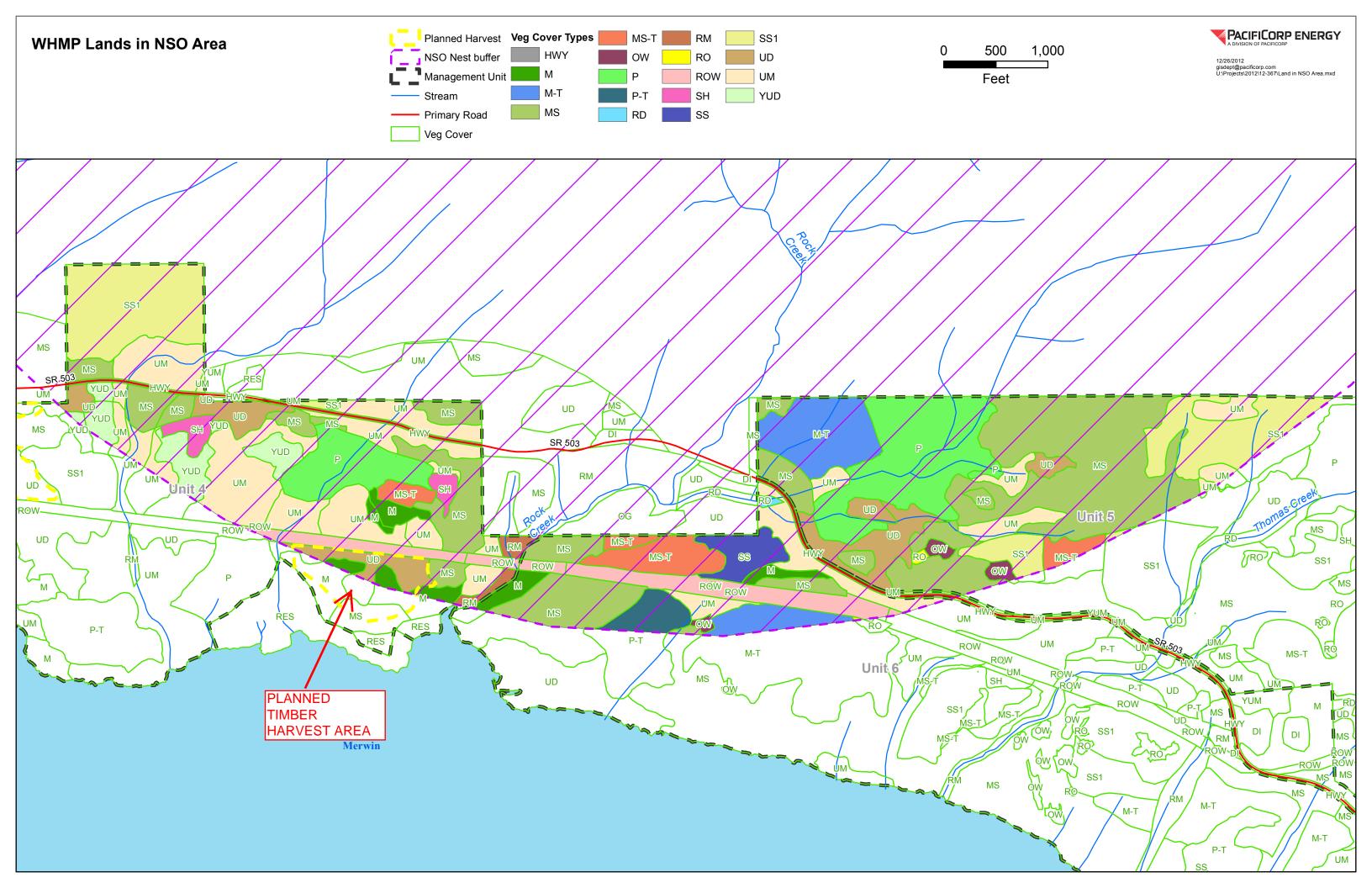
Next Scheduled Meetings

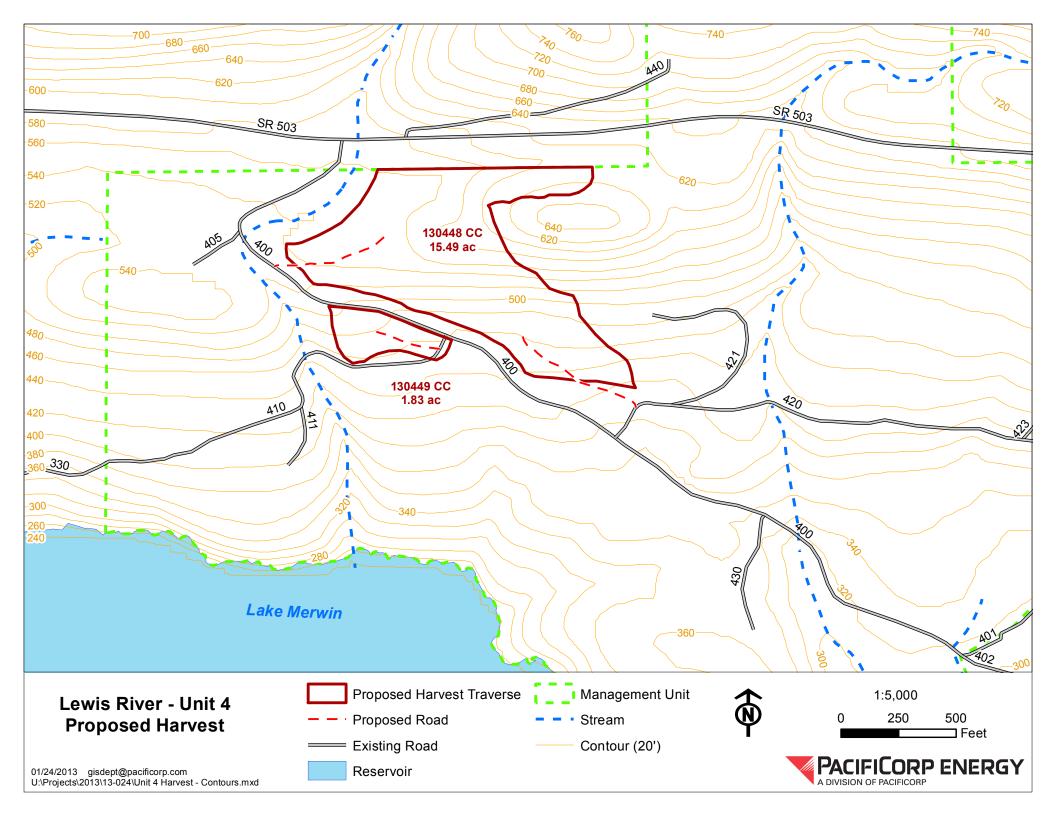
April 9, 2013	May 8, 2013
TCC Meeting	TCC Meeting
Merwin Hydro Control Center	Merwin Hydro Control Center
Ariel, WA	Ariel, WA
9:00am – 3:00pm	9:00am – 3:00pm

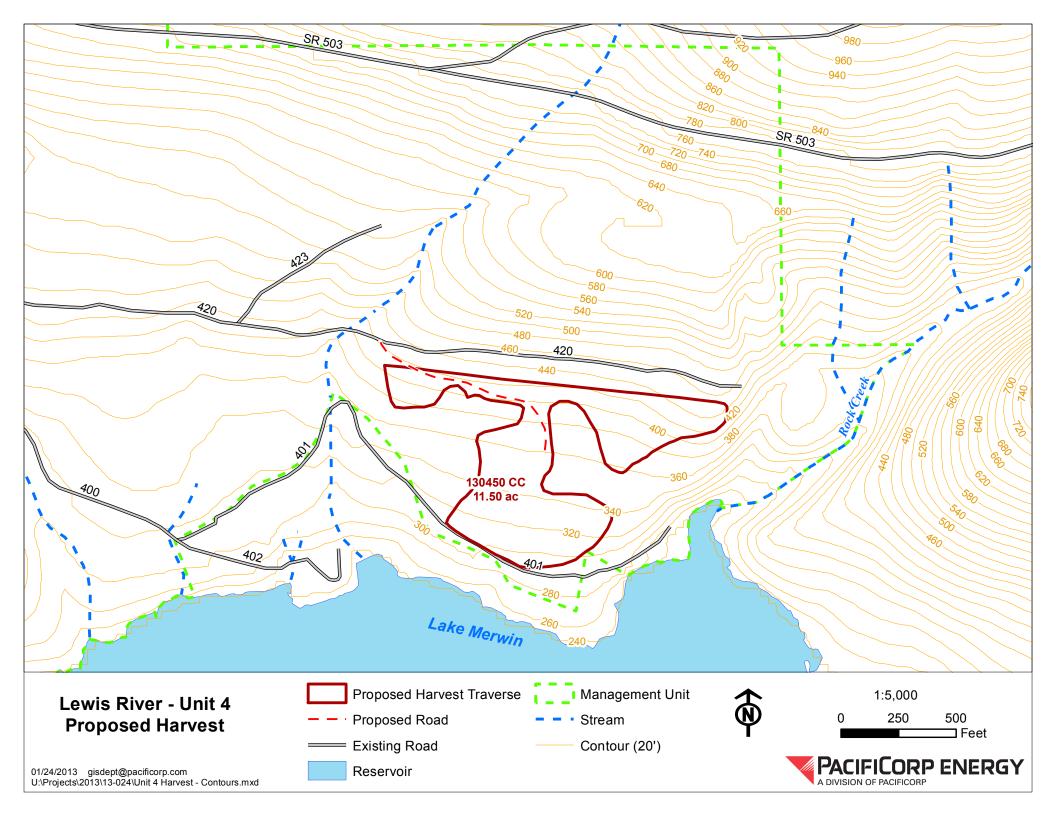
Attachments:

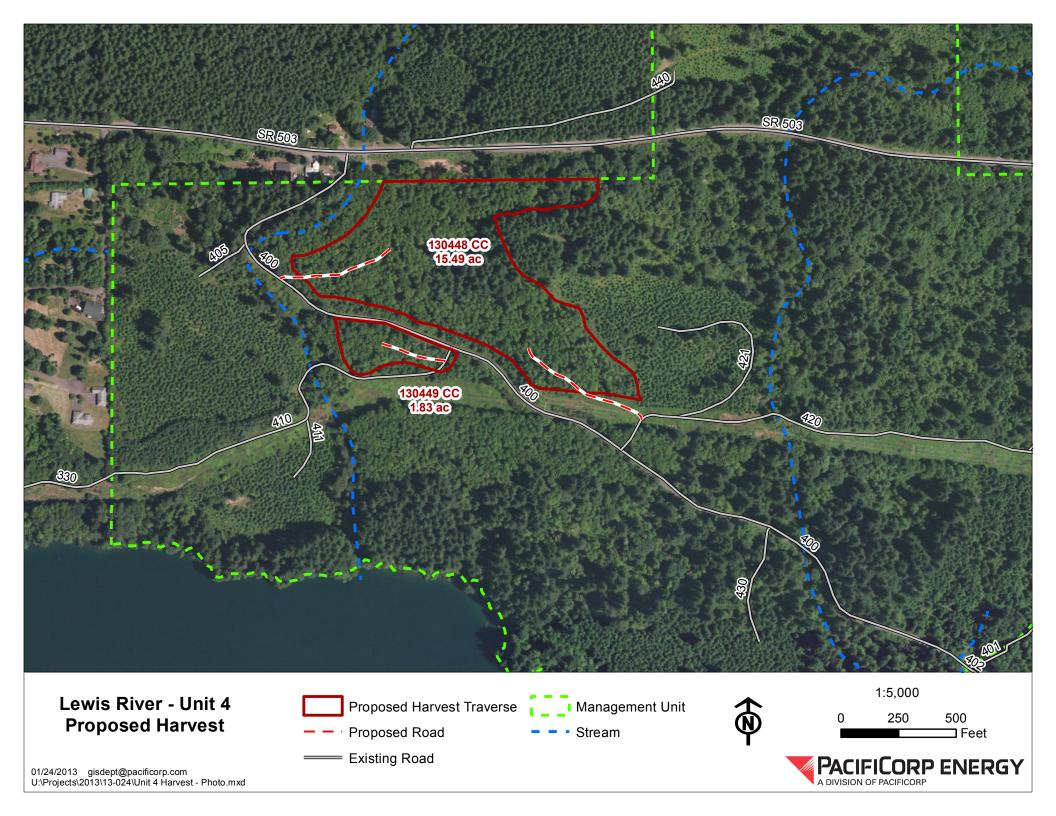
- ➤ March 21, 2013 Meeting Agenda
- February 12, 2013 Meeting Notes
- ➤ Attachment A Lewis River Wildlife Habitat Management Plan Old-Growth Management (Objective D), dated December 21, 2012

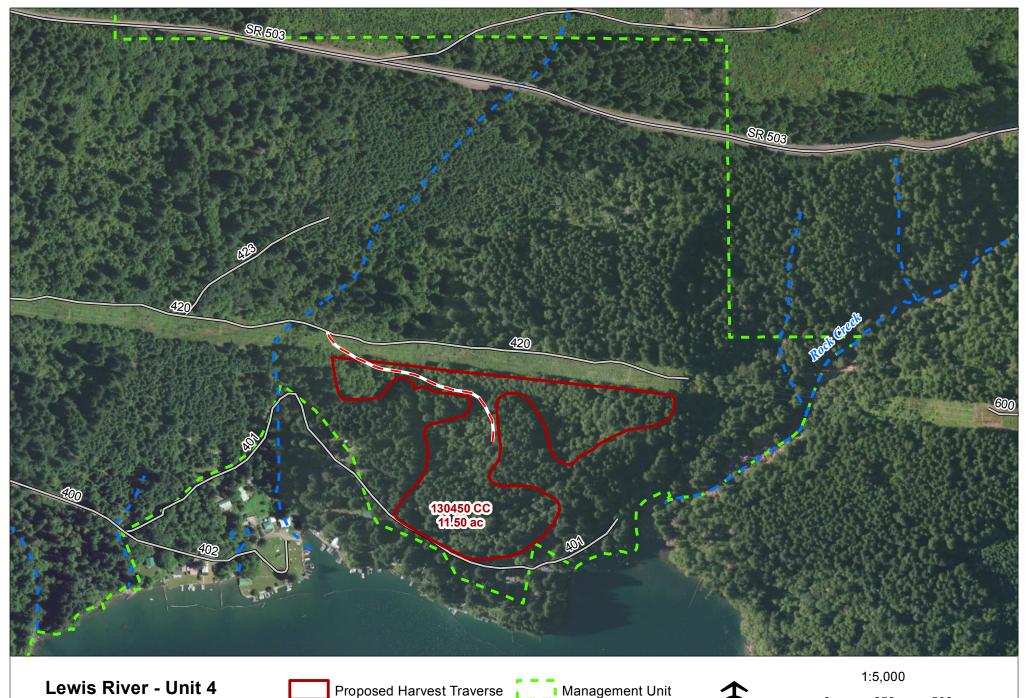
2013 Proposed Timber Harvest	Appendix D Area Maps and Fii	rst Pre-Cut Survey Forms











Lewis River - Unit 4
Proposed Harvest

Proposed Harvest Traverse
Proposed Road

Existing Road

Management Unit
Stream



1:5,000 0 250 500 Feet



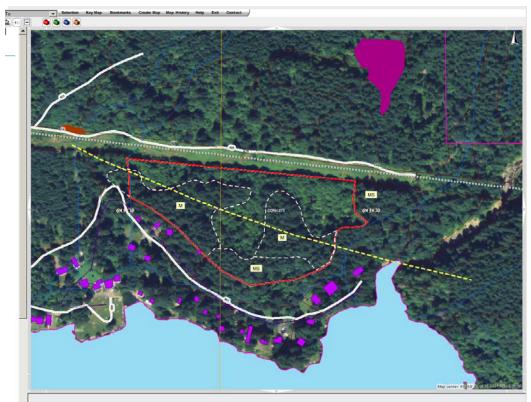
01/24/2013 gisdept@pacificorp.com U:\Projects\2013\13-024\Unit 4 Harvest - Photo.mxd

Wildlife/Forestry Evaluation Form

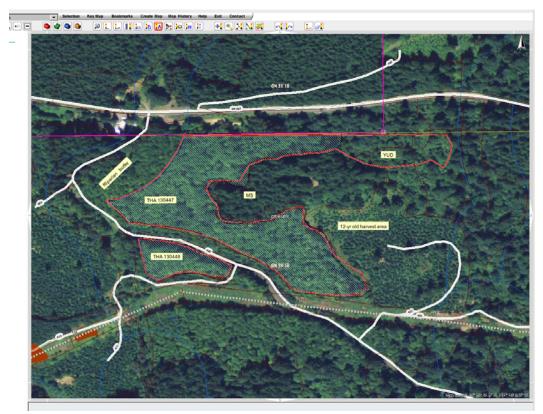
Management Unit No.:		4 Date:		Sept/Oct, 2012	
Observers:		K. Naylor			
Stand Descriptions: THA 130448 (12.0 ac): Proposed THA is north Comprised entirely of hardwoods (alder). Alder (declining). Understory predominantly sword for bracken fern. Scattered shrubs include hazel, vir oceanspray, woods rose and elderberry. Good by especially noted heavy use of young sprouting by (outside harvest area) indicative of rock ridge be area. Some scotch broom noted on knob should logging a small amount of D-fir within Mid-Sucwhile marking some trees for green-tree retention of rock ridge.			r is over-maturing ern, Oregon grape with ne maple with scattered rowse use of all shrubs and oig-leaf maple. Bald knob etween Hwy 503 and harvest be treated. Recommend ecessional (MS) conifer type		
	THA 130449 (1.8 ac): Proposed THA below Woodland Park Road (less than 2 acres) between road and transmission ROW. In 1993 a small strip of alder was removed along the transmission ROW and planted with conifer. This now forms a good visual buffer between road and ROW once the remaining alder is removed. Excellent shrub presence in buffer as well. Harvest area will remove only hardwoods to create permanent conifer screen between road and ROW. Alder is over-mature and a hazard along Woodland Park Road.				
	THA 130449: Located between ROW and Woodland Park cabin leases. Very tall timber – both conifer and alder. Mature conifer will be untouched except where hazard trees will be removed that are adjacent to homes. Majority of harvest will be alder and pole conifer above homes. Alder has all but vanished from one small pocket because of maturity and decay. Excellent tall shrub development (hazel, vine maple) in mature conifer stand – do not disturb. Little to no understory in dense pole conifer. Pole stand proposed as cc due to safety concerns, dense stocking causing poor crowns (couldn't be thinned w/o wind-throw problems).				
Invasive Plant Spe Unique Habitat Fe	Holly (so	disturb) and mature	thin harvest site e conifer. Big-g	es. Retain bald knob (do not game forage is declining in ars old and are being pre-	
Proposed	Clear		ed and pruned	to extend forage another 5-	

Management : Wildlife Observations:		historically received significant deer and elk use – purpose is to augment declining forage in older THA's while removing declining alder. Permanent forage unnecessary due to transmission ROW. Establishing shrubs is desirable if possible – browse use in area is significant. Maintain larger diameter conifer. Replant with Douglasfir in areas devoid of shrub cover. Deer, elk, ruby-crowned kinglet; winter wren; stellar jay; varied thrush. See raptor survey notes. Elk use heavy in managed transmission corridor.		
edge of a previously category 3 (single NSO) affect core area or remove mature conifer. To requires us to insure that PacifiCorp's owners >50% M, MS, OG, and/or UM. We are curre habitat (M, MS, MS-t, M-t, UM). The vegetar		e (see map) encompasses a portion of THA 130449. This is outer previously category 3 (single NSO) site. Timber harvest does not a area or remove mature conifer. To comply with the BiOp s to insure that PacifiCorp's ownership within the NSO circle is MS, OG, and/or UM. We are currently at 56.67% suitable NSO I, MS, MS-t, M-t, UM). The vegetation cover types need to be closely to ensure what is truly Mature. The harvest isn't intended any mature DF.		

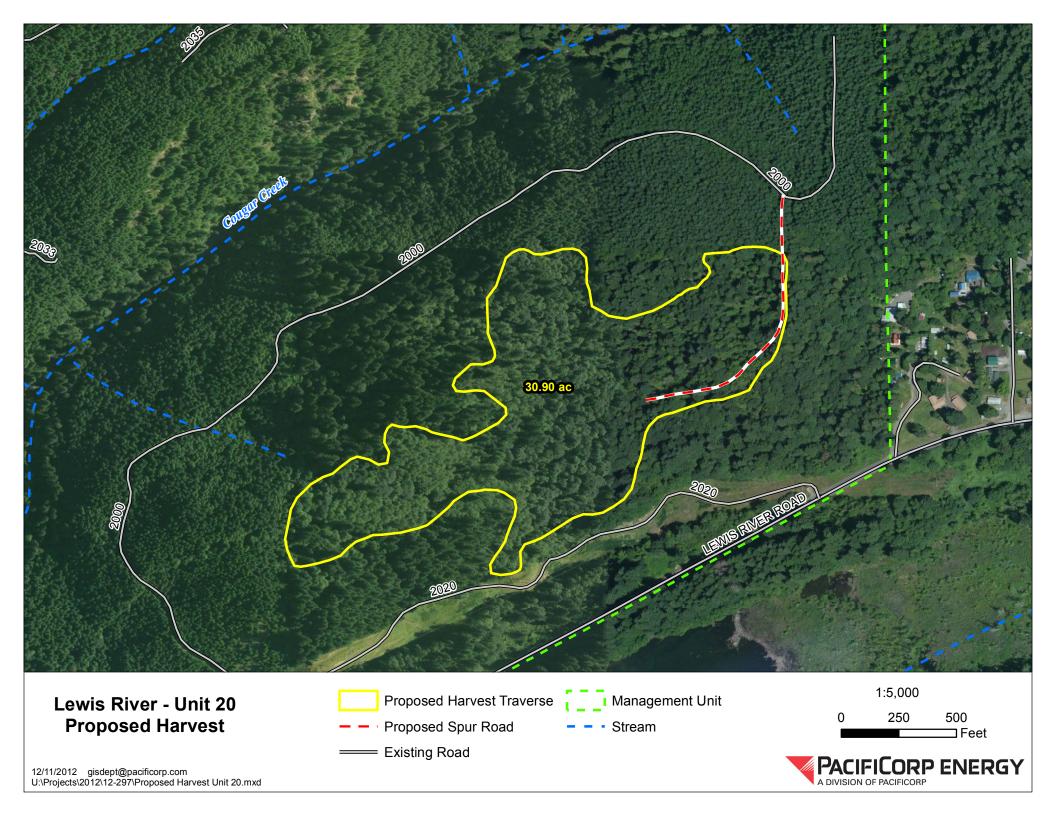
Attach a copy of an aerial photo, map, or schematic of the proposed THA; include roads, disturbances, and/or unique features.

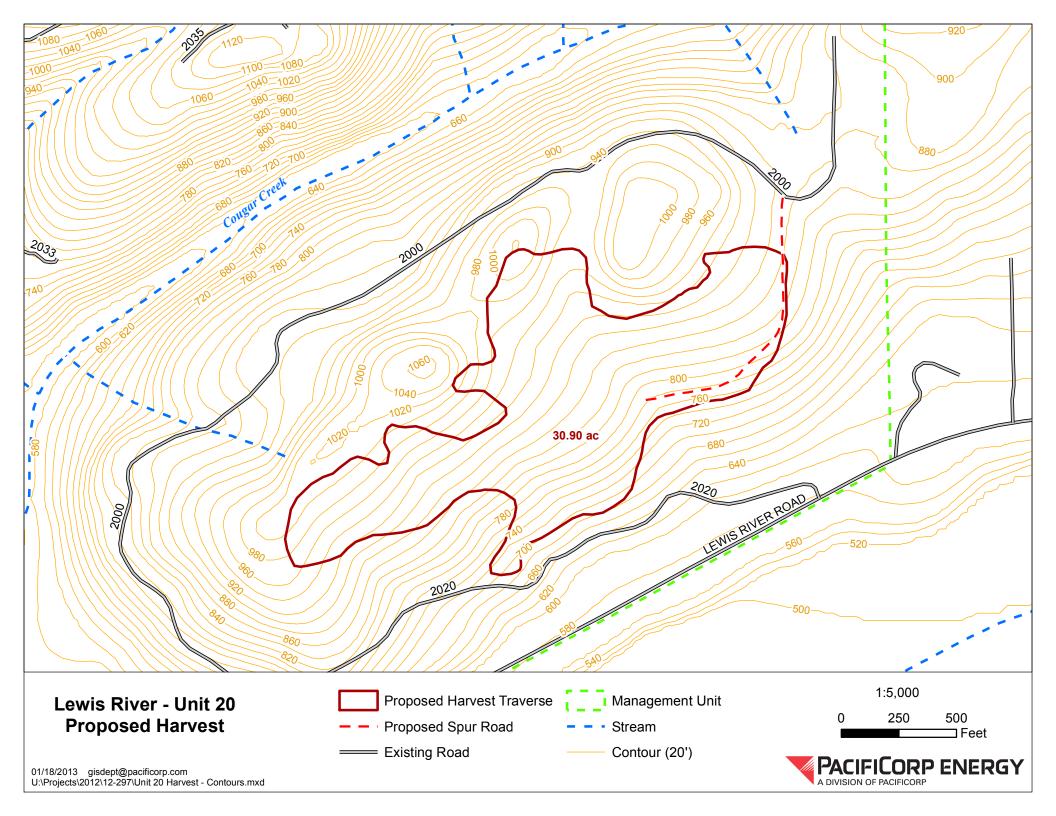


THA 130449. Yellow dashed line indicates outer 1.8mile radius of NSO circle. Purple polygon in upper right is OG.



THA 130448 and 130449

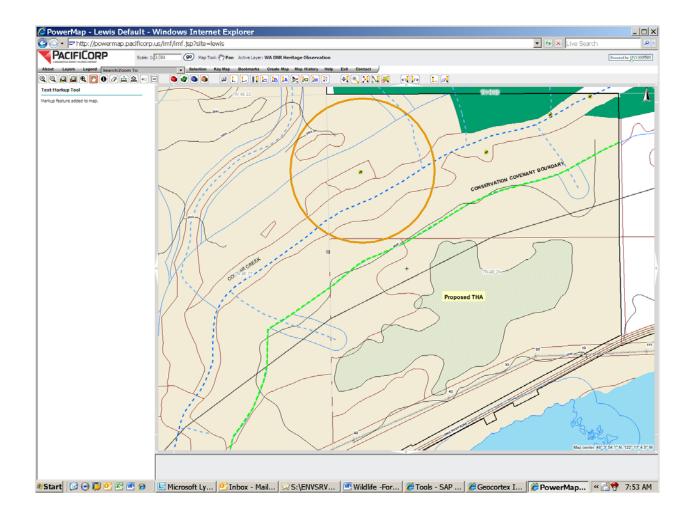




Wildlife/Forestry Evaluation Form

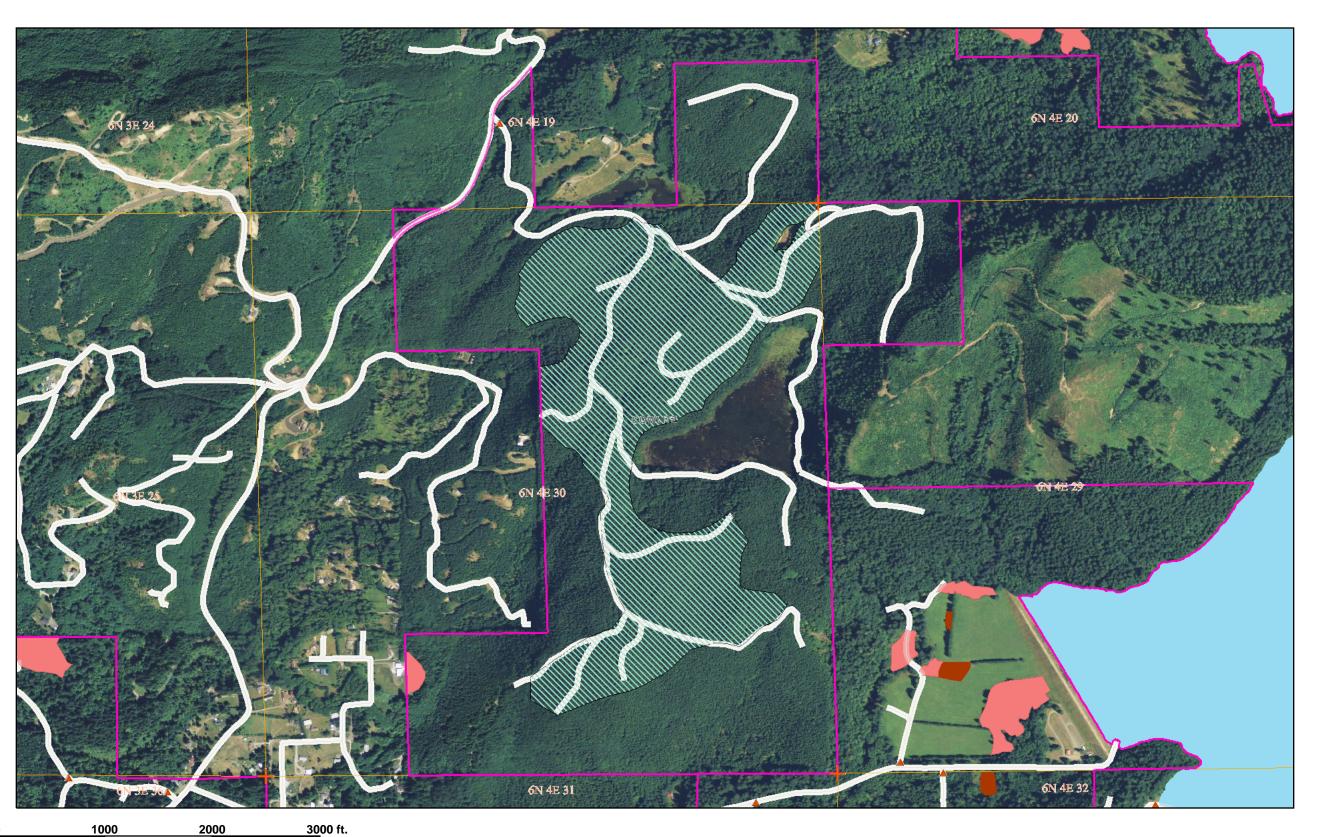
Manageme	ent Unit No.:	20	Date:	Oct, 2012	
Observers:	rvers: K. Naylor				
Stand Descriptions:	Conser and red Lots of unders blackb	THA 132009 : Located south of Cougar Creek outside the 500-foot Conservation Covenant. Upland deciduous forest with bigleaf maple and red alder. Scattered conifer (will provide good retention trees). Lots of un-stocked forest, vine maple, hazel. Entire area lacks much understory forage but due to un-stocked areas there is some trailing blackberry. Good browse use on some shrubs. Overall impression is that it was a disturbed area of some sort at one time.			
Invasive Plan	nt Species:	y (scattered); Scotch br			
Unique Habi	tat Features	Unique within ma (former WeyCo Evidence of big-g Big-game forage	properties) that came trails and low is definitely no	cause of dense pole stands exist to north and west. w to moderate sign of elk. eeded – flat bench has orage within stand.	
Proposed Management	t: do	llear-cut hardwoods. Re eclining forage adjacen ovenant) while removin pportunity. Provide gate iameter conifer. Replan	t to Cougar Creek ag declining alder. e on ROW to south	Permanent forage n. Maintain larger	
Wildlife Obs	ervations: -		vey notes. Elk pe	er wren; stellar jay; varied ellet groups. Osprey nest up	
NSO Habitat:		uence proposed THA	-	HA management unit but 't intended to remove	

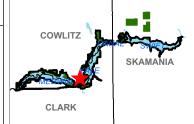
Attach a copy of an aerial photo, map, or schematic of the proposed THA; include roads, disturbances, and/or unique features.





PACIFICORP 2013 - Unit 10 Proposed Commercial Thin





Legend

Generation Facilities

- Wind
- Surveyed Corner
- Surveyed Section Corner

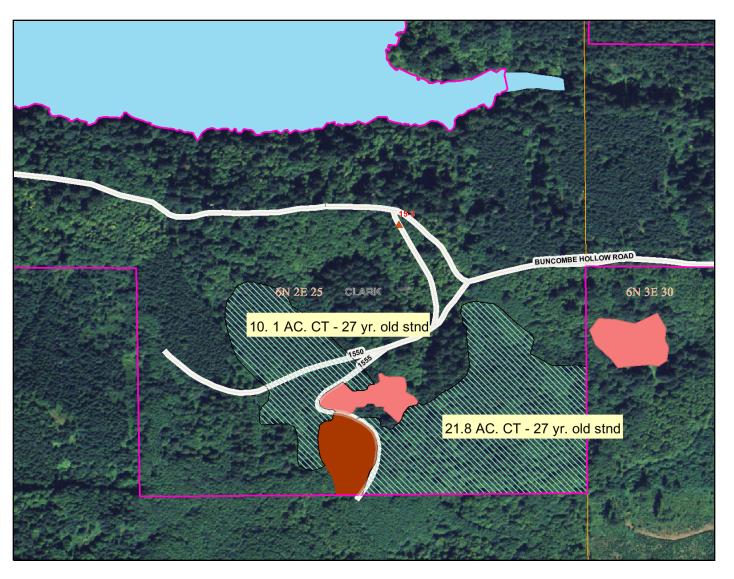
 Surveyed Property Corner
- PacifiCorp Transmission Pole
- PacifiCorp Transmission Line
- County
- PacifiCorp Ownership
- Section
- Planned Harvest Area
- Orchard
- Meadow

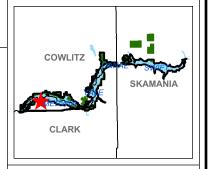
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Scale: 1:10,703



PACIFICORP 2013 Proposed Commercial Thin





Legend

Generation Facilities

- Hydro
 - Geothermal
- Thermal
- Wind
- Biomass

- Surveyed Corner
- Surveyed Section Corner Surveyed Property Corner
- PacifiCorp Transmission Pole
- PacifiCorp Transmission Line
- County
- PacifiCorp Ownership
- Section
- Planned Harvest Area
- Orchard
- Meadow

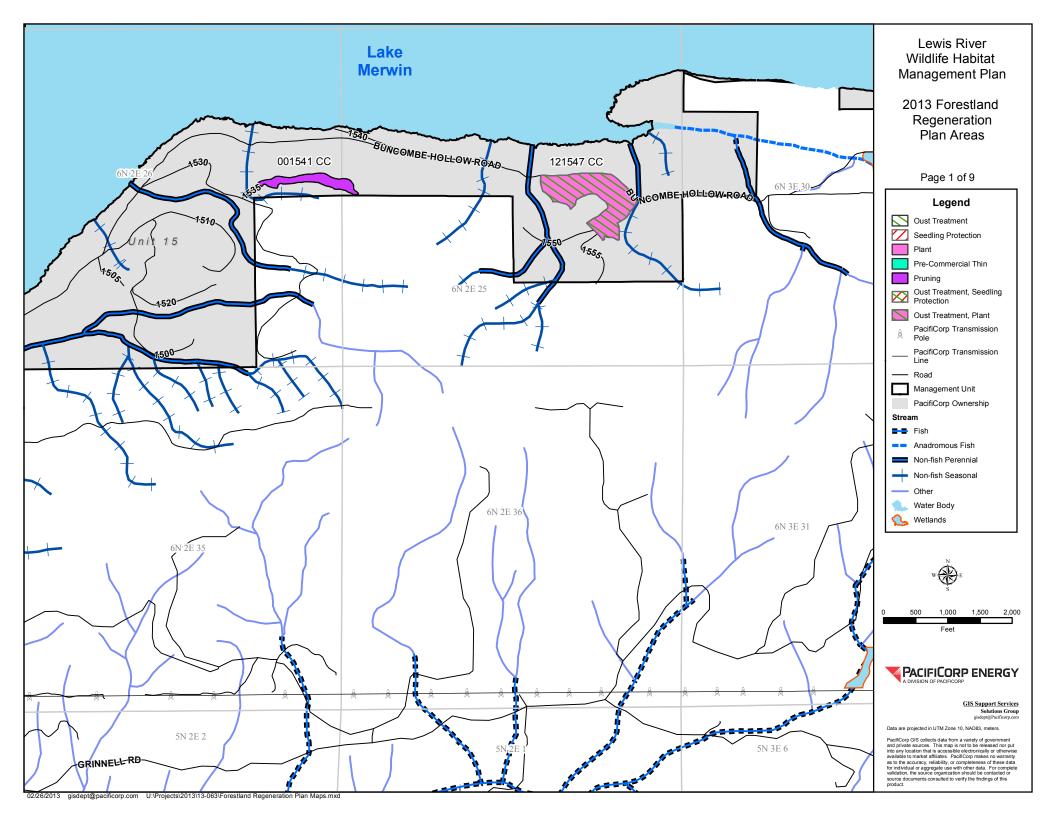
1950 ft. 650 1300

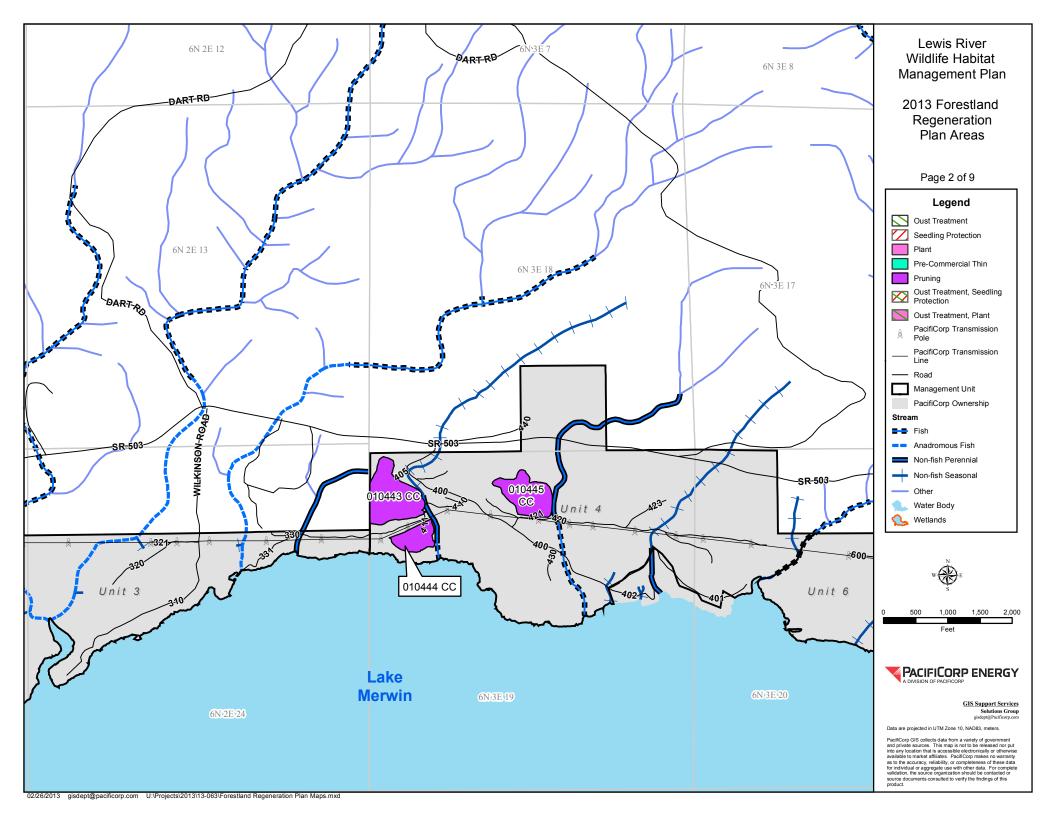
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

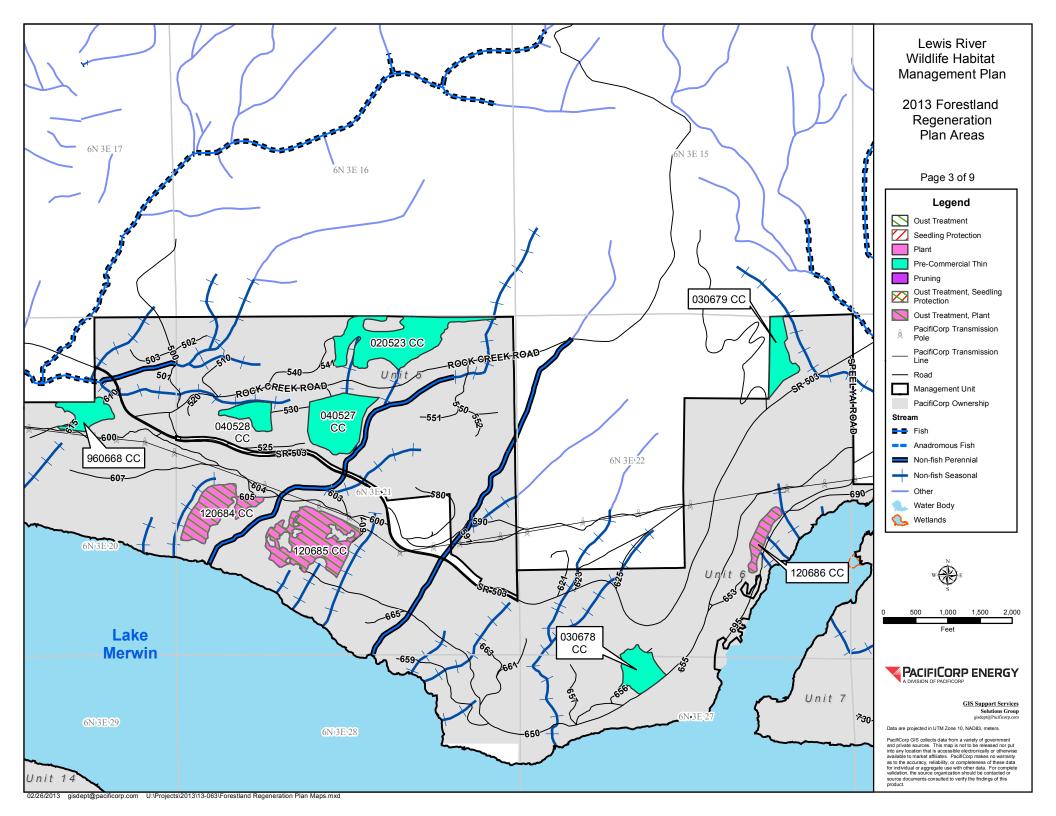


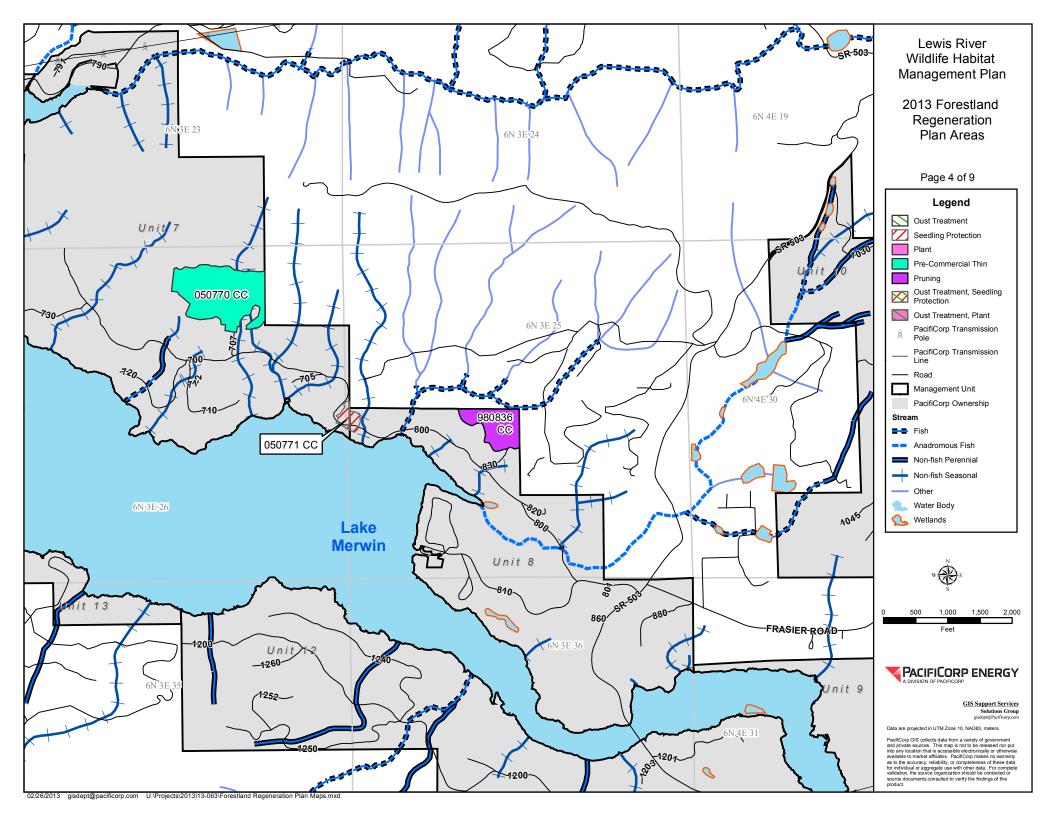
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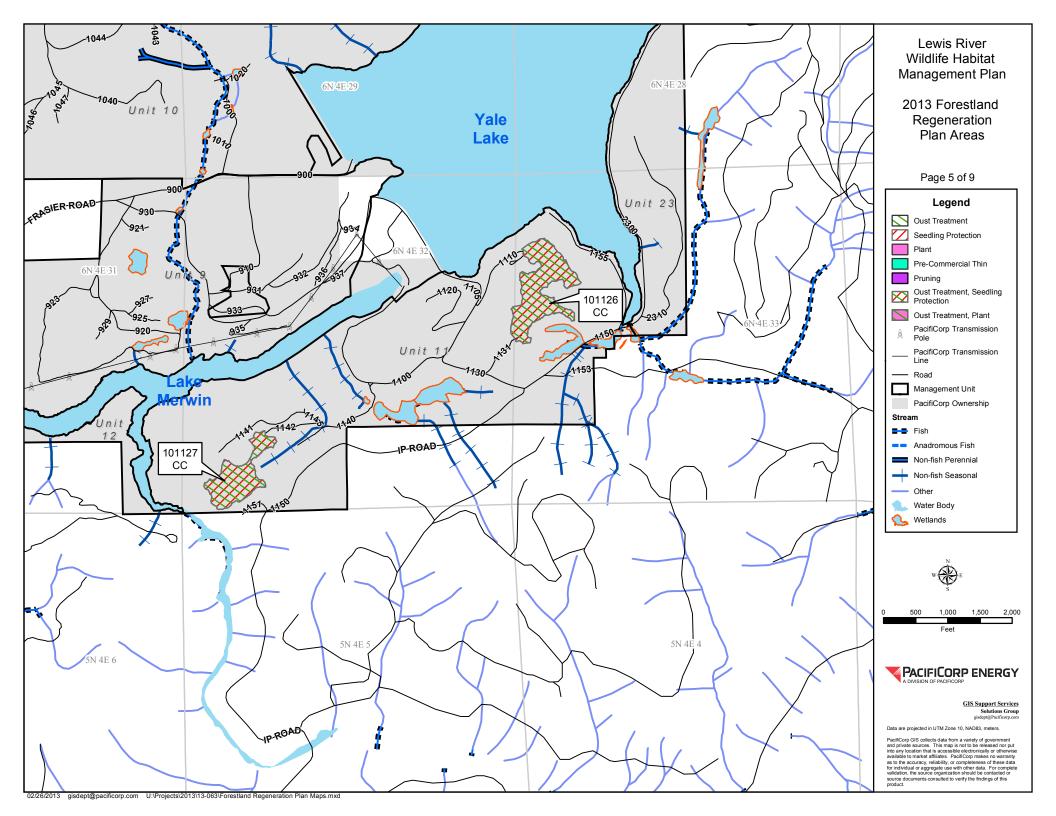
APPENDIX E 2013 REGENERATION PRACTICES MAPS

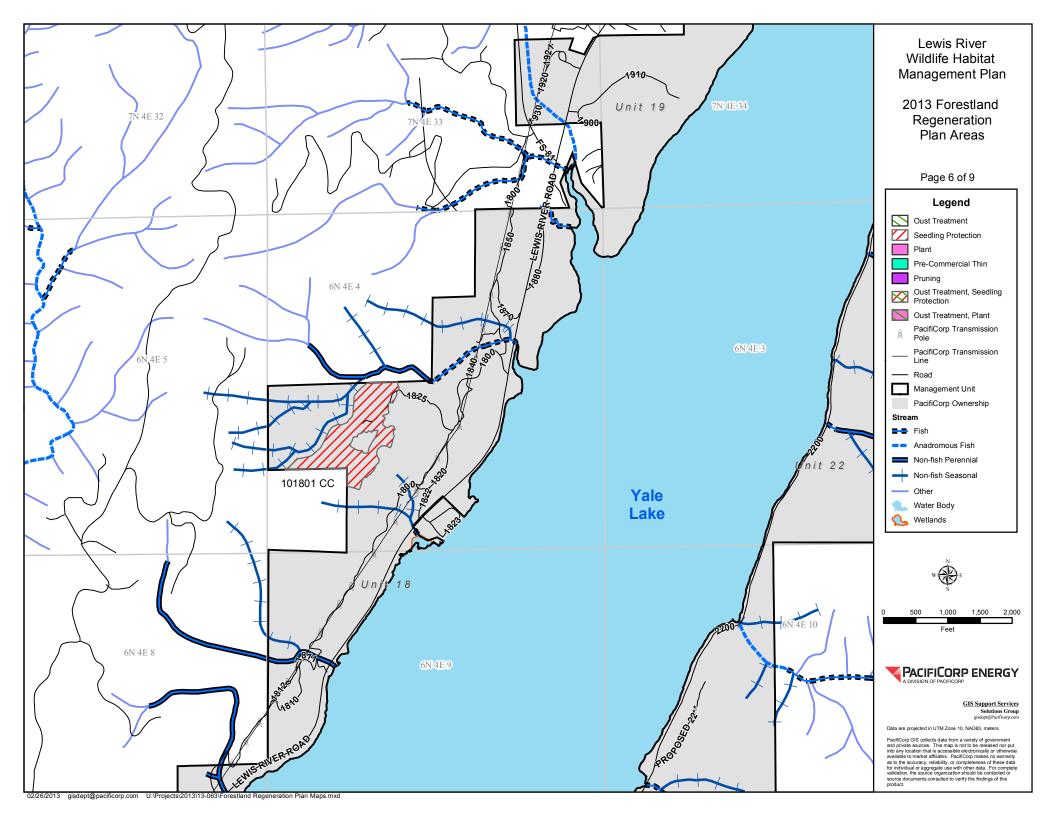


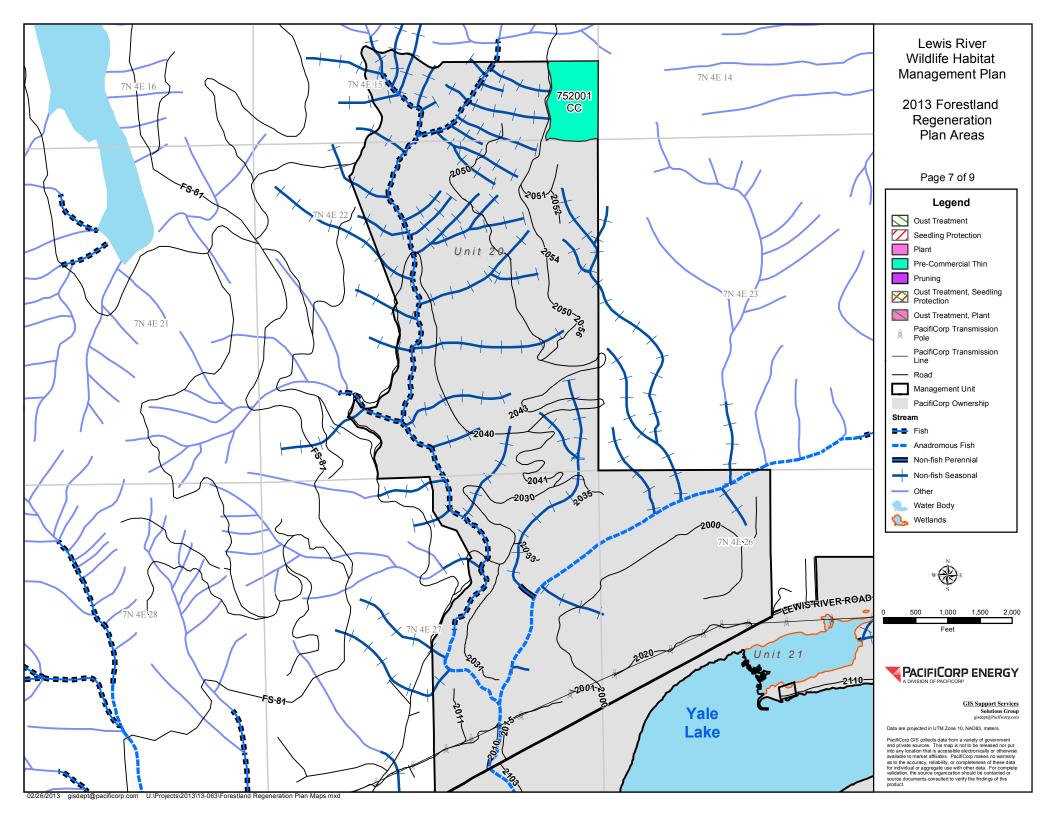


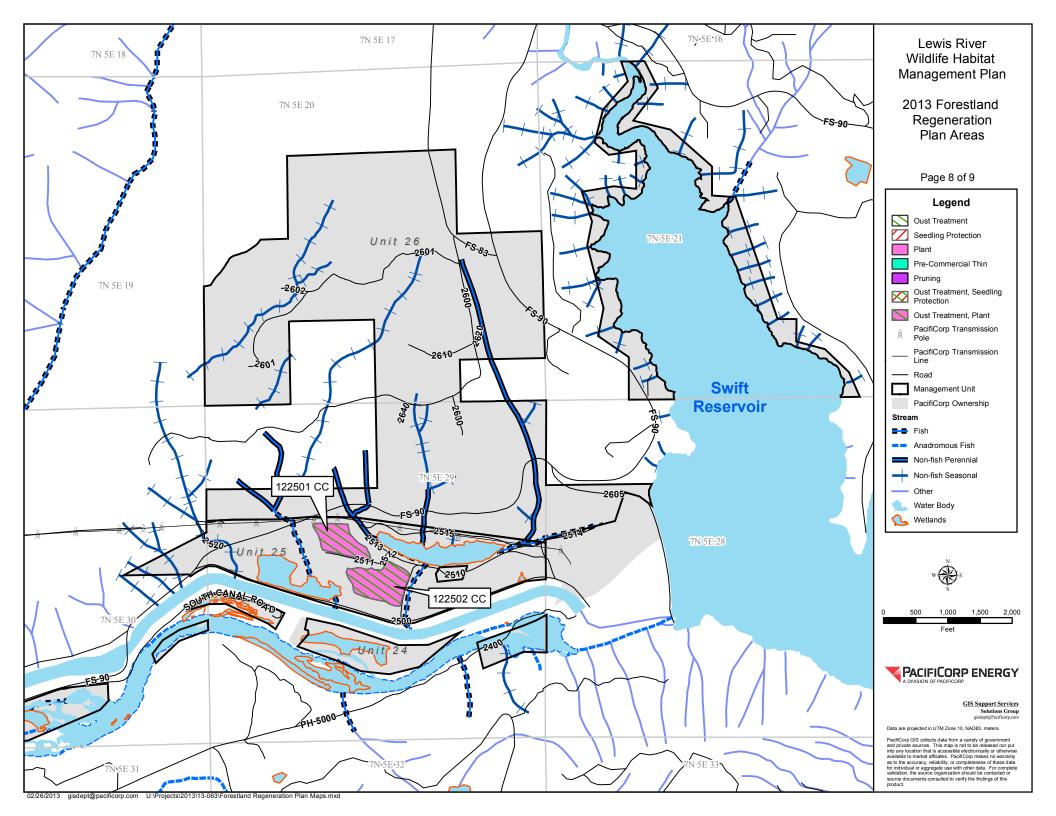


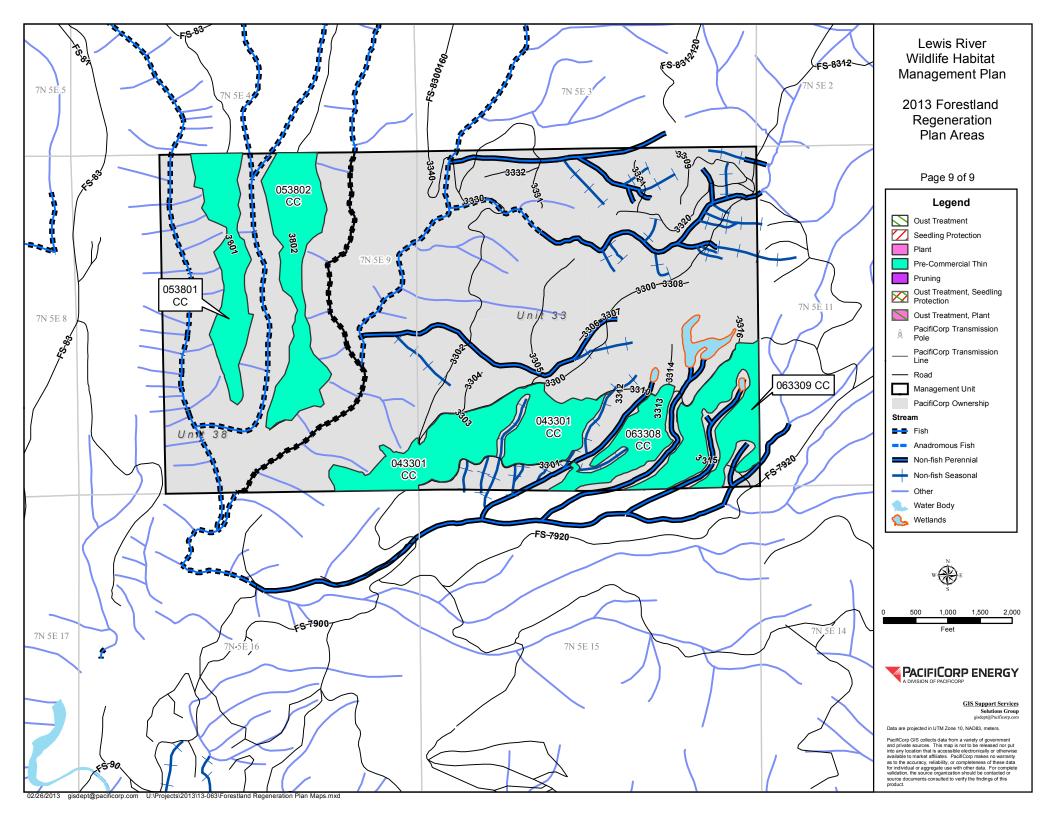












APPENDIX F 2013 VEGETATION CONTROL MAP

