

**Lewis River Hydroelectric Projects Settlement Agreement
Terrestrial Coordination Committee (TCC)
Meeting Agenda**

Date & Time: Wednesday, November 13, 2013
9:00 a.m. – 11:45 a.m.

Place: Merwin Hydro Control Center
105 Merwin Village Court
Ariel, WA 98603

Contacts: Kirk Naylor: (503) 813-6619; cell (503) 866-8750

Time	Discussion Item
9:00 a.m.	Welcome <ul style="list-style-type: none">➤ Review Agenda & 9/11/13 Meeting Notes➤ Comment & accept Agenda & 9/11/13 Meeting Notes
9:30 a.m.	Riparian Mix Evaluation Update
9:45 a.m.	BPA and Cowlitz PUD transmission line status update
10:15 a.m.	Break
10:30 a.m.	Orchards: Objective B and ROW's
11:15 a.m.	2014 TCC Meeting Schedule
11:30 a.m.	<ul style="list-style-type: none">➤ Next Meeting's Agenda➤ Public Comment Opportunity Note: all meeting notes and the meeting schedule can be located at: http://www.pacificorp.com/es/hydro.html
11:45 a.m.	Adjourn

Join by Phone

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Conference ID: 8098350

FINAL Meeting Notes
Lewis River License Implementation
Terrestrial Coordination Committee (TCC) Meeting
November 13, 2013
Ariel, WA

TCC Participants Present: (8)

Diana Gritten-MacDonald
 Ray Crosswell, RMEF
 Peggy Miller, WDFW
 Kimberly McCune, PacifiCorp Energy
 Kendel Emmerson, PacifiCorp Energy
 Kirk Naylor, PacifiCorp Energy
 Nathan Reynolds, Cowlitz Indian Tribe
 Bob Nelson, RMEF

Calendar:

December 11, 2013	TCC Meeting	HCC
February 12, 2014	TCC Meeting	HCC

Assignments from November 13, 2013	Status
Gritten-MacDonald – Contact Eric Holman to request his input about TCC timber management options.	Complete – 11/14/13

Assignments from September 11, 2013	Status
Emmerson: Complete more research on fireweed distribution, best timing, etc. and get back to the TCC (Forestland Units 4 & 20).	Complete – 11/13/13

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

Review of Agenda and Finalize Meeting Notes

Kirk Naylor (PacifiCorp Energy) called the meeting to order at 9:05 a.m. Naylor reviewed the agenda and asked the TCC if there were any changes/additions they needed to request. No changes were requested.

Naylor reviewed the September 11, 2013 meeting notes and assignments. The meeting notes were approved at 9:40am with the following changes:

Page 3, Old Growth Connectivity Discussion, first paragraph will be modified to read as follows:

Emmerson provided the Mature Stand Connectivity map that is from the November 29, 2012 memo (see [Attachment B](#) for more detail). She informed the TCC that she has visited most of the priority mature stands and that she has changed the assessment methods from what was originally proposed in the WHMP. The original methods would provide a lot of quantitative data on how little or how much old-growth characteristics exist within the priority stand. Emmerson proposed utilizing a qualitative assessment to determine if a stand meets the criteria for a priority stand. From just walking through the stands she is able to confirm the vegetation cover type and easily see what old-growth characteristics are lacking (e.g. openings, snags, and/or down wood). She will also note if the unit is meeting management objectives for the unit, vegetation cover type, access, management and harvest opportunities, riparian buffers, raptor nest/roosts in the area, and characteristics and ownership of the land surrounding the unit. The TCC will be able to utilize this information to determine if a stand should be considered as a priority stand. The TCC agreed that corrections to the GIS model caused Unit 5 to become a non-priority mature stand because it no longer meets the criteria.

Page 9; modify the text to read as follows:

The TCC expressed concern that the patch cuts may not be large enough to meet the WHMP goals so they requested Gritten-MacDonald to solicit a contractor(s) to view the sites and provide a non-binding estimate on three (3) scenarios for TCC consideration:

1. **Complete patch cuts and commercial thin between patch cuts 1 & 2**
2. **Commercial thin (larger scale)**
3. **Proceed with proposed Patch Cut Implementation Plan**

Riparian Mix Evaluation Update (Year 5)

Kendel Emmerson (PacifiCorp Energy) provided a handout for TCC review titled, Riparian Mixed Forest Stand Evaluation ([Attachment A](#)), which illustrated the following, but not limited to, acreage per area evaluated, number of snags recorded, number of snags required and field work completed. All riparian mixed stands were included in the spreadsheet, including stands that are less than 1.0 acres and in secondary management areas, but only stands greater than 1.0 acres and that are on primary WHMP lands were evaluated for number of conifer trees and snags. New lands that were purchased in 2012 have not been included in this evaluation.

Emmerson read Objective C to the attendees, which reads as follows from the WHMP:

- **Objective c:** Within 5 years of WHMP implementation, evaluate the number of live conifers and snags greater than or equal to 20 inch (50 cm) dbh in riparian mixed forest stands.
 - If there are less than or equal to 20 live conifer trees per acre (49 trees per ha) that are greater than or equal to 20 inches (50 cm) dbh, then protect the large conifers
 - If there are greater than 20 live trees per acre (49 trees per ha) that are greater than or equal to 20 inches (50 cm) dbh then determine if creation of additional large snags is needed to increase snag numbers (at least 1 per 6 acres [1 per 2.4 ha] greater than or equal to 20 inches [50 cm] dbh) and snag average dbh (greater than or equal to 25 inches [63 cm] dbh) for pileated woodpecker (*Dryocopus pileatus*). Develop a schedule to create additional snags, if needed.

Emmerson expressed that the riparian areas are not deficient of snags. All stands exceeded the minimum number of large snags, except for Stand 4-4 which is deficient by one snag.

Emmerson indicated that snag monitoring may be more effective if rather than focusing on snags only within a single vegetation cover type, the focus is on the entire riparian buffer regardless of the vegetation cover type. And since it appears that riparian areas have more than enough snags the TCC should focus on opportunities to protect or create snags in other areas on WHMP lands.

Naylor expressed that PacifiCorp created snags as part of the Merwin Wildlife Habitat Management plan adjacent to timber harvest units every year. As a result of this large snags are not a deficit on WHMP lands surrounding Merwin. Per the Settlement Agreement, PacifiCorp will re-evaluate the Habitat Evaluation Procedures (HEP) in license year 17. Depending on the results of the HEP, the WHMP may be revised to incorporate a new goal, objective, or management action for monitoring snags.

The TCC requested PacifiCorp create another snag in stand 4-4 and report back to the TCC at the December meeting before approving the completion of this objective.

BPA and Cowlitz PUD Transmission Line Status Update

Naylor informed the TCC that BPA has not been in the field yet; they have been in a holding pattern, pending results of the proposed Cowlitz PUD interconnect to the Merwin substation as well as getting a modification to the access agreement for allowing stakes to be driven during their surveys. PacifiCorp is reviewing the feasibility study relating to the Cowlitz PUD request for a double circuit transmission line (no additional width to the transmission line will be needed). PacifiCorp is reviewing how it will impact WHMP lands adjacent PacifiCorp's substation.

Naylor provided a handout titled, Cowlitz PUD Interconnect (**Attachment B**) which identified the basic impact footprint as reconstruction/improvement of a 14' wide access road, new substation addition (70' x 164' plus 10' clearance on all three sides) and addition of an control building on an existing 28' x 30' concrete pad. There is a proposed 50' radius change in the road leading to the control building. Naylor indicated that a few conifer trees would have to be removed on the edge of an upland mix stand on the edge of the road and two bigleaf maples would be impacted by the substation expansion. Most of the trees on the edge have been routinely pruned in the past to accommodate the road.

The entire area of impact is less than ½ acre, not counting the area within the existing transmission ROW.

Naylor also provided a handout titled, Cowlitz PUD Merwin Interconnection Structures (**Attachment C**). The handout illustrates new structures, existing structures and vegetation cover to name a few.

Naylor confirmed to Peggy Miller (WDFW) that all construction impacts will stay within the right-of-way other than the substation modifications as indicated.

Emmerson said that opportunities may exist to enhance deer habitat within the ROW as there isn't any known elk use in the area.

No decision is required at this time; PacifiCorp will continue to keep the TCC informed. PacifiCorp is sharing “perceived” impacts at this early stage of the process.

Nathan Reynolds (Cowlitz Indian Tribe) asked if there will be more conductors going across the river than this would increase the potential for eagle strikes. Naylor replied there would be additional wires associated with a double-circuit and remarked that as this project progresses, more habitat issues (habitat integrity) will need to be evaluated and addressed, but at this time impacts are relatively minor.

Naylor said that this project will not be handled any differently than any other projects affecting the WHMP lands. The TCC expressed concerns over the accumulative impact, such as potential bird strikes from increasing number of wires, as these concerns should be addressed simultaneously as the project design progresses.

Timeline – expect BPA comment in next 3-6 months with construction in 2-3 years.

In response to a question from Reynolds, Emmerson said that the WHMP right-of-way section doesn’t address new construction. Naylor said that PacifiCorp can change out poles as needed and they review for cultural resources, vegetation impacts and attempt schedule work outside of the critical nesting season, except for emergencies.

Time can be developed in the future for a site visit.

<Break 10:30am>

<Reconvene 10:40am>

Orchards: Objective B and ROW’s

Kendel Emmerson (PacifiCorp Energy) provided a handout for TCC review titled, WHMP 2013 Orchard Tree Inventory and Proposed Expansion (**Attachment D**), which provided names of orchard areas, management unit number, WHMP number of trees, types of trees, and additional planting recommendations.

Emmerson read Objective B to the attendees, which reads as follows from the WHMP:

- **Objective b:** Within 5 years of WHMP implementation, evaluate existing orchards and determine the feasibility and desirability of expanding the number of trees. Where feasible, plant new trees in year 6 of the WHMP.

The TCC discussed there are 299 WHMP trees and additional 27 orchard trees that exist on WHMP lands; so the total existing trees on WHMP lands is 326. There are 83 trees that will need to be removed from the ROW, bringing the total trees down to 243. There are a total of 39 trees proposed to be planted making the final total 309.

Discussion took place regarding the best locations for planting to make up for the loss of trees. The TCC is concerned about creating an attractive nuisance and luring deer/elk to cross the highway where there is limited site distance at Hamm Meadow 1 and Reese Meadow. The planting plan

was revised to plant trees in Hamm Meadows 4 and 5 instead of Hamm Meadow 1 and no additional trees will be planted in Reese Meadow.

Emmerson requested clarification on if mast trees, such as walnut or chestnut trees, should be considered an orchard tree. It was determined that these trees are more beneficial to squirrels, than deer or bears, and squirrels are not an associated species for orchards and should not be considered an orchard tree. It was agreed that trees that have late-season fruit were preferred and smaller trees, such as dwarf to semi-dwarf varieties were preferred. Miller inquired if it matters where the replacement trees are placed; such as if a tree was removed in Unit 4 should be replaced in Unit 4. Emmerson stated that she did not interpret the objective that way and that it was beneficial to plant trees where they would have the most success.

The TCC has some concern with the loss of orchard trees that have been dispersed through the WHMP lands versus proposing to clump replacement trees. It was discussed that many of the areas where fruit trees were planted in the past were marginal for site conditions and as a result developed spindly trees. PacifiCorp chose areas more conducive to fruit tree vitality, but that may result in clumping in trees in some areas. Crosswell said that the way PacifiCorp is proposing will get better results.

Emmerson requested that trees be planted over a 3-year period to disperse the costs over time and increase the likelihood of survival during extreme weather events. The TCC approved the planting over a 3-year period beginning in 2014. PacifiCorp will work on securing funds from Pacific Power transmission to fund the replacement of the trees that would be removed from ROW.

Reynolds expressed that if the trees on the ROW are to be removed all at once then replacement of trees should occur simultaneously to maintain functionality.

Emmerson will provide more detail on cost of planting at the December 2013 TCC meeting or the January 2014 meeting as planting will happen in February 2014.

2014 TCC Meeting Schedule

The TCC agreed to conduct the 2014 meetings on the second Wednesday of every month.

Other Topics

In response to the following assignment:

Assignments from September 11, 2013	Status
Emmerson: Complete more research on fireweed distribution, best timing, etc. and get back to the TCC.	Complete – 11/13/13

The fireweed seeding during 2012 in units 6, 15 and 25 THA's did not do well. Emmerson expressed to the TCC that there are two types of fireweed seed. The seed PacifiCorp used had a cotton-like fiber attached (aids in wind dispersal) to the seed which gummed the spreader. The other type is just the cleaned seed. Literature indicates seeds need some kind of moisture; doesn't do well if it dries out; to avoid this PacifiCorp distributes seed the end of September just prior to rains. PacifiCorp will try the cleaned seed in other areas to see if it is more successful. If seed is not working, maybe planting individual plants should be considered.

Public Comment Opportunity

No public comment was provided.

<11:30 a.m. meeting adjourned>

Agenda items for December 11, 2013

- Review November 13, 2013 Meeting Notes
- Orchards 2014 Budget Review
- Old Growth Mature Connectivity
- Wetlands Initial Evaluation (tentative)

Next Scheduled Meetings

December 11, 2013	February 12, 2014
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:

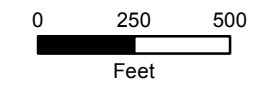
- November 13, 2013 Meeting Agenda
- September 11, 2013 Meeting Notes
- **Attachment A** – Riparian Mixed Forest Stand Evaluation
- **Attachment B** – Cowlitz PUD Interconnect
- **Attachment C** – Cowlitz PUD Merwin Interconnection Structures
- **Attachment D** – WHMP Orchard Tree Inventory and Proposed Expansion

**Riparian Habitat Management Objective C:
Riparian Mixed Forest Stand Evaluation**

Riparian Mix Forest Stand Identification	Acres	Within Secondary or Seasonal Management Area	Required Number of Conifer Trees (20 conifer trees per acre)	Meets Conifer Requirement	Number of Snags Required	Number of Snags Recorded	Field Work Completed	Comment
3-1	1.48	No	30	Yes	1	3	38 conifers	Exceeds snag requirement no further management needed.
3-2	6.33	No	127	Yes	1	18	157 conifers	Exceeds snag requirement no further management needed.
3-3	1.87	No	37	Yes	1	14	53 conifers	Exceeds snag requirement no further management needed. Some VCT revisions recommended.
3-4	1.55	No	31	Yes	1	12	Aerial Image determine < 20 conifer per acre. Survey determined there were 20 conifers.	Exceeds snag requirement no further management needed. Some VCT revisions recommended.
3-5	0.95	No	0	NA	0	NA	Area is less than 1.0 acre	
3-6	0.60	No	0	NA	0	NA	Area is less than 1.0 acre	
4-1	0.74	No	0	NA	0	NA	Area is less than 1.0 acre	
4-2	0.71	No	0	NA	0	NA	Area is less than 1.0 acre	
4-3	0.95	No	0	NA	0	NA	Area is less than 1.0 acre	
4-4	1.39	No	28	Yes	1	0	Conifer >28 trees	Create snags
4-5	1.39	No	28	Yes	1	2	Conifer >28 trees	Exceeds snag requirement no further management needed.
6-1	2.79	No	56	Yes	1	3	Conifer > 56 trees	Exceeds snag requirement no further management needed.
6-2	6.12	No	122	Yes	1	4	Conifer > 125 trees	Exceeds snag requirement no further management needed. Some VCT revisions recommended.
6-3	0.99	No	0	NA	0	NA	Area is less than 1.0 acre	Change polygon to M
6-4	2.08	No	42	Yes	1	20	Conifer > 72 trees and snags >10	Exceeds snag requirement no further management needed. Some VCT revisions recommended.
7-1	5.65	No	113	No	1	8	Conifer = 45 trees and root rot has created ample snags	Exceeds snag requirement no further management needed.
8-1	0.88	No	0	NA	0	NA	Area is less than 1.0 acre	Area is less than 1.0
8-2	4.67	No	93	Yes	1	3	Conifer > 107 trees	Exceeds snag requirement no further management needed.
8-3	2.19	Yes	0	NA	NA	NA	Area is in secondary management area	
9-1	10.36	No	207	No	2	5	Conifers = 160 <207	Exceeds snag requirement no further management needed.
12-1	0.99	No	0	NA	0	0	Area is less than 1.0 acre	
15-1	38.28	No	766	No	6	22	Total conifers =326 Snags =22	Exceeds snag requirement no further management needed.
20-1	37.54	No	751	NA	6	0	This stand was prior to vegetation cover type revisions	
20-2	5.36	No	107	NA	1	6	This stand was prior to vegetation cover type revisions and is in Cougar Campground	Exceeds snag requirement no further management needed.
20-3	25.36	No	507	NA	4	0	This stand was prior to vegetation cover type revisions	
20-4	10.45	No	209	NA	2	9	This stand was prior to vegetation cover type revisions	Exceeds snag requirement no further management needed.
21-1	4.38	Yes	0	NA	NA	NA	Area is in secondary management area	Cannot create snags in campground area.
24-1	0.59	No	0	NA	0	NA	Area is less than 1.0 acre	
26-1	10.21	No	204	No	2	6	Survey determine < 20 conifer per acre	Exceeds snag requirement no further management needed.
31-2	1.21	No	24	No	1	2	Conifer > 26	Exceeds snag requirement no further management needed.
31-3	0.57	No	0	NA	0	NA	Area is less than 1.0 acre	
31-5	0.99	No	0	NA	10	NA	Area is less than 1.0 acre	
31-6	0.74	No	0	NA	0	NA	Area is less than 1.0 acre	
32-1	7.36	Partially	147	NA	1	0	Aerial Image determine < 20 conifer per acre	All snags would be in near an operations area, therefore no management can be completed.
Total Riparian Mix Forested Areas	197.72				46	137		
Total Acres to be Evaluated	172.53							
20-5	77.72	No	1554	Yes	13	10	Not completed. This is revised VCT that would now include 20-1,20-3, and 20-4, which total 73.35 acres. The 10 snags come the 9 recorded in 20-4 and 1 additional snag observed on 11.8.13	

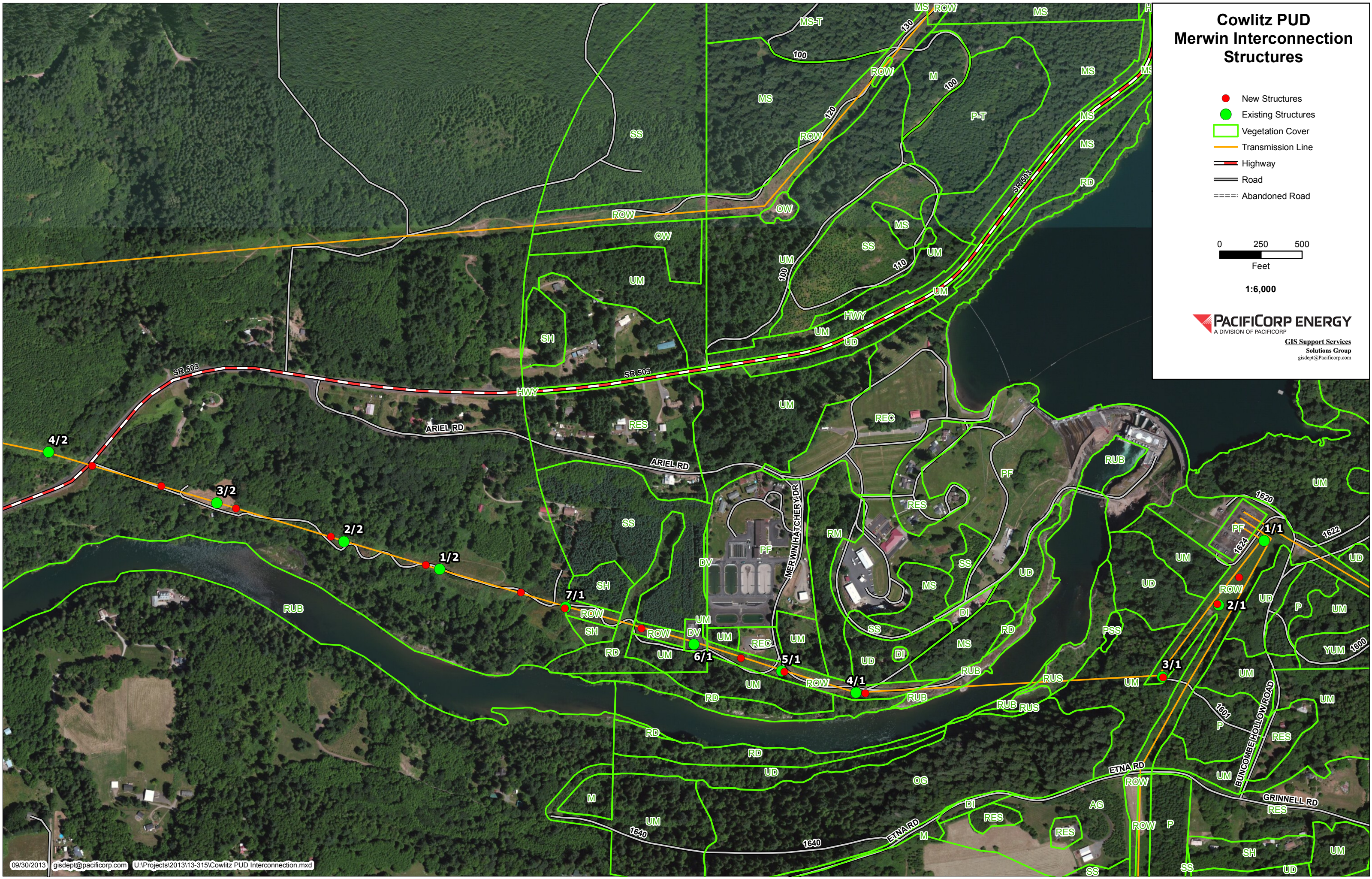
Cowlitz PUD Merwin Interconnection Structures

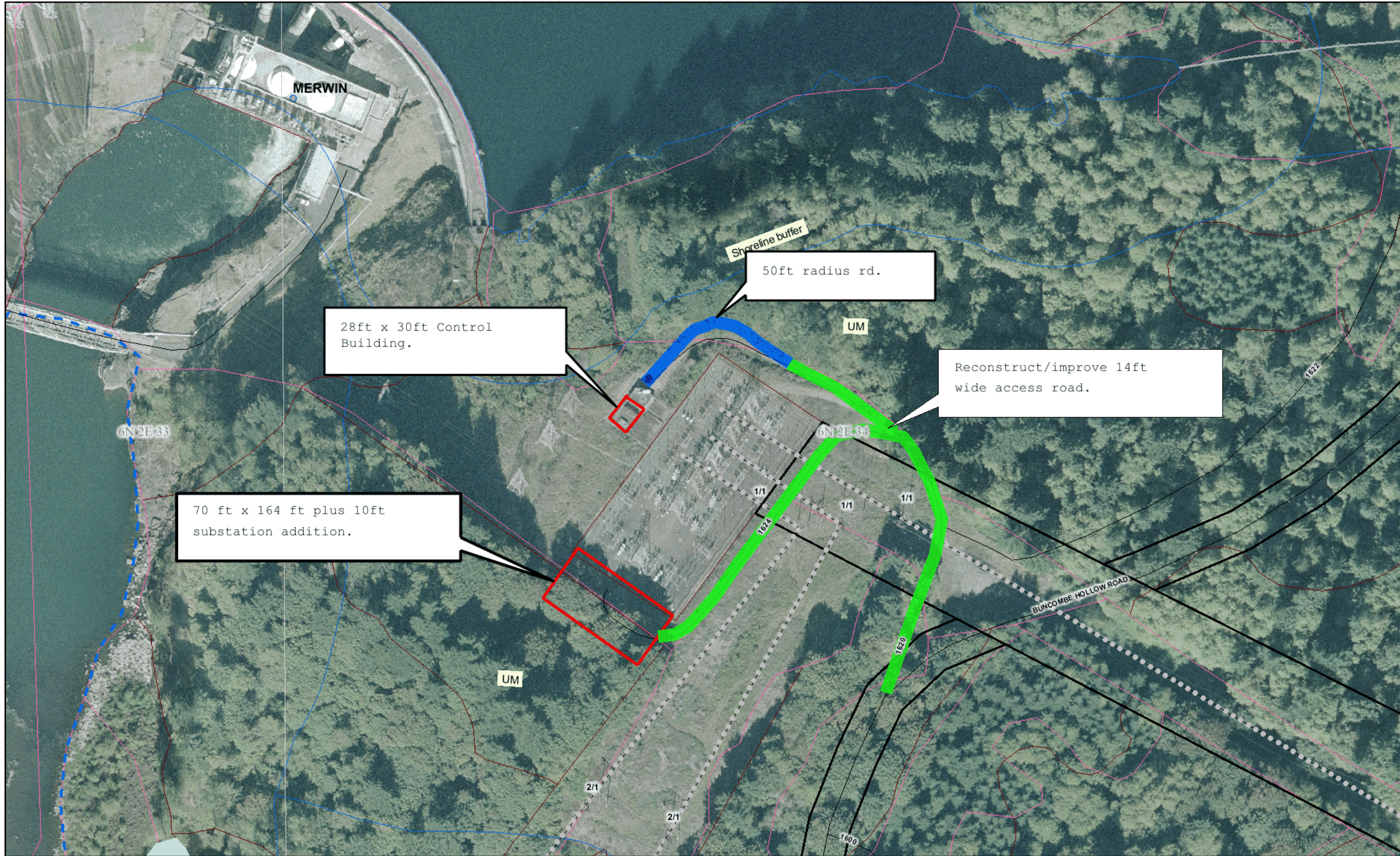
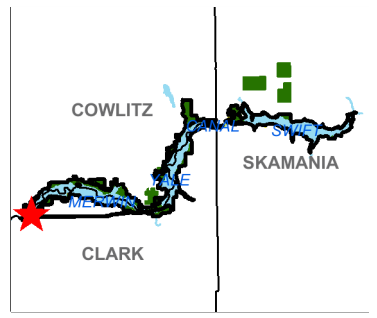
- New Structures
- Existing Structures
- Vegetation Cover
- Transmission Line
- Highway
- Road
- Abandoned Road



1:6,000

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Legend

- Generation Facilities**
 - Hydro
 - Geothermal
 - Thermal
 - Wind
 - Biomass
- Surveyed Corner**
 - Surveyed Section Corner
 - Surveyed Property Corner
 - Other Surveyed Corner
- Wetland (Point)**
- PacifiCorp Transmission Pole**
- Road**
- PacifiCorp Transmission Line**
- FERC Boundary**
- Section**
- Stream Buffer**
- Bald Eagle Roost / Staging Areas**
 - Roost Boundary
 - Roost Core Area
 - Staging Area
- Wetland (Polygon)**
- Stream**
 - Fish Stream
 - Non-Fish Perennial
 - Non-Fish Seasonal
 - Other
- Vegetation Cover - 2001 Baseline**
- Vegetation Cover**

0 175 350 525 ft.

Scale: 1:1,781

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.

Notes: Existing ROW would be cleared for new transmission structures and new fencing along Buncombe Hollow Road

WHMP Orchard Trees Objective B 2013 Inventory and Proposed Expansion

Orchard Trees	Name	Unit	WHMP Number of Trees ¹	Actual						ROW Hazard	Additional Planting Recommendation	Comments
				Apple	Pear	Crab Apple	Plum	Other	Total			
WHMP Orchard Trees	Speelyai Bay	6	44	30	10	0	4	0	44	0	0	
	Saddle Dam # 1	10	6	6	0	0	2	0	8	0	3	Need to plant additional trees away from the hedgerow to avoid being shaded out.
	Saddle Dam # 3	10	15	13	0	2	0	0	15	0	20	The area can support a total of 35 trees 7 rows of 5 trees. Mature trees are declining in vigor, so additional planting would prevent a gap in trees as the mature trees die off. Planting additional trees would break up line of sight to field two. Orchard appears to be productive recommend apples, pears, plums, and cherry.
	Saddle Dam Road	9	13	15	2	5	0	0	22	0	4	There is room to plant up to 4 more trees in the NW corner. The black sumac and Douglas-firs in the adjacent timber harvest to the east will eventually shade out some trees.
	Yale Dam	11	11	8	0	1	0	0	9	0	0	THA 991122CC surrounds the orchard. As these tree continue to grow shading is going to affect the orchard trees. Limited areas in Unit 11 that could support orchard for long term.
	Hanley-Curry	12	23	10	3	6	1	1	21	0	0	
	Buncombe Hollow	15	101	68	1	11	19	0	99	0	0	
	1/11 - 2/11	6	7	6	0	1	0	0	7	7	0	
	4/11 - 5/11	6	8	4	0	0	4	0	6	8	0	Two trees are not WHMP lands not included in WHMP total.
	5/12 - 6/12	6	4	4	0	0	0	0	4	4	0	
	7/12 - 8/12	6	4	0	0	4	0	0	4	4	0	
	8/12 - 1/13	6	2	2	0	0	0	0	2	2	0	
	4/13 - 5/13	6	4	4	0	0	0	0	4	4	0	
	3/14 - 4/14	4	4	4	0	6	0	0	10	10	0	1 tree outside of NERC clearance
	9/14 - 1/15	4	4	4	0	0	0	0	4	4	0	
	1/15 - 2/15	4	6	6	0	0	0	0	6	6	0	
	1/17 - 2/17	2	11	4	6	0	0	0	10	10	0	1 tree outside of NERC clearance
	5/17 - 6/17	2	8	8	0	0	0	0	8	8	0	
	2/18 - 3/18	2	6	5	0	0	3	0	8	8	0	
	2/19 - 3/19	1	8	8	0	0	0	0	8	8	0	
Total WHMP Trees²			289	209	22	36	33	1	299	83	27	
Other Existing Orchard Trees on WHMP Lands	Rhododendron	25	0	3	0	0	0	4	7	0	3	Additional trees may be planted at spacing that does not affect forage in the meadow.
	Reese Meadow	18	0	1	0	0	0	0	1	0	0	
	Winter Creek	17	0	2	3	0	0	0	5	0	4	Additional trees may be planted at spacing that does not affect forage in the meadow.
	Hamm Meadow 4 and/or 5	17	0	3	0	0	0	0	3	0	20	
	Upper Hanley Curry	12	0	3	3	0	4	1	11	0	12	Excellent option for orchard expansion. Existing trees do well and area is poorer quality forage compared to the rest of the meadow.
	Total			0	12	6	0	4	5	27	0	39

Total existing trees on WHMP lands **326**
 Total existing trees on WHMP lands minus ROW trees to be removed= 326-83= **243**
 (Total existing trees - ROW trees to be removed) + Proposed Trees to be Planted=(326-83)+39+27= **309**

¹ WHMP orchard trees numbers are the from the WHMP's Table 9.3.1

² Total WHMP Trees differs from Table 9.3.1 because ROW 5/11-6/11 (3 trees) and 6/17-6/18 (8 trees) were not included in the orchard tree inventory because these trees were planted off of WHMP lands.