FINAL Meeting Notes
Lewis River License Implementation
Terrestrial Coordination Committee (TCC) Meeting
February 24, 2010
Ariel, WA

TCC Participants Present: (13)

Susan Cierebiej, WDFW (via conference)
John Clapp, Lewis River Citizens at-Large
Ray Croswell, RMEF
Kendel Emmerson, PacifiCorp Energy
Diana Gritten-MacDonald, Cowlitz PUD
LouEllyn Jones, USFWS (via conference)
Curt Leigh, WDFW (via conference)
Kimberly McCune, PacifiCorp Energy
Kirk Naylor, PacifiCorp Energy
Bob Nelson, RMEF
Nathan Reynolds, Cowlitz Indian Tribe
Mariah Stoll-Smith Reese, Lewis River Community Council
Mitch Wainwright, USDA Forest Service

Calendar:

March 10, 2010	TCC Meeting	Merwin Hydro Control Center
April 14, 2010	TCC Meeting	Merwin Hydro Control Center

Assignments from February 24, 2010 Meeting:	**Status**
None	

Assignments from January 13, 2010 Meeting:	**Status**
McCune: Insert the requested changes to the Draft TCC 12/9/09 meeting notes and email to the TCC for their review and approval.	**Complete – 1/14/10**
McCune: Distribute the revised Yale Land Acquisition talking points document to TCC participants who have signed a confidentiality agreement.	**Complete – 1/13/10**
Kearney: Coordinate with McCune to convene a land acquisition subgroup meeting as early as mid February 2010.	**Pending**
McCune/Naylor: Coordinate with creating a land acquisition spreadsheet to include type designations for the TCC review and approval.	**Pending**

Parking lot items from February 10, 2006 Meeting:	**Status**
Conservation Agreement – what is wanted?	**Ongoing – 4/28/06**

Review of Agenda and Finalize Meeting Notes

Kirk Naylor (PacifiCorp Energy) called the meeting to order at 9:05am. Naylor asked if the TCC attendees had any additions or changes to the agenda. Diana Gritten-Macdonald (Cowlitz PUD) requested the addition of a brief overview about its WHMP 2010 Annual Plan 30-day TCC review Draft.

Mariah Stoll-Smith Reese and Nathan Reynolds joined

Naylor reviewed the TCC Draft December 9, 2009 and the TCC Draft January 13, 2010 meeting notes and asked for any comments and/or additional changes. The meeting notes were approved at 9:20am with no additional changes.

Curt Leigh (WDFW) requested that he be removed as the primary TCC representative and change to Susan Cierebiej (WDFW). In addition the alternate representative is Eric Holman (WDFW). Kimberly McCune (PacifiCorp) will add Cierebiej to the TCC email distribution lists and both Cierebiej and Holman to the list of TCC members and alternates.

Wildlife Habitat Management Plan (WHMP) 2010 (Year 2) Annual Plan for Swift No. 2

Diana Gritten-MacDonald (Cowlitz PUD) provided copies of a 30-day review draft of the Swift No. 2 WHMP 2010 Annual Plan (**Attachment A**) and communicated that she would follow up with the electronic version via email. Gritten-Macdonald presented a cursory overview of four activities planned for (see page 4 & 5 of the Plan):

- *Conduct follow-up invasive plant surveys at sites where weed control efforts were implemented in 2009 and high priority sites that were not included in initial surveys.*
- *Treat high priority weed infestations. Washington Conservation Corps may be considered to remove weeds.*
- *Inspect all accessible lands in the Project Works and Devil's Backbone MUs to evaluate public access activity and identify any habitat concerns or major changes in habitat conditions. Meridian Environmental will conduct the public access surveys in conjunction with the weed surveys.*
- *Implement other wildlife habitat management activities after Consultation with the TCC. Washington Conservation Corps may be considered for these activities.*

Gritten-MacDonald asked the TCC attendees to consider bullet number four above relating to the use of the Washington Conservation Corps (WCC) (18-25 year old students, supervised by Ecology crew boss). She further expressed that the WCC gave Cowlitz PUD 1 week of **free** crew time (6 people) last week during which they cleared the Devils Backbone road, planted trees at Dry Creek, and, at WDFW's request, hand pulled scotch broom at Swift No. 2 from the transmission tower east to the west debris basin–Gritten-MacDonald said that using the WCC increases the flexibility about what the crews do when and significantly decreases the amount of time required for contracting for individual tasks, saving the TCC money. The TCC asked if the WCC was licensed to apply herbicides and Gritten-MacDonald said the WCC would provide a crew boss with the appropriate herbicide license(s).

The TCC attendees agreed that the use of the Corps is a good idea and they approve.

Gritten-MacDonald informed the TCC attendees that comments on the WHMP 2010 Annual Plan are requested **on or before March 26, 2010.**

New Sign-in Protocol at Merwin Hydro Control Center

Naylor informed the TCC attendees of a new sign-in protocol at the Merwin Hydro Control Center (HCC) for today and all future TCC meetings. Attendees are asked to enter through the side door (directly into the conference room), avoid loitering in the main lobby area and conduct phone calls outside to minimize disruption for PacifiCorp staff working at the Merwin Hydro Control Center. Naylor also informed the TCC attendees that increased security measures are a FERC requirement so upon arrival at the HCC the gate will be closed and each attendee will be required to use the call-in box on the left side of the gate and announce who you are and the reason for the visit.

PacifiCorp Annual WHMP for 2010 Update and Brief Review

Naylor informed the TCC attendees that the TCC can expect to receive PacifiCorp's WHMP 2010 Annual Plan by next week for the 30-day review and comment period.

Discussion of Visual Screen: Jackman Property

Kendel Emmerson (PacifiCorp Energy) informed the TCC attendees that the orchards should be pruned now and it should be within budget this year. The mole termination (Rodenator) is finishing up this week. In addition, the Jackman property which PacifiCorp recently acquired is in need of a highway visual screen for elk. Emmerson is recommending a mix of conifers and shrubs and she would like to plan in early March (approximately 100 plants) budgeted at approximately $5,000. She communicated that the screen will sit behind the shop complex as a visual screen from the highway.

The TCC attendees approved PacifiCorp to proceed with planting the Jackman visual screen in accordance with the schedule Emmerson needs.

Curt Leigh and Susan Cierebiej (WDFW) departed

Yale and Swift Lands Update

Naylor and Ray Croswell (RMEF) provided a lands update relating to certain Swift and Yale parcels which is considered confidential and proprietary and not for public viewing. Mariah Stoll-Smith Reese (Lewis River Community Council) signed a confidentiality agreement in order to participate in this portion of the meeting.

Naylor provided photos of a certain parcel of interest in the Yale area. Naylor asked that once the TCC has had an opportunity to view the photos to please consider if the use of Yale funds is appropriate for this parcel.

The TCC responded that they would like to pursue another property of interest that Croswell has been working on as a priority property before applying its efforts to another parcel.

<Break 10:25am>
<Reconvene 10:40am>

Bonneville Power Administration (BPA) introductions, group comments and discussion of the 3-4 potential routes through the WHMP lands

BPA Attendees

Mike Johns	Lou Driessen
Mark Korsness	Nancy Wittpenn
Pam Gunther	

Naylor welcomed the BPA attendees then provided a cursory overview as an initial step to explain to BPA representatives the purpose of the TCC and the requirements of the Lewis River Settlement Agreement & subsequent Licenses, which drives the mission of the TCC and its implementation of the Wildlife Habitat Management Plan. In addition, Naylor requested a roundtable introduction for the benefit of the guests from BPA and the TCC attendees.

Mark Korsness (BPA) communicated an overview of the "network open season" needs whereby yearly requests are made. The outcome of the last request resulted in the need to build four separate 500 kV projects, one of which is the I-5 Corridor project which began the initial sighting of potential corridors in February 2009.

Korsness identified the area of constraint near Castle Rock & Troutdale consisting of approximately 70 miles of new line (see Project area map **Attachment B**). The fix is to build a new substation at Castle Rock and Troutdale.

Korsness communicated that BPA established a one mile wide notification zone and somewhere within this zone will be the proposed line. The notification resulted in 52 different segments that are affected and BPA is hoping to determine site points in the next few months.

BPA expects to submits its Draft Environmental Impact Statement (DEIS) in 2011 with a final EIS in 2012. The plan is to be energized in 2015.

Via the use of Power Map provided by PacifiCorp all attendees reviewed the BPAs eastern crossing and northwest approach near Yale Dam (Segments 20 and 21) and the western route (segments 17 and 23) near Merwin reservoir. Naylor described to the BPA attendees the general impact on WHMP lands to include affected habitat types, the raptor nesting, roosting and staging areas and potential impact on the developed recreation sites. Of greatest concern are the old growth conifer stands because these cannot be mitigated. Naylor further expressed that the TCCs obligation is to implement the Settlement Agreement and FERC license requirements of the Wildlife Habitat Management Plan.

BPAs intent is to discuss certain issues around PacifiCorp's and Cowlitz PUD lands in order to minimize impact and mitigate any impacts of the proposed corridor. The corridor is 150' wide but the timber cut could be more than a 150' wide cut. In addition, the BPA towers will be approximately 140' tall.

General discussion took place regarding how BPA could mitigate for old growth. PacifiCorp's view is the only mitigation is no removal of old growth. In addition, Emmerson shared that when anadramous fish are introduced in 2012 this action could cause additional issues for BPA with birds (due to pooling fish) below Merwin and may increase transmission line bird strikes. Also discussed was the needed stream buffering and habitat typing errors in existing vegetation mapping would need to be corrected. PacifiCorp is currently evaluating the structural characteristics and diameter of the identified old-growth stands to see if they meet old-growth vegetation cover type characteristics.
Naylor also shared the details of funds that the Settlement Agreement and FERC license requires the Utilities to set aside for acquisition for existing impacts not new impacts.

Naylor expressed that along BPAs line 11 is the Cresap Campground area, the Speelyai Day Use Recreation Area and old growth and raptor nest sites. In addition, segment 21 contains spotted owl special emphasis area (SOSEA) and a bald eagle winter roost.

LouEllyn Jones departed

Nathan Reynolds (Cowlitz Indian Tribe) expressed that BPA will need to meet all regulatory requirements as well as meet the requirements of the Utilities wildlife habitat management plans in those areas affected by the new transmission line.

Stoll-Smith Reese pointed out that additional concerns should be considered by BPA relative to the Lewis River aquatic, recreation and cultural committees.

BPA asked PacifiCorp for a preferred route(s) to minimize disruption to the habitat. PacifiCorp's response was a suggested focus on the west end to reduce negative impact to wildlife habitat. Reynolds suggested more northerly route then tie in at the west end. Reynolds reiterated that the Cowlitz Tribe prefers BPA avoid the eastern route in its entirety.

BPA communicated to the TCC attendees that they will refine its routes based on criteria the TCC has provide and present revised routes for TCC interpretation. PacifiCorp indicated that they will be glad to share its GIS data with BPA with the exception of the known cultural sites.

Lastly, PacifiCorp expressed other ancillary issues for consideration such as construction time constraints (construction windows) to alleviate noise disturbance of equipment, motorized access, 2-year raptor study, etc.

Prior to a site visit departure, Naylor will conduct a safety training meeting over lunch for those participating in a site visit after the TCC meeting adjourns.

New Topics/Issues
None

Next Meeting's Agenda

- Review of 2/24/10 Meeting Notes
- Yale and Swift Lands Update
- Distribute PacifiCorp WHMP 2010 Annual Plan and brief review

- Cowlitz PUD WHMP 2010 Annual Plan; TCC Questions/Comments

Public Comment Opportunity
No public comment was provided.

Next Scheduled Meetings

March 10, 2010	April 14, 2010
Merwin Hydro Control Center	Merwin Hydro Control Center
Ariel, WA	Ariel, WA
9:00am – 3:00pm	9:00am – 3:00pm

Meeting adjourned at 12:30 pm

Handouts
- Agenda
- Draft meeting notes from 12/9/09 and 1/13/10
- **Attachment A** - Wildlife Habitat Management Plan (WHMP) 2010 (Year 2) Annual Plan for Swift No. 2, dated February 23, 2010
- **Attachment B** - I-5 Corridor Reinforcement Project Study Area Map dated January 21, 2010, as provided by BPA

Swift No. 2 Hydroelectric Project
FERC No. 2213

WILDLIFE HABITAT MANAGEMENT PLAN
2010 (YEAR 2) ANNUAL PLAN
FOR THE
SWIFT NO. 2 WILDLIFE MANAGEMENT AREA

February 23, 2010
30-day Review DRAFT

Comments Due Friday March 26, 2010

Prepared for
Public Utility District No. 1 of
Cowlitz County, Washington

Prepared by
Meridian Environmental, Inc.
Seattle, Washington

_____, 2010

Contents

List of Figures

List of Tables

Appendices

Acronyms

BMPs	Best Management Practices
DB	Devil's Backbone
FERC	Federal Regulatory Energy Commission
HEP	Habitat Evaluation Species
HSI	Habitat Suitability Indexes
LWD	Large Woody Debris
MU	Management Unit
PUD	Public Utility District
PW	Project Works
SGD	Standards and Guidelines Document
SOPs	Standard Operating Procedures
TCC	Terrestrial Coordination Committee
WDFW	Washington Department of Fish and Wildlife
WHMP	Wildlife Habitat Management Plan
WMA	Wildlife Management Area

2010 (YEAR 2) ANNUAL PLAN FOR THE SWIFT NO. 2 WILDLIFE MANAGEMENT AREA

1.0 INTRODUCTION

Public Utility District No. 1 of Cowlitz County, Washington (Cowlitz PUD) owns the Swift No. 2 Hydroelectric Project (FERC No. 2213) on the Lewis River at River Mile 44 in Cowlitz and Skamania counties, Washington (Figure 1.0-1). The Swift No. 2 Project is one of four Lewis River Hydroelectric Projects. In 1999, Cowlitz PUD and PacifiCorp[1] began the Alternative Licensing Procedure (ALP) for the Lewis River Projects. In April of 2004 Cowlitz PUD filed with the Federal Energy Regulatory Commission (FERC) an Application for New License for Swift No. 2. In November 2004, Cowlitz PUD, PacifiCorp and 24 other Parties signed the Lewis River Settlement Agreement (SA) for the purpose of resolving all of the issues between the Licensees and the other Parties regarding the relicensing. The Federal Energy Regulatory Commission (FERC) issued a new 50-year License for Swift No. 2 on June 26, 2008 that incorporates without material modification Cowlitz PUD's obligations under the Settlement Agreement.

In accordance with License Article 403 of the new license, Cowlitz PUD filed a Wildlife Habitat Management Plan (WHMP) with the Commission on December 23, 2008. The WHMP provides long-term guidance for management of 525 acres of Cowlitz PUD lands within the Swift No. 2 Wildlife Management Area (WMA). The WHMP includes the following:

- Section 1 explains development of the WHMP through the relicensing process.
- Section 2 describes the Swift No. 2 WMA, which includes the Devil's Backbone and Project Works management units (MUs). It describes the vegetation cover types and baseline Habitat Suitability Indexes (HSI) for Habitat Evaluation Species (HEP) evaluation species, and provides maps and acreage tables for each MU.
- Section 3 summarizes the habitat-based and program-wide goals and objectives taken from the Standards and Guidelines Document (SGD) that apply to habitat types that occur in the Swift No. 2 WMA.
- Section 4 describes potential management activities designed to meet the SGD goals and objectives and provides a tentative timeframe for implementation.
- Section 5 includes Best Management Practices (BMPs) and Standard Operating Procedures (SOPs) that explain how each of the management prescriptions will be implemented. Section 5 also contains references for specific methods.

[1] PacifiCorp owns the Swift No. 1 (P-2111), Yale (P-2071) and Merwin (P-935) projects, also on the Lewis River. PacifiCorp filed the Application for New License for Yale in 1999 and filed Applications for Merwin and Swift No. 1in April 2004.

- Section 6 contains general references used in development of the WHMP.

Appendices attached to the WHMP include A) License Articles 403 and 404; B) Standards and Guidelines Document; C) applicable HEP Models; D) Swift No. 2 Revegetation Plan; E) Devil's Backbone Conservation Covenant; and F) the WHMP Consultation Record.

License Article 403 specifies that Cowlitz PUD should file an annual plan for implementation of the WHMP. On March 31, 2009, the Commission issued an order modifying and approving the WHMP, which specifies that Cowlitz PUD should file annual reports and annual plans with the Commission by April 30 of each year. In accordance with that order, this Year 2 Annual Plan outlines proposed wildlife measures and anticipated costs for work to be completed in 2010. The annual report is being filed under separate cover.

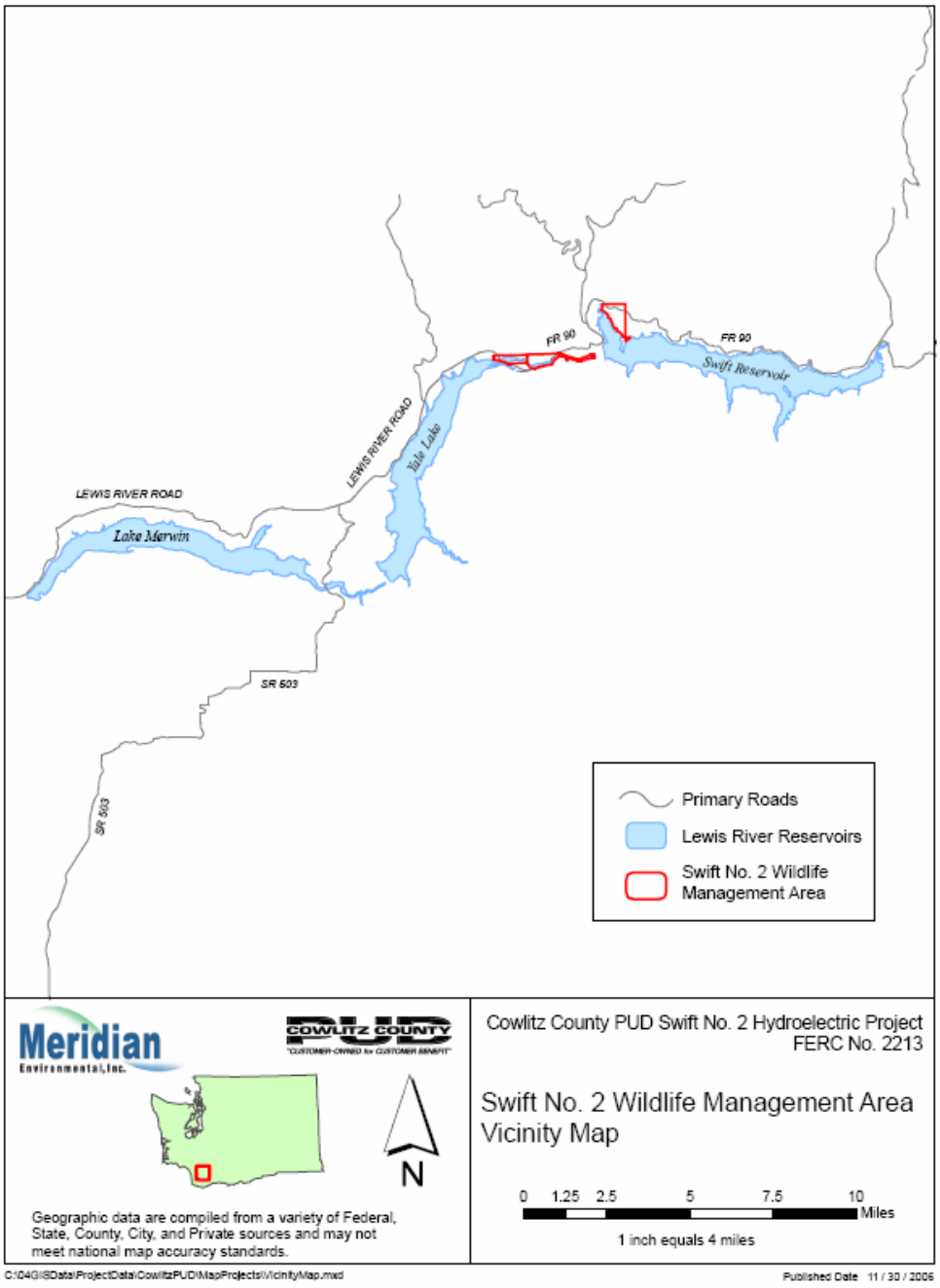

Figure 1.0-1 Project area map, project vicinity inset.

2.0 2010 (YEAR 2) MANAGEMENT ACTIVITIES

Management activities planned for 2010 (Year 2) include the following:

- *Conduct follow-up invasive plant surveys at sites where weed control efforts were implemented in 2009 and high priority sites that were not included in initial surveys. Meridian Environmental will conduct the weed surveys in conjunction with the public access surveys.* The biological goal and objectives for Invasive Plant Species Management are described in Section 3.2.1 of the WHMP. Sections 4.2.8 and 4.3.6 of the WHMP explain their application to the Devil's Backbone and Project Works MUs, while Section 5.8 of the WHMP provides detail about how the activity is to be implemented. For additional background regarding invasive plants, please see Chapter 4.1 of the Standards and Guidelines Document (WHMP Appendix B).

  Known weed infestations include Canada thistle in the Devil's Backbone MU (DBMU-11 Robinson's Marsh) and Scotch broom (scattered patches and individual plants) in the Project Works MU. Weed surveys will be conducted in May 2010 at these sites to identify any other weed species that may require treatment. Based on invasive plant surveys in 2009, most weed occurrences within the Swift No. 2 WMA are located within wetland and/or riparian buffers. For this reason, all areas to be treated for weeds will be managed as if they are within buffers, and the weed surveyor will flag weed treatment areas, rather than buffer boundaries. Cowlitz PUD will coordinate with the adjacent landowner to evaluate options for treating weeds that occur along the 7902 Rd. at the east and south entrances to the Devil's Backbone MU outside Cowlitz PUD's property boundary.

  Updated 2010 Washington State and Cowlitz County weed lists are attached to this Annual Plan as Appendix A. Skamania County follows Washington State, rather than maintaining a separate list.

- *Treat high priority weed infestations. Washington Conservation Corps may be considered to remove weeds.* Hand-pulling or mechanical removal will be emphasized where possible. Herbicides selected for application must be safe for wetland use and both spring and fall treatment may be considered.

- *Inspect all accessible lands in the Project Works and Devil's Backbone MUs to evaluate public access activity and identify any habitat concerns or major changes in habitat conditions. Meridian Environmental will conduct the public access surveys in conjunction with the weed surveys.* The biological goal and objectives for Public Access Management are described in Section 3.2.3 of the WHMP. Sections 4.2.10 and 4.3.8 of the WHMP explain their application to the Devil's Backbone and Project Works MUs. Section 5.10 provides details regarding how the activity is to be implemented. For additional background relating to public access management, please see Chapter 4.3 of the Standards and Guidelines Document (WHMP Appendix B).

- *Implement other wildlife habitat management activities after Consultation with the TCC. Washington Conservation Corps may be considered for these activities.* Potential activities include planting shrubs at the Project Works wetland, and hack/squirt thinning in the Devil's Backbone Management Unit.

2.1. 2010 (YEAR 2) ANNUAL PLAN BUDGET

Consistent with the SA budget of $27 per acre per year to manage 525.2 acres, the total WHMP budget is $14,180 in 2003 dollars. Adjusting that base amount for inflation (using the formula specified in the Definitions section of the SA) yields a Year 2 2010 budget of about $16,659. As provided in Section 10.8.2.3, WHMP funds shall accrue interest from the date the monies are due to be placed in the fund. Funds remaining from previous years (2009), if any, are also added to the fund.

Consistent with SA Section 10.8.3, the anticipated 2010 starting budget shown in Table 2.1-1 includes an estimate of the costs of Cowlitz PUD employees and contractors to implement all aspects of the WHMP in 2010, including overall management; administrative costs associated with specific management activities; and implementation costs for specific management activities. These budget numbers are very preliminary and the actual costs may be considerably lower or higher than those shown in Table 2.1-1. As mentioned above, monies not spent remain in the WHMP budget, and could be used to implement additional management activities during the current plan year or during following years.

If during the course of implementing this Annual Plan, to the extent known and at such time as Cowlitz PUD identifies significant cost savings or identifies cost overruns, Cowlitz PUD will notify the TCC.

Table 2.1-1. Anticipated 2010 (Year 2) Annual Plan Budget (2010 dollars).

WHMP Activity	Estimated Cost	Cost Assumptions
Annual Budget	$16,659.03	
Plan administrative cost	$4,054	3% increase over 2009 budget amount, not actual expenses. Includes general oversight and accounting; preparing Annual Report and Annual Plan; and participation in TCC meetings related to implementing Cowlitz PUD's WHMP.
Management activity administrative cost	$2,196	3% increase over 2009 budget amount, not actual expenses. Includes contract management and accounting, and maintenance of project files and GIS.
Annual inspection to monitor and manage public access	$1,138	3% increase over 2009 actual cost. Includes 1/2 day of labor plus fuel.
Invasive plant surveys at high priority sites	$1,138	3% increase over 2009 actual cost. Includes 1/2 day of labor plus fuel.
Activities to be decided by TCC; could include removal of existing weed infestations at high priority sites; shrub planting at PWMU wetland, hack/squirt thinning in the DBMU	$8,133	5 days Washington Conservation Corp Crew time, plus shrubs, herbicide, misc supplies and equipment.
Estimated cost of management activities	$16,659	
Estimated amount remaining in 2010 budget at year end	$0.03	Any funds not spent may be used for additional activities in 2010. Any funds not spent by year end plus accrued interest, remain in the WHMP budget to be carried into following year.

3.0 SITE MANAGEMENT PLANS

As discussed in sections 4.2 and 4.3 of the WHMP, Cowlitz PUD delineated and mapped 12 management sites within the Devil's Backbone MU (Figure 3.1-1) and four within the Project Works MU (Figure 3.1-2). The site boundaries are based on vegetation cover type mapping, review of aerial photographs and site visits, but also take into account factors such as slope, soils, understory composition, and access, that represent management opportunities and constraints.

Cowlitz PUD has developed a Site Management Plan for each site, as a means of identifying management opportunities and needs and tracking the implementation of management activities through the license period. Each Site Management Plan identifies the SGD goals and objectives, baseline HSI values, and analysis species associated with the cover type; summarizes baseline site conditions, including any apparent management constraints; identifies proposed management actions; and documents the actions that were implemented. The Site Management Plans will also serve as the basis for each Annual Report and the following year's Annual Plan.

Each Site Management Plan will become part of a Site File in the Swift No. 2 WMA database. Site Files will become a "home" for the documentation associated with each site's management. In addition to the Site Management Plan, the Site File will include a site map, photos, and field forms that record the results of inspections, treatments, and follow-up activities.

3.1 DEVIL'S BACKBONE MANAGEMENT UNIT

The following section provides a map of the Devil's Backbone MU (Figure 3.1-1) and Site Management Plans for sites 1 through 12. No management sites were delineated in the Devil's Backbone Conservation Covenant area, because no management activities are planned, other than protection of existing habitat values.

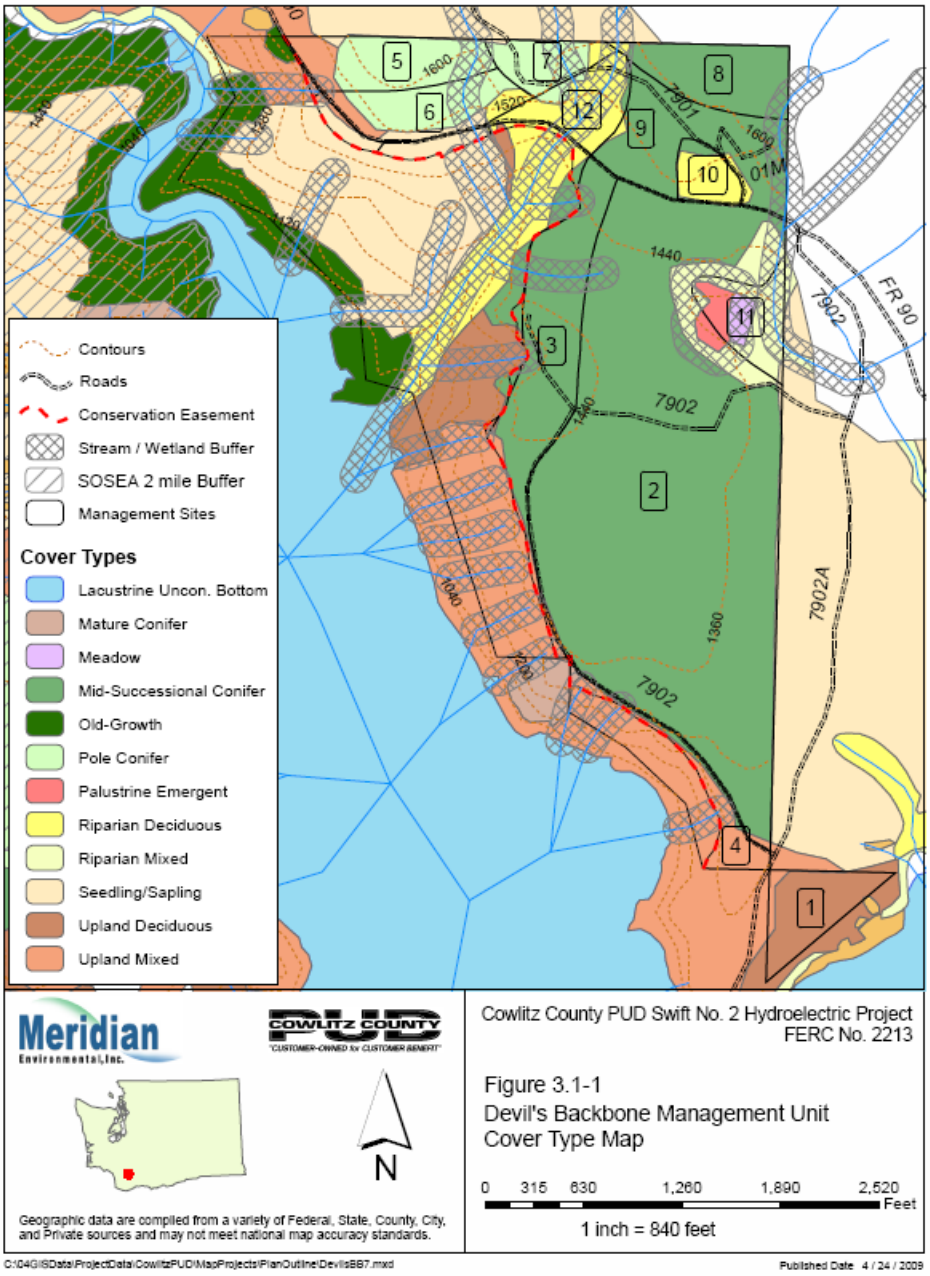

Figure 3.1-1. Devil's Backbone Management Unit

Site Management Plan: DBMU-1		
Cover type	Upland deciduous forest	
Acres	6.6	
Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goals	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Pileated woodpecker: 0.28 Black-capped chickadee : 0.80 Elk: 0.43 in Unit S-1	
Analysis Species	Forestland: Northern flying squirrel, northern spotted owl	
Site Description	Mix of deciduous trees and conifers, including some western red cedars > 24 in. dbh.	
Site Constraints	None	
Access	FR 90 to 7902 Rd (gated near FR 90); 7902A Rd. crosses corner of site. Cowlitz PUD has easement on 7902 Rd.	
Management Strategies	Maintain as mixed stand. Manage for species and habitat diversity. Monitor and manage invasive plants and public access.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Surveys conducted May 13. No access concerns identified. Survey form included in Site File.
2009	Conduct invasive plant survey at 7902 Rd./7902A Rd. in May and control invasive plants as needed.	Surveys conducted May 13. No invasive plants observed within the site, but invasive plants were documented along the 7902A Rd. on adjacent property near the entrance to the Devil's Backbone MU. Survey form included in Site File.
2010	Monitor and manage public access.	
2010	Contact adjacent landowner to evaluate invasive plant treatment options	

Site Management Plan: DBMU-2		
Cover type	Mid-successional conifer forest	
Acres	104.5	
Review Type	Visual walk-through and 5 stand density quick plots 9/1/05, walk-through 6/14/06	
SGD Management Goals	Old-growth: Promote the development, maintenance, and connectivity of old-growth coniferous forest and/or associated habitat components for wildlife species that use old-growth habitat. Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Old- growth-c: Protect and manage forested buffers to promote development of large trees where appropriate. Old-growth-e: Within areas to be thinned to develop old-growth characteristics, leave LWD. Forestland-a: At the MU level, provide a range of alternatives for developing and maintaining a mix of forage and hiding cover for elk. Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.85 Pileated woodpecker: 0.47 Elk: 0.43 in Unit S-1	
Analysis Species	Old-growth: Northern flying squirrel, marten, Larch Mountain salamander, northern spotted owl, bald eagle Forestland: Northern flying squirrel, northern spotted owl	
Site Description	Flat site dominated by Douglas-fir and western hemlock from 8 to 18 in. dbh, with a quadratic mean diameter of 11.6 in. Stand age = 35 yrs in 2006.; crown closure = 100%; canopy height = 80 ft., trees per acre = 266. Few small-diameter snags, no large diameter snags, moderate LWD. Variable understory; dominated by Oregon grape and swordfern. Patchy herbaceous cover includes oxalis, inside-out-flower, bedstraw, vanilla-leaf.	
Site Constraints	None	
Access	Good: FR 90 to 7092 Rd. (gated near FR 90); 7092A Rd. crosses through stand. Cowlitz PUD has easement on 7092 Rd.	
Management Strategies	Consider patch cuts to mimic canopy gaps in old-growth stands and increase number of vegetation layers. Consider thinning to accelerate development of large-diameter live trees and potential snags, and increase shrub and herbaceous cover that will improve elk forage. Seed disturbed soils with elk forage mix. Consider establishing and maintaining elk forage plots. Monitor and manage snags/LWD to meet target densities as trees mature. Monitor and manage invasive plants and public access.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Surveys conducted on May 13. No access concerns identified. Survey form included in Site File.
2009	Conduct invasive plant survey at 7902 Rd. in May and control invasive plants as needed.	Surveys conducted on May 13. Invasive plants documented within project boundary along 7902 Rd. were treated with herbicide in July and September. Invasive plants also observed on adjacent property along the MU boundary. Survey form included in

Site Management Plan: DBMU-2		
		Site File.
2010	Monitor and manage public access.	
2010	Conduct follow-up invasive plant surveys in May and re-treat as necessary. Contact adjacent landowner to evaluate treatment options.	

Site Management Plan: DBMU-3	
Cover type	Mid-successional conifer forest
Acres	17.2
Review Type	Vegetation cover typing, aerial photo review
SGD Management Goals	Old-growth: Promote the development, maintenance, and connectivity of old-growth coniferous forest and/or associated habitat components for wildlife species that use old-growth habitat. Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.
SGD Management Objectives	Old growth-c: Protect and manage forested buffers to promote development of large trees where appropriate. Old-growth-e: Within areas to be thinned to develop old-growth characteristics, leave LWD. Forestland-a: At the MU level, provide a range of alternatives for developing and maintaining a mix of forage and hiding cover for elk. Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.85 Pileated woodpecker: 0.47 Elk: 0.43 in Unit S-1
Analysis Species	Old-growth: Northern flying squirrel, marten, Larch Mountain salamander, northern spotted owl, bald eagle Forestland: Northern flying squirrel, northern spotted owl
Site Description	Flat site dominated by Douglas-fir and western hemlock from 8 to 18 in. dbh.
Site Constraints	None
Access	Good: FR 90 to 7902 Rd. (gated near FR 90), which crosses through stand. Cowlitz PUD has easement on 7902 Rd.
Management Strategies	Consider 1) patch cuts to mimic canopy gaps in old-growth stands and increase number of vegetation layers; 2) thinning to accelerate development of large-diameter live trees and potential snags, and increase shrub and herbaceous cover that will improve elk forage, and seed disturbed soils with elk forage mix; and 3) establishing and maintaining elk forage plots. Monitor and manage snags/LWD to meet target densities as trees mature. Monitor and manage invasive plants and public access.

Implementation

Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Surveys conducted on May 13. No access concerns identified. Survey form included in Site File.
2009	Conduct invasive plant survey at 7902 Rd. in May and control invasive plants as needed.	Surveys conducted on May 13. No invasive plants observed. Survey form included in Site File. Low priority for additional weed surveys.
2010	Monitor and manage public access.	

Site Management Plan: DBMU-4		
Cover type	Upland mixed forest	
Acres	4.3	
Site Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goal	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Forestland-a: At the MU level, provide a range of alternatives for developing and maintaining a mix of forage and hiding cover for elk. Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.71 Pileated woodpecker: 0.19 Elk: 0.43 in Unit S-1	
Analysis Species	Northern flying squirrel, northern spotted owl	
Site Description	Primarily Douglas-fir and hemlock, 8 to 18" dbh, with some big-leaf maple and alder growing on western edge.	
Site Constraints	Narrow, linear configuration between project road and steep slope down to the Conservation Easement boundary. One intermittent stream/stream buffer.	
Access	Good: adjacent to 7902 Rd. (gated near FR 90). Cowlitz PUD has easement on 7902 Rd.	
Management Strategies	Maintain as buffer between road and Conservation Easement. Manage for species and habitat diversity. Monitor and manage invasive plants and public access.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Surveys conducted on May 13. No access concerns identified. Survey form included in Site File.
2009	Conduct invasive plant survey at 7902 Rd. in May and control invasive plants as needed.	Surveys conducted May 13. No invasive plants observed within the site boundary, but documented on adjacent property. Survey form included in Site File.
2010	Contact adjacent landowner to evaluate invasive plant treatment options.	

Site Management Plan: DBMU-5		
Cover type	Pole conifer forest	
Acres	8.8	
Site Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goal	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.43 Pileated woodpecker: 0.18 Elk: 0.43 in Unit S-1	
Analysis Species	Forestland: Northern flying squirrel, northern spotted owl	
Site Description	Primarily Douglas-fir and western hemlock	
Site Constraints	Steep slopes, possible wet soils.	
Access	Bordered by FR 90 on the west. 7901 Rd. does not pass through site. .	
Management Strategies	Manage for species and habitat diversity. Monitor and manage snags/LWD to meet target densities as trees mature. Monitor and manage invasive plants and public access.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Surveys conducted on May 13. No access concerns identified. Survey form included in Site File.
2010	Monitor and manage public access.	

Site Management Plan: DBMU-6		
Cover type	Pole conifer forest	
Acres	8.2	
Site Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goal	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.43 Pileated woodpecker: 0.18 Elk: 0.43 in Unit S-1	
Analysis Species	Forestland: Northern flying squirrel, northern spotted owl	
Site Description	Primarily Douglas-fir and western hemlock	
Site Constraints	Steep slopes, possible wet soils.	
Access	Bordered by FR 90 on the west and south. 7901 Rd. does not pass through site.	
Management Strategies	Manage for species and habitat diversity. Monitor and manage snags/LWD to meet target densities as trees mature. Monitor and manage invasive plants and public access.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Survey conducted on May 13. No access concerns identified. Survey form included in Site File.
2010	Monitor and manage public access.	

Site Management Plan: DBMU-7		
Cover type	Pole conifer forest	
Acres	4.3	
Site Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goal	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.43 Pileated woodpecker: 0.18 Elk: 0.43 in Unit S-1	
Analysis Species	Forestland: Northern flying squirrel, northern spotted owl	
Site Description	Primarily Douglas-fir and western hemlock	
Site Constraints	Steep slopes, possible wet soils.	
Access	FR 90 to 7901 Rd.	
Management Strategies	Manage for species and habitat diversity. Monitor and manage snags/LWD to meet target densities as trees mature. Monitor and manage invasive plants, public access, erosion along 7901 Rd.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Survey conducted on May 13. No access concerns identified. Survey form included in Site File.
2009		No invasive plant species observed during survey along 7901 Rd. Survey form included in Site File. Low priority for additional survey.
2010	Monitor and manage public access.	

Site Management Plan: DBMU-8		
Cover type	Mid-successional conifer forest	
Acres	8.6	
Site Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goal	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.85 Pileated woodpecker: 0.47 Elk: 0.43 in Unit S-1	
Analysis Species	Forestland: Northern flying squirrel, northern spotted owl	
Site Description	Primarily Douglas-fir and western hemlock, 8 to 18" dbh.	
Site Constraints	Possible wet soils.	
Access	FR 90 to 7901 Rd. 7901 Rd. does not pass through site.	
Management Strategies	Manage for species and habitat diversity. Monitor and manage snags/LWD to meet target densities as trees mature. Monitor and manage invasive plants and public access.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Surveys conducted on May 13. No access concerns identified. Survey form included in Site File.
2009	Conduct invasive plant survey at 7901 Rd. in May and control invasive plants as needed.	7901 Rd. does not pass through DBMU-8, so invasive plant survey did not cover this site.
2010	Monitor and manage public access.	

Site Management Plan: DBMU-9		
Cover type	Mid-successional conifer forest	
Acres	13.2	
Site Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goal	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.	
SGD Management Objectives	Forestland-b: Maintain or create at least 8 snags, green retention trees, or wildlife reserve trees per acre, if available; retain larger trees and snags, and retain or create 4 logs/acre if possible. Forestland-c: At the MU level, promote habitat diversity by increasing or maintaining minor native tree species composition.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.85 Pileated woodpecker: 0.47 Elk: 0.43 in Unit S-1	
Analysis Species	Forestland: Northern flying squirrel, northern spotted owl	
Site Description	Primarily Douglas-fir and western hemlock, 8 to 18" dbh.	
Site Constraints	Possible wet soils.	
Access	Bordered by FR 90 on the south; 7901 Rd. and 01M Rd. pass through site.	
Management Strategies	Manage for species and habitat diversity. Monitor and manage snags/LWD to meet target densities as trees mature. Monitor and manage invasive plants, public access, and erosion.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Survey conducted on May 13. No access concerns identified. Erosion in the road cut at intersection of 7901 Rd. and 01M roads, but no soil disturbance or loss of vegetation within the site itself. Erosion within 7901 Rd. roadbed between 01M Rd. and FR 90. Survey form included in Site File.
2009	Monitor and manage invasive plant species.	Survey conducted on May 13. No invasive plant species observed. Survey form included in Site File. Low priority for future surveys.
2010	Monitor and manage public access; monitor erosion.	

Site Management Plan: DBMU-10		
Cover type	Riparian Deciduous Forest	
Acres	3.1	
Site Review Type	Vegetation cover typing, aerial photo review, visual walk-through 9/1/05 and 6/14/06	
SGD Management Goal	Riparian: Protect, maintain, and/or enhance riparian areas to include a diversity of native plant species and vegetation structures to benefit wildlife species that use riparian habitats.	
SGD Management Objectives	Riparian-a: Identify and establish buffers. Riparian d: Protect existing large snags. Riparian-e: As part of implementation of WHMP, identify riparian sites damaged by anthropogenic processes and prepare restoration plans within 5 yrs., if feasible.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.19 Pileated woodpecker: 0.32 Yellow warbler. 0.65 Elk: 0.43 in Unit S-1	
Analysis Species	Cascade torrent salamander, papillose tail-dropper	
Site Description	Red alder overstory, sparse mid-story shrub and understory forb component, bisected by an unnamed stream. Western Hemlock/Coolwort Foamflower PA, with several old, large-diameter hemlock stumps, but no snags and little LWD.	
Site Constraints	Seasonal flooding, wet soils, stream buffer.	
Access	Bordered by FR 90 on the south; 7901 on the east.	
Management Strategies	Manage for species and habitat diversity. Monitor and manage invasive plants, public access and erosion along 7901/01M Rd.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Survey conducted May 13, 2009. No access concerns identified. Erosion within 7901 Rd. roadbed between intersection with 01M Rd. and FR 90.
2009	Conduct invasive plant survey at 7901 Rd. in May and control invasive plants as needed.	Survey conducted May 13, 2009. Invasive plant species at intersection of 7901 Rd. and FR 90.
2010	Monitor and manage public access; monitor erosion.	
2010	Treat invasive plant species.	

Site Management Plan: DBMU-11 Robinson's Marsh	
Cover type	Palustrine Emergent Marsh/Meadow/Riparian Mixed Forest
Acres	PEM 1.8 ac.; MD 1.0 ac.; RM 3.4 ac.
Review Type	Vegetation cover typing, aerial photo review, walk-throughs 9/1/05, 6/14/06, 9/9/08, and 4/16/09
SGD Management Goals	Wetland: Protect, maintain, and/or enhance wetlands to provide a diversity of habitat types for native amphibians, waterfowl, and other wildlife species. Meadow: Perpetuate and enhance to benefit elk and other species that use open habitats. Forestland: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage.
SGD Management Objectives	Wetland-e: Identify and establish buffers to maintain and protect wetland habitat and functions. Meadow-c: Manage select meadows and old fields over the license periods to prevent shrub/tree encroachment, and maintain a diverse composition and structure of desirable grasses and forbs for birds and mammals. Forestland-c: At the MU level, promote forest habitat diversity for wildlife by increasing or maintaining minor native tree species composition where appropriate site conditions exist over the life of the licenses.
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.58 Pileated woodpecker: 0.46 Elk: 0.43 in Unit S-1 No suitable habitat for yellow warbler (wetland, riparian mixed forest) or Savannah sparrow (meadow)
Analysis Species	Wetland: No suitable habitat for wetland associated analysis species (beaver, great blue heron (rookeries), wood duck). Meadow: elk (no suitable habitat for Savannah sparrow). Forestland: Northern flying squirrel, northern spotted owl.
Site Description	Sedge and grass wetland/meadow with 100% herbaceous cover within narrow band of mixed riparian forest. Scattered snowberry and vine maple shrub in meadow shows signs of heavy browsing. Several small-diameter standing snags and small-diameter woody debris. Non-native invasive plants observed, that may provide elk forage (e.g., clovers), but Canada thistle also abundant in 2008.
Site Constraints	Wetland buffer.
Access	Good. FR 90 to 7902 (gated) to 7902A. Cowlitz PUD has easement on 7902 Rd.
Management Strategies	Control conifer encroachment to maintain wetland/meadow characteristics over time. Thin forest edges to promote shrub development to improve elk forage. Monitor and manage invasive plants and public access. Consider establishing elk forage plot(s) near meadow.

Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Survey conducted on May 13. No access concerns identified.
2009	Flag wetland buffer boundary in May.	Weed treatment areas flagged; all were considered within wetland or riparian boundary, so wetland buffers not flagged.
2009	Conduct invasive plant survey in wetland and meadow in May and control invasive plants as needed.	Survey conducted on May 13. Weed treatments applied in July and September.

Site Management Plan: DBMU-11 Robinson's Marsh		
2010	Monitor and manage public access.	
2010	Conduct follow-up invasive plant survey of treated areas in May.	

Site Management Plan: DBMU-12		
Cover type	Riparian deciduous forest	
Acres	6.1	
Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goals	Riparian: Protect, maintain, and/or enhance riparian areas to include a diversity of native plant species and vegetation structures to benefit wildlife species that use riparian habitats.	
SGD Management Objectives	Riparian-a: Identify and establish buffers. Riparian d: Protect existing large snags. Riparian-e: As part of implementation of WHMP, identify riparian sites damaged by anthropogenic processes and prepare restoration plans within 5 yrs., if feasible.	
HEP Evaluation Species and Baseline HSIs	Black-capped chickadee: 0.19 Pileated woodpecker: 0.32 Yellow warbler. 0.65 Elk: 0.43 in Unit S-1	
Analysis Species	Cascade torrent salamander, papillose tail-dropper	
Site Description	Red alder overstory. Permanent stream/stream buffer in steep canyon.	
Site Constraints	Steep slopes, stream/stream buffer.	
Access	Bordered by FR 90 on the south; 7901 Rd. crosses north edge. Cowlitz PUD has easement on 7901 Rd.	
Management Strategies	Maintain cover on steep slopes. Manage for species and habitat diversity. Monitor and manage public access, invasive plants, and erosion.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Survey conducted on May 13. No access concerns identified.
2010	Monitor and manage public access.	

3.2 PROJECT WORKS MANAGEMENT UNIT

The following section provides a map of the Project Works MU (Figure 3.2-1) and Site Management Plans for four management classifications. These include areas that were revegetated following reconstruction of the canal in 2002 (PWMU-REV); a constructed wetland within the revegetated area (PWMU-PUB Worthington's Wetland); forested areas that were not disturbed during reconstruction activities (PWMU-FOR); and the transmission line right-of-way (PWMU-ROW).

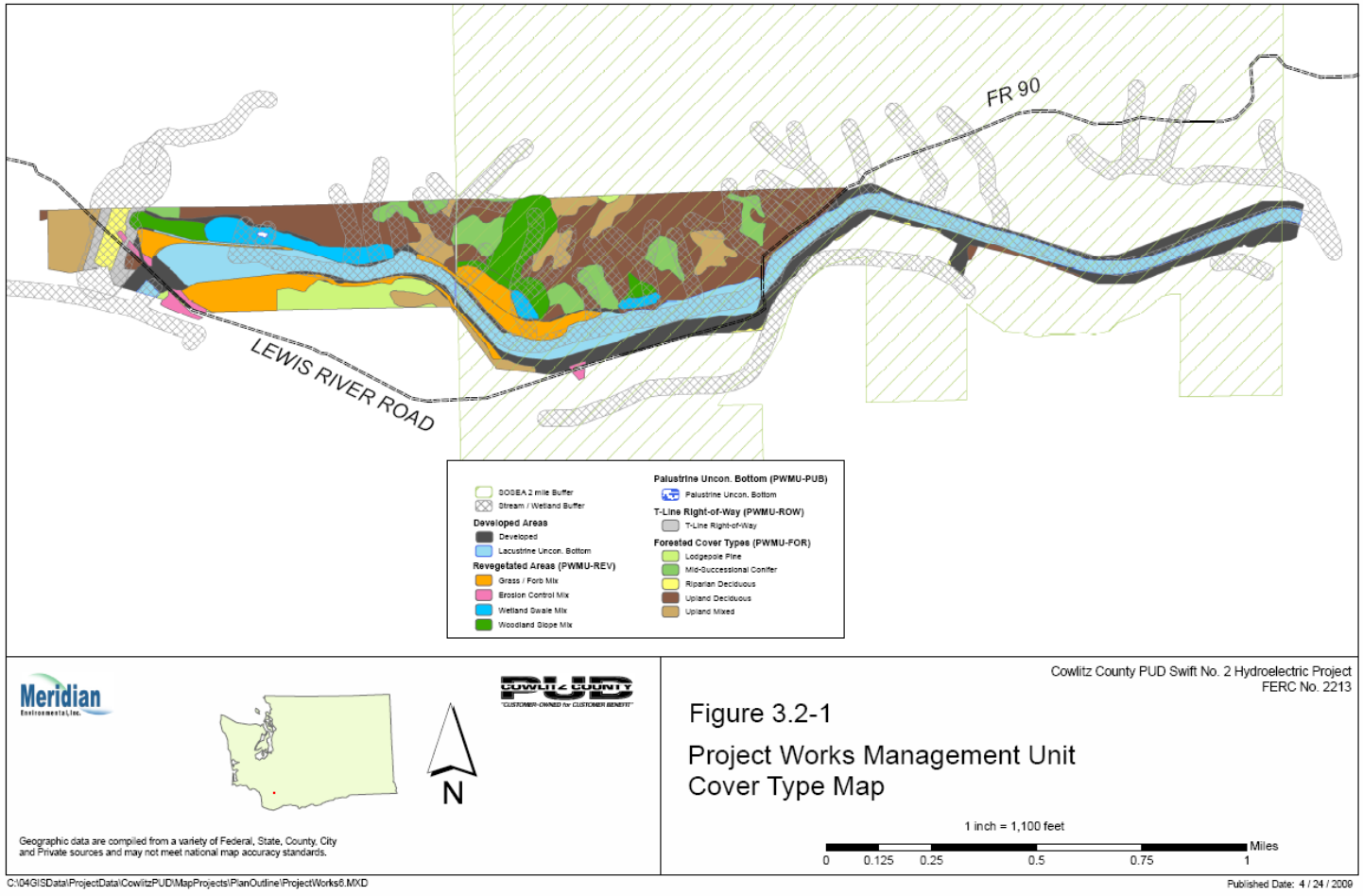

Figure 3.2-1. Project Works Management Unit

Site Management Plan: PWMU-REV		
Cover type	Revegetated: wetland swale, woodland, forage, roadside areas	
Acres	61.82 (seeded with following mixes:14.65 wetland; 10.54 woodland; 33.34 forage; 3.29 roadside)	
Review Type	Contract drawings, visual walk-throughs 9/1/05, 9/14/06, 9/9/08, 1/9/09, 4/16/09	
SGD Management Goals	NA	
SGD Management Objectives	NA	
HEP Evaluation Species and Baseline HSIs	NA	
Analysis Species	NA	
Site Description	Areas cleared or exposed during Swift No. 2 reconstruction, revegetated and stabilized. Areas around the wetland (PWMU-PUB Worthington's Wetland) were covered with soil and large woody debris from natural slides on January 8, 2009. As a result, Cowlitz PUD reconfigured site drainage (ditches and culverts) during the summer of 2009 to minimize the risk that future landslides would interfere with project operation.	
Site Constraints	Some accessible flat areas, some very steep inaccessible areas with unstable slopes.	
Access	Good: Gated project maintenance roads.	
Management Strategies	Manage for species and habitat diversity. Monitor and manage invasive plants. *Note: public access is not allowed.*	
Implementation		
Year	Management Activity Planned	Management Activity Implemented/Documentation
2009	Flag wetland and riparian buffer boundaries in May.	Weed treatment areas flagged; all were considered within wetland or riparian boundary, so buffers not flagged.
2009	Conduct invasive plant survey in May and control invasive plants as needed.	Survey conducted May 13. Some Scotch broom hand-cut in June. Weed treatment applied (herbicides and hand-pulling) in August and September.
2009	Seed exposed soils with pasture mix in April; evaluate management needs and opportunities in May.	Exposed soils seeded in April.
2010	In May, conduct follow-up invasive plant survey of treated areas and high priority areas not yet surveyed. Control invasive plants as needed.	

Site Management Plan: PWMU-PUB Worthington's Wetland		
Cover type	Palustrine unconsolidated bottom (may develop PEM and/or PSS characteristics)	
Acres	0.1 (may be expanding)	
Review Type	Walk-throughs 9/1/05, 9/14/06, 9/9/08, 1/9/09, 4/16/09	
SGD Management Goals	NA	
SGD Management Objectives	NA	
HEP Evaluation Species and Baseline HSIs	NA. In the future, pond-breeding amphibians, yellow warbler, and black-capped chickadee may apply.	
Analysis Species	NA	
Site Description	New open-water wetland developing in regraded, revegetated soils on the north side of the canal. Hydrology supplied by upslope surface flows and subsurface drainage. Wetland was partially covered with soil and large woody debris from slides that occurred following a severe rainstorm on January 8, 2009. As a result, Cowlitz PUD re-configured site drainage (ditches and culverts) during the summer of 2009 to minimize the risk that any future landslides would interfere with project operation.	
Site Constraints		
Access	Good: Lewis River Rd., gated project maintenance roads.	
Management Strategies	Manage for species and habitat diversity. Monitor and manage and invasive plants. *Note: Public access is not allowed.*	
Implementation		
Year	Management Activity Planned	Management Activity Implemented/Documentation
2009	Conduct invasive plant survey in May and control invasive plants as needed.	Survey conducted on May 13. Some Scotch broom removed by hand-cutting in June. Herbicide applied in August and September.
2009	Evaluate enhancement opportunities in May.	TCC developed site design in June. Berm constructed in September, soils re-seeded using a wetland mix and willow stakes planted around the margin of the pond.
2010	Conduct follow-up survey of weed treatment areas. Control invasive plants as needed.	

Comment [ECM1]: With pasture or wetland mix?

Site Management Plan: PWMU-FOR		
Cover types	Mid-successional conifer (MS), lodgepole pine (LP), riparian deciduous (RD), upland deciduous (UD) , upland mixed (UM)	
Acres	177.7 (MS 24.5; LP 11.9; RD 4.0; UD105.0; UM 32.3)	
Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goals	Forestlands: Promote forestland species composition and structures that benefit wildlife and provide an appropriate mosaic of big game hiding cover and forage. Unique Habitats/Areas: Protect unique habitats, including, lava flow, and areas of culturally sensitive plant species identified as important to the Tribes.	
SGD Management Objectives	Forestland-a: At the MU level, provide a range of alternatives for developing and maintaining a mix of forage and hiding cover for elk. Forestland-c: At the MU level, promote forest habitat diversity for wildlife by increasing or maintaining minor native tree species composition where appropriate site conditions exist over the life of the licenses. Unique Habitat-d: Identify and implement appropriate measures to protect and maintain important areas of ethnobotanically significant plants, as identified by the Tribes, over the life of the licenses.	
HEP Evaluation Species and Baseline HSIs	MS LP RD UD UM Black-capped chickadee: 0.60 0.92 0.68 0.27 0.89 Pileated woodpecker: 0.62 0.00 0.29 0.27 0.71 Elk: 0.43 in Unit S-1.	
Analysis Species	Forestlands: Northern flying squirrel, northern spotted owl Lodgepole: Pacific western big-eared bat, Larch Mountain salamander, Van Dyke's salamander. Riparian: Cascade torrent salamander, papillose tail-dropper	
Site Description	Very steep with potentially unstable slopes north of the canal; flat between canal and Lewis River Rd.	
Site Constraints	Proximity to project facilities	
Access	Good: Lewis River Rd.; gated project roads. *No public access allowed.*	
Management Strategies	Manage for species and habitat diversity. Monitor and manage invasive plants.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage invasive plants.	Low-priority (no public access, good ground cover without soil disturbance); not included in invasive plant survey area.
2010	Monitor and manage invasive plants as budget allows.	

Site Management Plan: PWMU-ROW

Site Management Plan: PWMU-ROW		
Cover type	Transmission line right-of-way	
Acres	3.6	
Review Type	Vegetation cover typing, aerial photo review	
SGD Management Goals	While allowing for safe and reliable transmission, promote establishment and maintenance of desirable vegetation to provide habitat for wintering deer and elk and a diverse mix of shrub and other early-successional vegetation.	
SGD Management Objectives	ROW-c: Identify and provide screening cover for deer and elk, where needed, where public roads cross ROW.	
HEP Evaluation Species and Baseline HSIs	Elk: 0.43 in Unit S-1. No suitable habitat for Savannah sparrow.	
Analysis Species	None identified.	
Site Description	Tall, dense shrub cover.	
Site Constraints	Proximity to traffic on Lewis River Rd. and project facilities	
Access	Good: Lewis River Rd. *Note: Public access not allowed.*	
Management Strategies	Monitor and manage invasive plants; evaluate need for visual screening.	
Implementation		
Year	Planned Management Activity	Implemented Management Activity/Documentation
2009	Monitor and manage public access.	Public access not allowed. Visual screening at Lewis River Rd. assessed; no concerns identified.
2010	Monitor invasive plant species.	

Appendix A

2010 Washington State and County Weed Lists

Appendix B

Annual Plan Consultation Record

2010 ANNUAL PLAN CONSULTATION RECORD

As required by License Article 403, this section documents Cowlitz PUD's consultation with the TCC regarding the development of the Annual Plan for the Swift No. 2 Wildlife Management Area. The 30-day Review draft of the Annual Plan was circulated to the TCC on February 23, 2010. Discussions of the draft can be found in the meeting notes from XXX, 2010 (XXX), Cowlitz PUD received written comments on the draft Annual Plan from XXX on XXX. The table below summarizes the comments and provides Cowlitz PUD's responses, by paragraph or comment number. The comments are included, following the summary.

I-5 Corridor Reinforcement Project Study Area Map Jan. 21, 2010

Proposed New Substation Sites
Castle Rock
Silver Lake
01
02
03
Lexington
Ostrander
04
05
06
07
08
Lexington
Longview
Longview
Cowlitz
Allston
10
Cowlitz Co
30
Rainier
Rainier
5
09
11
Kalama River
Trojan
Cardwell
Kalama
Columbia Co
WASHINGTON
OREGON
12
13
16
14
17
23
MERWIN DAM
18
20
21
YALE DAM
15
24
19
22
Lake Merwin
Yale Lake
Lewis River
Clatskanie River
Woodland
Amboy
Chelatchie
Columbia City
26
28
Saint Helens
La Center
Clark Co
Yacolt
Warren
29
Ridgefield
30
Columbia River
Battleground
Scappoose
Meadow Glade
33
Malarky Lake
Salmon Creek
Brush Prairie
32
34
Felida
25
Salmon Creek
Vancouver Lake
205
Ross
36
37
38
35
Minnehaha
45
Alcoa
39
Carborundum
Vancouver
Sifton
41
43
Rivergate
40
48
49
Mill Plain
Fishers Road
St. Johns
46
47
50
51
Vancouver Shipyard
Washington Co
Camas
52
Oak Park
Keeler
Proposed New Substation
Troutdale
Hillsboro
Portland
84
Troutdale
26
Multnomah Co

Facilities
- Proposed New Substation
- sde.SDE.BPA_Planned_Tlines (exact segment locations may change)
- BPA Substation
- Non-BPA Substation
- BPA Transmission Lines

- Cities and Towns
- Urban Areas
- County Boundary
- State Boundary
- Columbia Gorge National Scenic Area
- Dam

Land Ownership
- U.S. Forest Service
- National Park Service
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- U.S. Department of Defense
- WA State Department of Fish and Wildlife
- WA State Parks and Recreation Commission
- County Government
- WA DNR Lands
- Oregon State Lands

0 3 6 12 Miles

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Source: BPA Regional GIS Database, 2009.

BONNEVILLE POWER ADMINISTRATION

nzehnlbauer Jan. 21, 2010