

# **NORTH UMPQUA HYDROELECTRIC PROJECT**

**FERC Project No. P-1927**

**Protection, Mitigation, and Enhancement Measures**



**2015 Annual Report**



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**SECTION 1.0**

**INTRODUCTION**

## 1.0 INTRODUCTION

Located on the west side of the Cascades mountain range in southern Oregon, the North Umpqua Hydroelectric Project (FERC Project No. P-1927; Project) consists of eight dams and power plants that have a combined capacity to generate 194 megawatts of power. The project was constructed between 1947 and 1956.

In the early 1990s, as the expiration of the first FERC license approached, PacifiCorp initiated the relicensing application process with FERC. In June 2001, the relicensing process resulted in the development and signing of the North Umpqua Hydroelectric Project Settlement Agreement (Settlement Agreement, SA). The Settlement Agreement identifies annual reporting requirements ranging from fiduciary reporting to narrative descriptions of actions. This annual report documents a calendar year (January to December 2015) and fulfills reporting requirements of the following Settlement Agreement sections:

- SA Section 7.2.3 (amended) Gravel Augmentation Program Funding and Accounting--Written annual report describing the amounts deposited and disbursed;
- SA Section 8.3.5 (amended) North Umpqua River Habitat Restoration/Creation Project Funding and Accounting--Written annual report describing the amounts deposited and disbursed;
- SA Section 19.1.1.3 Tributary Enhancement Program Funding and Accounting--Written annual report describing the amounts deposited and disbursed;
- SA Section 19.3.1 Mitigation Fund Annual Reporting--Written annual report describing the amounts deposited and disbursed; and
- SA Section 21.4.2 Environmental Coordinator Reports--An annual report on the activities of the RCC and on the implementation of the PM&E Measures.

### 1.1 Background

On June 13, 2001, PacifiCorp filed a Settlement Agreement pursuant to FERC Rule 602, 18 Code of Federal Regulations §385.602, to resolve issues concerning the relicensing of the North Umpqua Hydroelectric Project. Parties to the Settlement Agreement include PacifiCorp, the USDA Forest Service (USDA-FS), the USDI Fish and Wildlife Service (USFWS), the USDI Bureau of Land Management (BLM), the National Marine Fisheries Service (NMFS), the Oregon Department of Environmental Quality (ODEQ), the Oregon Department of Fish and Wildlife (ODFW), and the Oregon Water Resources Department (OWRD), referred to collectively as the “Parties.” As required by statute, FERC conducted a National Environmental Policy Act (NEPA) process that concluded with a Final Environmental Impact Statement (FEIS) issued in March 2003. Based on the

findings of the FEIS, FERC developed articles for a new license for the Project. FERC formally issued the new license on November 18, 2003, designating a license term of 35 years.

Under the provisions of the Settlement Agreement, the license is not final until all administrative and judicial appeals are exhausted. The license was appealed to the Ninth U.S. Circuit Court of Appeals on May 21, 2004. On September 1, 2005, the Court ruled the case in favor of FERC, USDA-FS, and PacifiCorp. The license was considered final on October 18, 2005.

Copies of the Settlement Agreement and the FERC license are available from FERC upon request or on the PacifiCorp Web site at: <http://www.pacificorp.com/es/hydro/hl/nur.html#>.

## **1.2 Resource Coordination Committee**

SA Section 21 establishes a process to facilitate coordination and decision-making concerning implementation of Settlement Agreement measures. To accomplish this objective, SA Section 21.1 provides for the creation of the Resource Coordination Committee (RCC) consisting of representatives from the signing Parties. The purposes of the RCC, discussed in detail in SA Section 2.0, are to (1) facilitate coordination and consultation on plans developed by PacifiCorp for the implementation of PM&E Measures; (2) coordinate the implementation of PM&E Measures and ongoing monitoring requirements by PacifiCorp; (3) establish appropriate procedures for conducting activities; and (4) establish subcommittees to accomplish these objectives.

## **1.3 Report Organization and Review**

The 2015 North Umpqua Hydroelectric Project Annual Report provides information on RCC roles, responsibilities, members, and meetings; PM&E measure implementation; FERC license actions; and fiduciary reporting.

## **SECTION 2.0**

# **RESOURCE COORDINATION COMMITTEE**

## 2.0 RESOURCE COORDINATION COMMITTEE

This section provides an overview of RCC roles and responsibilities according to the Settlement Agreement and as subsequently implemented. It also presents a summary of RCC meetings held during the reporting period, including major discussion points, decisions, and action items associated with each meeting.

### 2.1 RCC Roles and Responsibilities

The purpose and role of the RCC, as defined in SA Section 21.1, is to facilitate coordination and implementation of PM&E Measures. The RCC also looks at implementation requirements, and through collaboration and sharing of information, works to achieve desired results. Specifically excluded from RCC responsibility and authority is the administration of the Tributary Enhancement Program and Mitigation Fund set forth in SA Section 19. However, responsible Parties may consult with the RCC concerning measures conducted pursuant to this program and fund.

The structure and process of the RCC is intended to provide a forum to address time-sensitive matters, give early warning of problems, and coordinate member organization actions, schedules, and decisions to save time and expense. As described in the Settlement Agreement, the RCC must endeavor to conduct its business by consensus. However, in the event of disagreements, the Parties may refer disagreements to appropriate policy-level decision-makers. Decisions of the RCC may not usurp the authority of individual Parties or specific governmental agencies identified in the Settlement Agreement as having approval authority regarding specific PM&E Measures.

The RCC is responsible for the following measures pursuant to the Settlement Agreement:

- coordinating implementation of the Resource Coordination Plan (RCP), including ongoing operations and maintenance (SA Section 21.1);
- coordinating implementation of PM&E Measures and ongoing monitoring requirements by PacifiCorp (SA Section 21.1);
- coordinating responses and evaluations specifically assigned to the RCC (SA Sections 8.2.2, 8.3.3, 12.2, 14.3.3, 14.5, 17.8, 19.2.1 and 22.5.2, and SA Amendment Section 7.2);
- coordinating and consulting on plans developed by PacifiCorp (SA Section 21.1);
- reviewing and commenting on the draft annual report of RCC activities and implementation of PM&E Measures (SA Section 21.4.2); and
- serving as a common point of contact for public information regarding Settlement Agreement implementation.

The following measures are specifically excluded from RCC responsibility:

- administration of the Tributary Enhancement Program through ODFW's Memorandum of Understanding (SA Section 19.1);
- administration of the Mitigation Fund through USDA-FS (SA Section 19.3); and
- approval of plans and actions regarding specific PM&E Measures assigned to individual organizations for resource protection (SA Section 21.2).

The RCC defined discrete goals and functional responsibilities to enhance its effectiveness, including the following:

- interpretation of the Settlement Agreement through provisions to on-the-ground planning and implementation;
- monitoring implementation of the Settlement Agreement as a whole to provide a wider view than one agency's perspective;
- avoiding surprises and errors through effective communication;
- tracking progress as the interface for the Parties during implementation;
- identifying policy issues by working collectively to define and clarify the issues and options for transmittal to the executive members of the Parties;
- providing public information as a source of information regarding Settlement Agreement implementation with a collective voice;
- promoting efficiency through sharing of information among organizations; communicating changes in policy, procedure, or regulation; consulting before decision-making; and sharing technical resources;
- implementing the Settlement Agreement collaboratively to ensure that all Parties' interests continue to be valued throughout the new license term; and
- effectively communicating its progress through the development of a Web site at: <http://www.pacificorp.com/es/hydro/hl/nur.html#>.

## 2.2 RCC Members

The Parties have each appointed a member and an alternate to the RCC. The members are shown in Table 2-1. The RCC members work with a designated caucus within their respective organizations.

**TABLE 2-1. 2015 Resource Coordination Committee Members**

<b>RCC Member</b>	<b>Organization</b>
Pam Sichting	USDA Forest Service, Umpqua National Forest, Roseburg, Oregon
Jim Thrailkill	USDI Fish and Wildlife Service, Roseburg, Oregon
Anne Shirley	USDI Bureau of Land Management - Roseburg District, Roseburg, Oregon
Jim B. Muck	NOAA Fisheries West Coast Region, Roseburg, Oregon
Dave Harris	Oregon Department of Fish and Wildlife, Roseburg, Oregon
Chris Stine	Oregon Department of Environmental Quality, Eugene, Oregon
Mary Grainey	Oregon Water Resources Department, Salem, Oregon
Steve Albertelli	PacifiCorp, Medford, Oregon

## 2.3 RCC Meetings

During the reporting period, the RCC conducted four meetings to review work plans, discuss implementation objectives for current and future PM&E Measures, and facilitate the overall Settlement Agreement implementation. The formal ground rules established and adopted by the RCC provide the functional framework for this collaborative approach. These ground rules are provided on the PacifiCorp Web site at:

[http://www.pacificorp.com/content/dam/pacificorp/doc/Energy\\_Sources/Hydro/Hydro\\_Licensing/North\\_Umpqua\\_River/RCC\\_Ground\\_Rules.pdf](http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/North_Umpqua_River/RCC_Ground_Rules.pdf)

Meeting summaries are drafted and distributed to the RCC members for review and comment. After corrections have been made as appropriate, the RCC approves the summaries by consensus. Meetings are open to the public for comment, and any comments received are added to the meeting summaries.

This section provides highlights of items discussed at RCC meetings during the reporting period. Detailed meeting summaries are provided on the PacifiCorp Web site at: <http://www.pacificorp.com/es/hydro/hl/nur.html#>.

- The RCC approved the following two TWG funding proposals:
  - Commitment of approximately \$50,000 from the SA 8.3 fund to design and install in-water structures (boulders) to repair and protect the Soda Springs bypass reach upper log weir from severe scour experienced in December 2014.
  - Commitment of an estimated \$128,600 from the SA 19.2 fund for ODFW experimental biology aide (EBA) staffing and associated costs for 2015-2016. EBA work assignments will include long term monitoring and predator/prey studies as prescribed by the Settlement Agreement.
- The annual public tour was held on October 22, 2015.
- It was discussed whether to continue to hold the public tours in spite of low attendance. The consensus was that the RCC felt the public tours continue to be a good way for the private citizens to see the successes achieved through implementation of the License and Settlement Agreement.
- The RCC considered the *Tailrace Barrier Biological Evaluation Report* and associated, revised operations procedures to be complete and satisfactory.

## **SECTION 3.0**

# **PROTECTION, MITIGATION, AND ENHANCEMENT MEASURES**

## **3.0 PROTECTION, MITIGATION, AND ENHANCEMENT MEASURES**

This section presents a progress report of PM&E Measures defined in the North Umpqua Settlement Agreement and the FERC license implemented during calendar year 2015. A summary of all documents submitted to FERC and their current status is also presented.

During the current license term, the Parties may agree to modify the schedule of PM&E Measures, when necessary. In such instances, the Parties will convene and modify Settlement Agreement implementation schedules only if all Parties are in agreement that such modifications are warranted. Delays in implementation are typically only needed to further refine plans for the action in order to ensure greater success.

### **3.1 Implementation of PM&E Measures**

The schedule for all PM&E Measures and their status is presented in Table 3-1. The status of the PM&E Measures specific to calendar year 2015 is presented in Table 3-2.

During 2015, Settlement Agreement and license actions focused on planning, monitoring, constructing projects, and engineering designs. All Parties have worked cooperatively toward meeting Settlement Agreement schedule commitments.

**TABLE 3-1  
Protection, Mitigation, and Enhancement Measures  
Implementation Schedule**

Key	
	Due Date
x	In Progress
●	Complete

SA Section	PM&E	YEAR														
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024+
<b>6.0 RAMPING</b>																
6.2.1	Slide Creek Ramping Monitoring Plan Implementation				x	x	x									
6.4	Wild & Scenic Ramping Restrictions	●	●	●	●	●	●									
6.5	Bypass Reach Ramping Restrictions	●	●	●	●	●	●									
6.6	Project Maintenance - Appendix D Schedule	●	●	●	●	●	●									
6.7	Emergency Shutdown Ramp Restrictions	●	●	●	●	●	●									
<b>7.0 RESTORATION OF FLUVIAL PROCESSES</b>																
7.2	Gravel Augmentation Program	●	●	●	●	●	●									
7.3	Passage of Woody Debris	●	●	●	●	●	●									
7.4	Passage of Sediment (if high flows present)	●	●	●	●	●	●									
<b>8.0 MAINSTEM HABITAT ENHANCEMENT</b>																
8.3.5	Soda Springs Funding and Accounting	●	●	●	●	●	●									
<b>9.0 RESERVOIR AND FOREBAY MANAGEMENT</b>																
9.1	Stocking of Rainbow Trout Funding	●	●	●	●	●	●									
9.3	Management of Lemolo Lake Reservoir	●	●	●	●	●	●									
9.5	Fish Salvage during Shutdowns	●	●	●	●	●	●									
<b>10.0 AQUATIC RESOURCES</b>																
10.6	Reconnecting Aquatic Connectivity Sites	x	x	x	x	x	x									
<b>11.0 TERRESTRIAL RESOURCES</b>																
11.5	Wetland Enhancements			x	x	x	x									
<b>12.0 VEGETATION MANAGEMENT</b>																
12.1	Vegetation Management Plan Development and Implementation	●	●	●	●	●	●									
12.2	Noxious Weed Control	●	●	●	●	●	●									
<b>13.0 AVIAN PROTECTION</b>																
13.4	Records & Database Management System	●	●	●	●	●	●									
<b>14.0 EROSION &amp; SEDIMENT CONTROL</b>																
14.4.3	Medium Priority Erosion Sites (27)	x	x	x	x	x	●									
14.5	Erosion Monitoring	●	●	●	●	●	●									
<b>15.0 TRANSPORTATION</b>																
15.1	Transportation Management Plan Implementation	●	●	●	●	●	●									

**TABLE 3-1  
Protection, Mitigation, and Enhancement Measures  
Implementation Schedule**

Key	
	Due Date
x	In Progress
●	Complete

SA Section	PM&E	YEAR														
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024+
15.2	PPL Roads to USDA-FS Standards	●	●	●	●	●	●									
15.3	Cost Sharing for Joint Roads and Maintenance	●	●	●	●	●	●									
15.5	Bridges - Inspections/Maintenance	●	●	●	●	●	●									
15.5.1	Bridge Maintenance Cost Sharing	●	●	●	●	●	●									
15.6	100-Year Flood Culvert Upgrades	x	x	x	x	x	●									
15.6	Culvert Maintenance on PPL Use Roads	●	●	●	●	●	●									
<b>16.0 AESTHETICS</b>																
16.1	Aesthetics Management Plan Implementation	●	●	●	●	●	●									
<b>17.0 RECREATION</b>																
17.2	Recreation O&M Funding	●	●	●	●	●	●									
17.7	Law Enforcement Funding	●	●	●	●	●	●									
17.8	Recreation - Capital Improvements	●	●	●	●	●	●									
17.9	Public Information Funding	●	●	●	●	●	●									
17.10	Annual Monitoring Funding	●	●	●	●	●	●									
<b>18.0 CULTURAL</b>																
18.1	Historic Properties Management Plan Implementation	●	●	●	●	●	●									
18.3/18.6	Site Discovery/Monitoring	●	●	●	●	●	●									
18.4	Protection, Restoration, and Recovery	●	●	●	●	●	●									
<b>19.0 MITIGATION</b>																
19.1.1	Tributary Enhancement Account - Use of Funds	●	●	●	●	●	●									
19.2	Long-Term Monitoring/Predator Control Funding	●	●	●	●	●	●									
19.2.1	Long-Term Monitoring/Predator Control Disbursements	●	●	●	●	●	●									
19.3.3	Federal Mitigation Funding	●	●	●	●	●	●									
19.4.1	Monitoring and Oversight	●	●	●	●	●	●									
<b>21.0 COORDINATION &amp; DECISION-MAKING</b>																
21.1	Resource Coordination Committee	●	●	●	●	●	●									
21.1	Resource Coordination Plan - Developed and Implemented	●	●	●	●	●	●									
21.4.2	Annual Report	●	●	●	●	●	●									
21.5	Site Specific Plan Development	●	●	●	●	●	●									

**TABLE 3-2. Protection, Mitigation, and Enhancement Measures Status**

SA Section	PM&E	Due Date	Current Status
4.1	Fish Passage at Soda Springs Dam  Design/Construct/ Evaluate/Operations and Maintenance	2012 – Complete construction  2017 – Complete evaluation	The fish ladder was in service throughout the year with the exception of a winter shutdown for an improvement to the fish counting window. The ladder passed hundreds of adult steelhead and salmon. The fish screen was in service most of the year but was also shut down in mid-summer for maintenance. Performance evaluations are on-going. The Operations and Maintenance Annual Report, filed with FERC, was updated to include more detail.
4.1.1(f)	Tailrace Barriers	2007 – Complete construction (Soda Springs)  2011 – Complete construction (Slide Creek)	The added biological evaluation was completed in the fall. The final report indicated that the facilities are successfully protecting adult fish as designed.
5.1	Instream Flow Increases in Project Bypass Reaches	2005-2038	License-required minimum flows continued to be provided and managed within required ramp rate allowances.
5.5	Instream Flow Monitoring	2002-2038	Monitoring and reporting continued as required in the Plan.
6.2.1	Slide Creek Ramping Monitoring Plan Implementation	2013-2020	Study conditions (aggressive load following operations) did not occur in 2015, so field study was not pursued.
6.4	Wild and Scenic Ramping Restrictions	2001-2038	Ramping restrictions were followed within equipment limitations per the Flow Monitoring Plan.
6.5, 6.6	Bypass Reach Ramping Restrictions	2001-2038	Ramping restrictions and reporting requirements were followed per the Flow Monitoring Plan.

SA Section	PM&E	Due Date	Current Status
7.2	Gravel Augmentation Program (as per SA Amendment No. 1)	2002-2038	Monitoring of augmentation sites continued per the Plan.
7.3	Passage of Woody Debris at Soda Springs and Slide Creek Dams	2002-2038	Passage of woody debris continued according to the Plan.
8.2.1-8.2.2	Slide Creek Bypass Reach Habitat Project Implementation/ Monitoring	2002-2038	Monitoring continued according to the Plan.
8.3.2-8.3.3	North Umpqua River Habitat Restoration/ Creation Implementation/ Monitoring	2004-2038	Annual monitoring occurred according to the Plan. An annual report was submitted to the RCC. Maintenance included the addition of 100 cubic yards of spawning gravel and 345 cubic yards of boulders at a cost of \$41,000.
9.1	Funding for Production of Rainbow Trout for Stocking	2004-2038	PacifiCorp provided \$19,829.65 to the ODFW in 2015.
9.3	Lemolo Reservoir Management Plan and Limits on Drawdown Rate and Elevations	2001-2038	Water levels and drawdown rates were monitored according to the Flow Monitoring Plan.  Lake management and consultation proceeded according to the Lemolo Reservoir Management Plan.
9.5	Salvage of Fish During Maintenance Shutdowns	2001-2038	Advance notice of maintenance shutdowns was made to the appropriate agencies, and the salvage and liberation of fish continued as required.
10.6	Aquatic Connectivity	Priority 2 sites – 2016	Seven aquatic connectivity sites were constructed in 2015. The final ten sites are planned for construction in 2016. All of the final sites require dewatering and excavation below the flume. Engineered construction plans for these sites will be completed on or about May 2016.

SA Section	PM&E	Due Date	Current Status
11.5	Wetland Development	2006-2016	The Fireswamp wetland enhancement was constructed in October 2015. Design development and consultation for the Lake Creek wetland enhancement project began in 2015, and the project is planned for construction in 2016.
12.1	Vegetation Management Plan Implementation	2004-2038	The Vegetation Management Plan (VMP) continues to undergo implementation. Noxious weed treatments were conducted on USDA-FS lands. Noxious weed training occurred per the Plan and implementation of the horticultural invasive species program continued as necessary to satisfy VMP requirements. The 5-year rolling action plan (RAP) was developed and presented to both the USDA-FS and the BLM in December.
13.1	Power Pole Modification	2001-2038	Transmission structures were replaced and installed on transmission lines within the FERC boundary in 2015 to achieve NERC under-clearance compliance requirements.
13.4	Records Database Management System	2001-2038	The database for management of birds on power lines was maintained. An annual report summarizing avian-power line program activities occurring within the Project area was submitted to the USDA-FS in February.
14.2	Canal Shutoff and Drainage Systems (CSDS)	2007-2010	The Fish Creek CSDS continued to receive improvements to its communication system. Installations of fiber optic and power cables along the canal alignment were completed, to provide reliable communications and prepare the site for final testing.
14.4	Erosion Site Remediation	2016	Erosion site remediation was completed at the FC-14 site. All high and medium sites have now been remediated.

SA Section	PM&E	Due Date	Current Status
14.5	Erosion Control Monitoring	2001-2038	Erosion sites were monitored and an annual report was produced and distributed to the agencies in December.
15.1 – 15.4	Transportation Management Plan Implementation	2004-2038 2007-2038 – Cost Sharing	The Transportation Management Plan continues to undergo implementation. The 5-year RAP was developed in consultation with the USDA-FS and the BLM. The total cost of road maintenance on roads jointly-maintained by USDA-FS and PacifiCorp in 2015 was \$64,248, of which PacifiCorp's share was \$13,331.
15.5, 15.5.1	Bridge Inspections, Maintenance; and Cost Sharing	Biennial - Inspections  2013 – Non-critical, Deferred Bridge Maintenance  2005-2038 – Cost Sharing	Major progress was made toward completion of remaining, non-critical, deferred bridge maintenance tasks by 2016. Maintenance delays were discussed and coordinated with USDA-FS staff at the annual RAP meeting. Cost-sharing continued or commenced for bridges on jointly-maintained hydro (JMH) roads following completion of non-critical, deferred maintenance. All of the North Umpqua bridges were inspected in 2015 as part of the biennial inspection program. The U-29 Cottage Bridge West and the U-41 Slide Creek bridge approach span were both replaced in 2015. The Deer Creek U-15 bridge deck replacement began in 2015 and will be completed by May 2016.
15.6	Fish Passage and Q100 Culvert Upgrades	2005-2015	The two remaining USDA-FS-owned culverts (6520 at Soda Springs and 6535 below Soda Springs plant) on jointly-maintained roads were replaced in 2015. PacifiCorp paid the required cost-share of these replacements for work performed by USDA-FS.
16.1, 16.3, 16.4	Visual Resources (Aesthetics) Management Plan	2005-2038	The Visual Resources (Aesthetics) Management Plan continued to undergo implementation. The 5-year RAP was developed in December.
17.1	Recreation Resources Management Plan Implementation	2004-2038	The Recreation Resources Management Plan continued to undergo implementation. The 5-year RAP was developed and updated in consultation with the USDA-FS. Identified actions were completed.

SA Section	PM&E	Due Date	Current Status
17.2	Campground Operations and Maintenance	2004-2038	PacifiCorp provided \$137,206 to the USDA-FS in 2015.
17.7	Law Enforcement	2004-2038	PacifiCorp provided \$10,576 to the USDA-FS in 2015.
17.8	Capital Improvements	2002-2015; future years will be monitoring-dependent	PacifiCorp provided \$158,640 to the USDA-FS in 2015.
17.9	Public Information	2004-2038	PacifiCorp provided \$8,567 to the USDA-FS in 2015.
17.10	Recreation Monitoring  Recreation Monitoring (Periodic Surveys)	2004-2038  2007, 2012, 2017, 2022, 2027, and 2032	PacifiCorp provided \$8,567 to the USDA-FS in 2015.
18.1	Cultural Resources (Historic Properties) Management Plan Implementation	2006-2038	The Historic Properties Management Plan and Historic Structures Plan continue to undergo implementation. The 5-year RAP was updated in consultation with the USDA-FS, the BLM, and the SHPO.
18.6	Cultural Resources Monitoring	2001-2038	PacifiCorp coordinated ground-disturbing activities with the USDA-FS, the BLM, and the SHPO to assure ongoing monitoring and protection of historic properties.
19.1	Tributary Enhancement Program	2004-2038	Per the ODFW Memorandum of Understanding, work continued on fish habitat enhancements and fish passage improvements.

SA Section	PM&E	Due Date	Current Status
19.2	Long-Term Monitoring and Predator Control	2004-2038	PacifiCorp deposited \$132,197.63 into the designated fund in 2015. The RCC agreed to provide \$128,201 from this fund to the ODFW for 2015-2016 EBA staffing/costs. Long-term monitoring and predator study work proceeded according to the study plan, refined as necessary by the technical working group.
19.3	Mitigation Fund	2004-2038	PacifiCorp deposited \$330,494.08 into the USDA-FS account in 2015.  A USDA-FS Mitigation Fund Board of Directors (BOD) annually evaluates proposals and selects mitigation projects to be implemented with this funding. Project rankings are completed by the USDA-FS hydropower project review group and final recommendations are made by the BOD. The Forest Supervisor of the Umpqua National Forest makes the final decision on project selections.
19.4	Oversight Costs	2005-2020	PacifiCorp provided \$214,160.17 in 2015 to the ODFW for the funding of two full-time ODFW personnel to help oversee and monitor work associated with the ODFW MOU.
21.4.1	RCC	2001-2038	The RCC continued to facilitate the implementation of PM&Es. It held an annual planning session, a public tour, and quarterly meetings. TWGs convened if and when necessary, to address detailed consultation issues.

### 3.1.1 Major Accomplishments

During the reporting period, PacifiCorp continued implementing PM&E Measures in compliance with the Settlement Agreement. Major accomplishments are described below by Settlement Agreement section.

#### Anadromous Fish Passage at Soda Springs Dam (SA Section 4.1)

The first annual Soda Springs Fish Passage Facility Operation and Maintenance Report was filed with the FERC in January. The fish ladder was in operation for the majority of the year with the exception of a pair of maintenance events lasting several days each. The fish screen was also in operation for the majority of the year with the exception of longer maintenance and upgrade outages including one spanning July and August. Precautionary High Flow Procedures and automated operations were refined to reduce the likelihood and magnitude of fish screen damage during high flow events. No major damage was experienced in 2015.

Hydraulic and biological performance evaluations continued in 2015, with the majority of hydraulic evaluations and approximately half of the biological evaluations completed.

Biological monitoring of fish behavior at both the Soda Springs and Slide Creek tailrace barriers was completed. Results indicated that each facility was successfully protecting adult fish, as intended.

#### Anadromous Fish Habitat Enhancement (SA Sections 7.2 - 8.3)

Monitoring was completed according to the respective Plans. In August, 100 cubic yards of spawning gravel and 345 cubic yards of boulders were added to the SA 8.3 upper spawning habitat area to expand the area of spawning habitat and protect the weirs from undercutting, respectively.



Aquatic Connectivity Sites (SA Sections 10.6 and 10.7)

Seven aquatic connectivity sites were constructed in 2015, including five sites on the Fish Creek waterway and two sites on the Lemolo 2 waterway. These sites are successfully passing flows and providing uninterrupted aquatic habitat connectivity between habitats upstream and downstream of Project waterways.



Enhancement of Wetland Species Diversity (SA Section 11.5)

The Fireswamp wetland enhancement site (the seventh of eight SA-required wetland enhancements) was constructed in October. The USDA-FS completed the initial planting efforts in November, with supplemental planting to occur in May 2016. Designs for the Lake Creek wetland enhancement were developed for review by the ODFW and USDA-FS in December. Construction and planting of the site are planned for fall 2016.



Tributary Enhancement Program (SA Section 19.1)

Implementation of habitat enhancements and other program work by ODFW staff continued, including:

- *Harrington Creek* - ODFW Hydropower Mitigation Biologists' implementation of designs prepared in 2014 were completed at 21 sites, adding 983 boulders, 167 logs, 10 whole trees, and 9 whole trees with root-wads. Based on the results from the previously completed 8-year effectiveness monitoring study in Harrington, the designs and strategic placement of the materials added 23 side channels and an additional 1.45 miles to the 1-mile stretch of mainstem, tallying 2.45 total miles of restored Harrington Creek habitat. In addition, a Harrington Creek tributary culvert replacement is scheduled for 2018 and a proposal for a possible temporary bridge, spanning upper Harrington Creek to access another 0.75 mile enhancement reach, is in the planning stage.



Harrington Creek - Site #9



Harrington Creek – Bottom of site #10 and side channel



Harrington Creek – Sediment barrier with floc blocks

- *Rock Creek Mainstem* - Designs were completed for 20 sites in a 1-mile section of mainstem Rock Creek, upstream and downstream of the confluence with Harrington Creek. Implementation is scheduled for the summer of 2016. While some of the designs incorporating a combination of 1,500 boulders and 161 pieces of wood are time-tested standards, some innovative designs will integrate the boulders and 101 of the newly procured trees with full root-wads attached to enhance both juvenile and adult life history needs. This same section is where two mussel beds were discovered during previous spawning surveys, and unique designs were added to protect and enhance these areas.
- *Spawning Surveys 2015-2016* - Adult spring Chinook, coho, winter steelhead, summer steelhead and adult Pacific lamprey spawning surveys continued in most previously-enhanced reaches, as well as in new reaches that are designated for implementation in 2016 in mainstem Rock Creek. Spring Chinook (11 redds) and winter steelhead (18 redds) have been actively using the recently restored reaches by digging nests within the newly accumulated gravel. A pre-enhancement spawning survey for spring Chinook and coho turned up zero redds and will be used as a baseline for comparison with post project success surveys.

Harrington Creek had a peak coho count of 8 fish and 11 redds which, while low, was better than some of the larger, restored streams in the basin and in alignment with the low escapement numbers reported throughout the Umpqua Basin. Winter steelhead spawning survey numbers are better than predicted in 2015 and are still ongoing.

- *Wapiti Creek Manual Riparian Conversion/Enhancement* - Wapiti Creek is a tributary of the North Fork of East Fork Rock Creek. The Wapiti Creek project was not completed as described in the 2014 report due to conflicts with the landowner's consultant's timeline and has been rescheduled for a later date.
- *Rock Creek Diversion Dam and Fish Ladder* - Two of the three rotating screens at the diversion dam were recently damaged and pulled out for repair. The third screen has been non-operational and is cleaned by hand instead of with the pulsating water jets. No timeline has been given for repairs.
- *Adult Salmonid Snorkel Survey* – Snorkel surveys for adult summer salmonids continued in September. The entire North Umpqua spring Chinook (CHS) run count was low based on Winchester dam counts. For the period from 2009-2014, the total CHS count ranged from 13,800-16,800. For comparison, in 2015 the count at Winchester dam was 9,597, and of those crossing the dam, only 599 CHS made it to Rock Creek, versus over 1,000 CHS per year between the same period of 2009-2014. Of the 615 CHS above and below the diversion dam in Rock Creek, only 16 were non-clipped. For summer steelhead, the same areas held 55 total fish with 29 non-clipped. Management has decided not to trap 100 percent of the hatchery fish as was first proposed, and therefore, these corresponding numbers will likely continue.

- *Lamprey* - A couple of adult Pacific lamprey were seen in the Rock Creek diversion dam's video record, and these sightings are expected to continue along with increased redds as the restoration continues and older enhancements mature.
- *Monitoring* - ODFW continues to partner with local watershed councils (South Umpqua Rural Community Partnership and Partnership for Umpqua Rivers) to supplement mitigation dollars to provide continued enhancement of tributaries in the basin well into the future.

ODFW's hydropower program has partnered with BLM's hydrologist to build up to ten small water quality stations in Rock Creek and a couple of tributaries. Station data will be used to validate and monitor water temperature decreases from instream restoration structures contributing to increased hyporheic flow and lateral flood plain inundation. ODFW's hydropower program has also partnered with USGS and Douglas County to move and renovate the gage station below McComas Creek.

ODFW has partnered with BLM's professional drone pilots to film approximately ten miles of mainstem Rock Creek and East Fork Rock Creek to document the restoration. ODFW is also partnering with BLM's hydrologist and Engineering Department to designate old rock quarries for future boulder acquisition. In addition, ODFW is continuing to help BLM's Seed Tree Orchards get rid of unwanted trees by mechanically pushing them over with root-wads intact and hauling them away for placement in Rock Creek Basin.

### 3.1.2 Plans and Reports

The following plans and reports were completed and/or revised:

**Table 3-3. Plan and Report Status in CY2015**

Plan/Report	SA Section, License Article, or FERC Order	Date
Soda Springs Spawning Habitat Annual Report	SA 8.3	January
Lemolo Reservoir Management Annual Report	SA 9.0	January
Annual Avian Protection Report	SA 13.4	January
Soda Springs Fish Passage Operation and Maintenance Annual Report	SA 4.1.1 (FERC requirement)	January
Annual Threatened and Endangered Species and Bald Eagle Monitoring Report	License Articles 411 & 412	February
Flow Monitoring Annual Report (WY2013)	SA 5,6	March
Long-term Monitoring and Predator Control Study Annual Report	SA 19.2	March
Resource Coordination Committee Annual Report	SA 21.4.2	June
Erosion Control Plan Annual Report	SA 14.5	October
Historic Properties Annual Report	License Article 414	December

### 3.2 FERC License Actions

The FERC license contains actions that are required in addition to those actions in the Settlement Agreement. Table 3-4 summarizes the FERC License requirements that were fulfilled during this reporting period.

**Table 3-4. FERC License Actions Status**

Date Filed	License Article	Settlement Agreement Section	Description	Status/ Comments
1/28/15	401	4.1	2014 Soda Springs Fish Passage Facility Operations and Maintenance Annual Report	Acknowledged 2/18/15
2/3/15	411 & 412	USDA-FS 4(3) Cond. 16	2014 Threatened and Endangered Species and Bald Eagle Monitoring Report	Acknowledged 2/3/15
6/8/15	401	21.4.2	2014 Resource Coordination Committee Annual Report	Acknowledged 6/8/15
12/15/15	414	18.1 & 18.2	2015 Historic Properties Annual Report/Action Plan	Acknowledged 12/15/15

**SECTION 4.0**

**FIDUCIARY REPORTING**

## 4.0 FIDUCIARY REPORTING

Consistent with Settlement Agreement fiduciary reporting requirements, this section provides account information for the following actions and fulfills the requirement to annually report the amounts deposited into and disbursed from each of the following accounts:

- SA Section 7.2.3 (amended) Gravel Augmentation Program;
- SA Section 8.3.5 (amended) North Umpqua River Habitat Restoration/Creation Project;
- SA Section 19.1.1.3 Tributary Enhancement Program; and
- SA Section 19.3.1 Mitigation Fund.

The Settlement Agreement does not require annual reporting for SA Section 19.2 Long-Term Monitoring and Predator Control Fund. Since this was likely an oversight, the account information for this fund is also provided in this section.

## Fiduciary Reporting

**Table 4-1. SA 7.2 Gravel Augmentation Program**

<b>Date</b>	<b>Item</b>	<b>Expenditures</b>	<b>Funding</b>	<b>Balance</b>
<b>2015</b>	<b>Opening Balance</b>			<b>\$38,609.60</b>
2015	Annual Escalation (per SA 22.4.4)		\$606.64	\$39,216.24
2015	Expenditures			
2015	Total Expenditures	\$0.00		\$39,216.24
<b>2015</b>	<b>Ending Balance</b>			<b>\$39,216.24</b>

## Fiduciary Reporting

**Table 4-2. SA 8.3 North Umpqua River Habitat Restoration/Creation Project**

Date	Item	Expenditures	Funding	Balance
<b>2015</b>	<b>Opening Balance</b>			<b>\$120,891.24</b>
2015	Annual Escalation (per SA 22.4.4)		\$1,899.47	\$122,790.71
2015	Expenditures			
	<b>Stillwater Sciences</b>			
	Soda Springs bypass reach log weir – Field site assessment and preparation of draft and final technical memorandums	(\$8,730.24)		
	<b>Weekly Bros.</b>			
	Soda Springs bypass reach log weir scour protection	(\$41,000.00)		
2015	Total Expenditures	(\$49,730.24)		\$73,060.47
<b>2015</b>	<b>Ending Balance</b>			<b>\$73,060.47</b>

## Fiduciary Reporting

**Table 4-3. SA 19.1 Tributary Enhancement Program Fund**

Date	Item	Expenditures	Funding	Balance
<b>2015</b>	<b>Opening Balance</b>			<b>\$1, 655,483.75</b>
2015	Expenditures			
	<b>Kevin Saylor</b>			
	Tree tipping, log yarding and decking, slash piling and log truck loading; root wad transfer to staging sites	(\$48,100.00)		
	<b>Bruce Standley Construction</b>			
	Log hauling	(\$20,639.76)		
	<b>South Umpqua Rural Community Partnership</b>			
	Start-up costs for two 2015-2016 Rock Creek projects: 1) stream gage and water quality station; and 2) boulder and rock pit development	(\$33,000.00)		
	<b>United Rentals</b>			
	Backhoe/Loader Rental	(\$680.69)		
	<b>Willard Marshall Trucking</b>			
	Log hauling	(\$21,062.50)		
2015	Total Expenditures	(\$123,482.95)		\$1,532,000.80
2015	Investment Earnings		\$164.75	\$1,532,165.55
<b>2015</b>	<b>Ending Balance</b>			<b>\$1,532,165.55</b>

## Fiduciary Reporting

**Table 4-4. SA 19.2 Long Term Monitoring/Predator Control Fund**

Date	Item	Expenditures	Funding	Balance
<b>2015</b>	<b>Opening Balance</b>			<b>\$358,272.89</b>
2015	Annual Funding (\$100K escalated)		\$132,197.63	\$490,470.52
2015	Expenditures			
	<b>ODFW</b>			
	2015-2016 EBA* staffing	(\$128,201.00)		
	<b>Stillwater Sciences</b>			
	Predator Control Program Monitoring and Adaptive Management Plan development; provision of spawning survey field maps	(\$11,237.97)		
2015	Total Expenditures	(\$139,438.97)		\$351,031.55
2015	Investment Earnings		\$43.55	\$351,075.10
<b>2015</b>	<b>Ending Balance</b>			<b>\$351,075.10</b>

\*EBA - *Experimental biology aide*

## Fiduciary Reporting

**Table 4-5. SA 19.3 Mitigation Fund**

<b>Date</b>	<b>Item</b>	<b>Expenditures</b>	<b>Funding</b>	<b>Balance</b>
<b>2015</b>	<b>Opening Balance</b>			<b>\$2,455,680.34</b>
2015	Annual Funding (\$250,000 escalated)		\$330,494.08	\$2,786,174.42
2015	Expenditures			
2015	Total Expenditures	\$0.00		\$2,786,174.42
2015	Interest Earned		\$545.86	\$2,786,720.28
<b>2015</b>	<b>Ending Balance</b>			<b>\$2,786,720.28</b>

**SECTION 5.0**

**CONCLUSION**

## 5.0 CONCLUSION

The 2015 Annual Report provided herein underscores another productive year of License and Settlement Agreement implementation made possible through the dedication of the Parties and their respective staff, PacifiCorp's implementation team members, and the public.

The RCC ground rules and protocols for interagency teamwork and communication have provided an effective framework for watershed management consistent with the goals of the Settlement Agreement. Parties worked cooperatively toward meeting Settlement Agreement commitments during the report period and projects were completed on schedule.

Of particular note, the Soda Springs fish passage facilities were operational throughout 2015, with the exception of limited maintenance outages, and hundreds of steelhead and salmon were observed using the fish ladder during the year. Hydraulic and biological evaluations of the fish passage facilities continued in 2015 as planned.

Other major accomplishments during the reporting period included completion of biological monitoring of fish behavior at the Soda Springs and Slide Creek tailrace barriers; continued enhancement of anadromous fish habitat via placement of spawning gravel below Soda Springs dam; successful construction of seven aquatic connectivity sites; construction of the Fireswamp wetland enhancement site; and completion of annual Rolling Action Plans for ongoing programs to manage vegetation, erosion, transportation, aesthetics, recreation, and cultural resources in the North Umpqua Project area.

2016 will be the final year of date-certain, large-scale construction projects for implementation of PM&E measures. These measures include construction of the last ten aquatic connectivity sites along the Lemolo 2 waterway and construction of the eighth and final wetland enhancement site adjacent to a side-channel of Lake Creek. In addition to these construction projects, emphasis will be placed on the continued successful operation and evaluation of the Soda Springs fish passage facilities pursuant to the intent of the Settlement Agreement. Balancing hydraulic conditions and refining operation of downstream fish passage facilities will be an important precursor to biological evaluations of these facilities in 2016. As in past years, long-term monitoring and off-site mitigation will continue in the North Umpqua basin as part of the implementation program to protect, mitigate, and enhance natural resources in this highly valued watershed.