

# **Klamath Hydroelectric Settlement Agreement Implementation Progress**

**March 31, 2010**

## **General Settlement Implementation**

**Regulatory Filings** - On March 18, 2010, in accordance with KHSA Sections 4.1.1 and 7.3.9, PacifiCorp filed its Economic Analysis and requested the California and Oregon Public Utility Commissions establish customer surcharges to collect the customer contribution towards dam removal costs and adjust the depreciation schedule for the Klamath hydroelectric facilities in contemplation of their potential removal in 2020. On September 16, 2010, the Oregon Public Utility Commission (OPUC) issued a final order affirming the dam removal surcharges for Oregon customers and a depreciation schedule for the facilities that provides for removal in 2020. The OPUC order is available at <http://apps.puc.state.or.us/orders/2010ords/10-364.pdf>. The Oregon customer surcharge of \$172 million over ten years will provide approximately \$184 million in funding for dam removal in 2020. On February 22, 2011 the California Public Utilities Commission (CPUC) issued a proposed decision affirming surcharges for PacifiCorp's California customers and a depreciation schedule that provides for a removal of the facilities in 2020. The proposed decision is available at <http://docs.cpuc.ca.gov/EFILE/PD/131033.PDF>. The CPUC is expected to issue a final order on the California surcharge filing in April 2011.

**401 Abeyance** - On March 19, 2010, PacifiCorp requested, pursuant to Section 6.5 of the KHSA and on behalf of the Parties except ODEQ, to the California State Water Resources Control Board (SWRCB) and the Oregon Department of Environmental Quality (DEQ) that permitting and environmental review for PacifiCorp's licensing activities be held in abeyance during the Interim Period. This request was subsequently granted by DEQ on March 29, 2010 and the SWRCB passed a resolution granting the abeyance, with conditions, on May 18, 2010. On September 16, 2010, PacifiCorp filed a request to the SWRCB to amend its abeyance resolution to accommodate the fact that federal legislation was not introduced in Congress by June 18, 2010. A number of parties to the KHSA wrote the SWRCB to express support for this request and the abeyance resolution was amended on October 5, 2010 to incorporate a May 17, 2011 milestone for enacting federal legislation.

**Local Community Power** – Pursuant to Section 5.3, Interior and PacifiCorp have discussed the need to identify eligible loads that may qualify for federal power. When Interior has identified these loads, PacifiCorp and Interior plan to identify necessary information about those loads to inform planning on the potential delivery of federal power to serve eligible loads.

**Keno Transfer** - Pursuant to KHSA Section 7.5.2, PacifiCorp and the Bureau of Reclamation (Reclamation) have conducted conference calls and shared information on the potential transfer of the Keno development. PacifiCorp has cooperated with Reclamation in completing a Safety of Dams Inspection of the Keno development, as well as transferring project drawings and information necessary for the Department of the Interior to complete the Keno facility study process described in Section 7.5.1. Reclamation is continuing its studies of Keno facility transfer and PacifiCorp and Reclamation are discussing the framework for a transfer agreement for the Keno facility. PacifiCorp and Reclamation expect to have an agreement in principle for Keno

transfer by June 1, 2011.

**Lease of State-Owned Beds and Banks** - Pursuant to Section 2.5, PacifiCorp submitted special use applications to the Oregon Department of State Lands on April 16, 2010 for leases authorizing occupancy of submerged and submersible lands occupied by J.C. Boyle and Keno dams. PacifiCorp and the State of Oregon are currently finalizing lease terms for these lands.

## **Interim Measures Implementation**

### **Interim Measure No. 1 – Interim Measures Implementation Committee**

Parties to the KHSA have designated their representatives to the Interim Measures Implementation Committee (IMIC) and the IMIC has been meeting quarterly since the KHSA was signed. The IMIC met three times in 2010 and conducted its first meeting of 2011 on February 10, 2011 in Portland. The next IMIC meeting is scheduled to be conducted in May, 2011.

### **Interim Conservation Plan Measures (Interim Measures Nos. 2-5)**

PacifiCorp has been implementing Interim Conservation Plan (ICP) measures to benefit listed species (Lost River and shortnose suckers and coho salmon) since the Interim Conservation Plan was developed in November 2008. Pursuant to Section 6.2 of the KHSA, PacifiCorp has engaged in technical discussions with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) regarding applications for incidental take permits under Section 10 of the Endangered Species Act (ESA) through Habitat Conservation Plans to cover interim operations of the Project prior to potential dam removal. PacifiCorp has also met with and briefed the Klamath, Karuk, Yurok, and Hoopa Tribes on the development and implementation of ICP measures and has requested comments from the Tribes on early drafts of the Habitat Conservation Plans. PacifiCorp filed a Habitat Conservation Plan for Coho Salmon and related Section 10 application materials with NMFS on February 14, 2011, and expects to transmit a final application to the USFWS in the near future.

### **Interim Measure No. 2 – California Klamath Restoration Fund/Coho Enhancement Fund**

On February 15, 2011, PacifiCorp made its third payment of \$510,000 into the Coho Enhancement Fund, which is being administered by the National Fish and Wildlife Foundation. Monies available from the Coho Enhancement Fund will be used to implement habitat enhancement projects that meet the goals and objectives outlined in PacifiCorp's Habitat Conservation Plan for Coho Salmon recently filed with NMFS. Projects implemented under the Coho Enhancement Fund have included project recommended by the California Department of Fish and Game (CDFG) and NMFS. Projects selected and implemented under the Coho Enhancement Fund in 2009 included the following:

#### **2009 Coho Enhancement Fund Projects**

Seiad Creek Channel Reconstruction - Phase 1

Seiad Creek Off-Channel Pond Habitat Construction

Scott River Diversion Improvements: Shackelford, French and Etna Creeks

Scott River - Denny Ditch Fish Screen Installation

Projects selected for funding under the Coho Enhancement Fund in 2010 included the following:

**2010 Coho Enhancement Fund Projects**

Shasta River Coho Habitat Protection  
Grenada Irrigation District – Huseman Relocation Instream Phase  
Improving Streamflow for Coho Salmon in the Scott River  
Seiad Creek Channel Restoration – Phase II  
Middle Klamath Restoration Implementation Planning  
Middle Klamath Coho Rearing Habitat Enhancement Project

**Interim Measure No. 3 – Iron Gate Turbine Venting**

Passive venting of the Iron Gate turbine was successfully tested at the Iron Gate powerhouse in the fall of 2008. Based upon this initial testing, a blower system was installed in 2009 to determine if forced air introduction into the Iron Gate turbine draft tube would result in additional dissolved oxygen (DO) improvement in tailrace discharges. This initial system was tested inconclusively prior to its failure shortly after it became operational. PacifiCorp installed a new blower system at the Iron Gate powerhouse in January 2010. This blower system was successfully tested after initial installation. Based upon dissolved oxygen monitoring below the Iron Gate powerhouse indicating DO levels were dropping below 85 percent saturation, the blower system was engaged on June 30, 2010. PacifiCorp conducted additional testing this fall and monitored DO improvement resulting from the operation of this blower system. Additional testing in 2011 will evaluate different modes of operation of the turbine venting system to determine optimum system operation on an ongoing basis.

**Interim Measure No. 4 – Hatchery and Genetics Management Plan**

After consultation with CDFG and NMFS, PacifiCorp retained a consultant in early 2010 to assist in the development of a Hatchery and Genetics Management Plan (HGMP) for Iron Gate Hatchery. This consultant has worked with CDFG and PacifiCorp to develop an HGMP for review and approval by NMFS. PacifiCorp provided a draft HGMP to NMFS in mid-July and subsequently presented and discussed the draft HGMP to NMFS and basin Tribes and requested comments on the draft HGMP. CDFG and PacifiCorp submitted a final HGMP with a Section 10 application to NMFS on September 16, 2010 for its review and approval. This application was amended on March 17, 2011 to incorporate recent revisions to the HGMP. The HGMP was prepared to meet applicable regulatory requirements and to address the recommendations of the Hatchery Scientific Review Group. PacifiCorp is funding, and CDFG is implementing, a number of early actions called for in the HGMP such as genetic analysis for broodstock management and bird netting on coho raceways to reduce predation.

**Interim Measure No. 5 – Iron Gate Flow Variability**

Specific procedures for implementing flow variability at Iron Gate dam are still under development, although NMFS has developed a recommended Fall Flow Variability Plan for Iron Gate Dam to assist in the implementation of variable flows at Iron Gate. Consistent with Term and Condition 2A of Reclamation’s March 2010 Biological Opinion, a technical group including NMFS, Reclamation, PacifiCorp, USFWS, states, and tribes, has been meeting to recommend changes to flows during the November through February time period and the delivery of variable flows at Iron Gate Dam. In response to a recommendation from the technical workgroup, and following agreements and clarifications between PacifiCorp, Reclamation, and NMFS regarding flow variability and coverage under the Endangered Species Act of PacifiCorp’s actions

necessary to implement flow variability, a planned pulse flow event began on February 9, 2011. The pulse flow event resulted in flows below Iron Gate dam in excess of 5,000 cfs and was planned to use no more than the 18,600 acre-feet of water made available for the flow variability program as a result of lower Klamath River flows during October 2010. During the flow event, monitoring was conducted by several basin entities to assess the potential effectiveness of the flow event in improving habitat conditions in the Klamath River.

#### **Interim Measure No. 6 – Fish Disease Relationship and Control Studies**

PacifiCorp provided funding of \$500,000 to the National Fish and Wildlife Foundation, the administrator of this fund, in 2009. In cooperation with NMFS, research projects have been selected to investigate the effects of scour on the polychaete that is the intermediate host for *C. shasta*. Other work being funded under this measure includes water quality monitoring and polychaete habitat monitoring. Some of the results from the first year of monitoring were discussed at the annual Fish Disease workshop in Fortuna, CA on March 22, 2011.

#### **Non-ICP Interim Measures**

##### **Interim Measure No. 7 – J.C. Boyle Gravel Placement and/or Habitat Enhancement**

The IMIC formed a subgroup with local knowledge to assist PacifiCorp with implementation of this measure. With the input of the IMIC subgroup, PacifiCorp retained a consultant to assist with implementation of this measure and a site visit occurred on December 16, 2010. The consultant, PacifiCorp and the IMIC subgroup met to discuss permitting requirements and select gravel augmentation sites. Environmental analysis and permitting preparations are underway and a draft gravel augmentation plan was released to the IMIC for review on March 10, 2011.

##### **Interim Measure No. 8 – J.C. Boyle Bypass Barrier Removal**

PacifiCorp consulted with the IMIC during the May 13, 2010 meeting to begin the scoping and planning for removal of the sidecast rock barrier. PacifiCorp has discussed the means and methods for removal of the barrier with contractors to develop a conceptual plan for implementation following Concurrence with the Secretarial Determination. Because of the similarities in work scope and location between this measure and Interim Measure 7, the IMIC determined that environmental review and permitting for these measures should proceed in tandem. Thus, permitting and environmental review of this measure is being handled in conjunction with Interim Measure 7.

##### **Interim Measure No. 9 – J.C. Boyle Powerhouse Gage**

PacifiCorp is continuing to provide the U.S. Geological Survey with funding for the operation of the existing gage below the J.C. Boyle powerhouse (USGS Gage No. 11510700). This gage data is available at [http://waterdata.usgs.gov/usa/nwis/uv?site\\_no=11510700](http://waterdata.usgs.gov/usa/nwis/uv?site_no=11510700).

##### **Interim Measure No. 10 – Water Quality Conference**

PacifiCorp, the Oregon Department of Environmental Quality (DEQ), and the North Coast Regional Water Quality Control Board (NCRWQCB) have been collaborating on the purpose and scope of the workshop and a steering committee has been formed to oversee the workshop. The NCRWQCB has been soliciting additional funding for this workshop which may increase its effectiveness. The water quality workshop is planned to occur in 2011.

##### **Interim Measure No. 11 – Interim Water Quality Improvements**

PacifiCorp, in consultation with the IMIC, has developed study plans for pre-Secretarial

Determination studies and pilot projects as outlined in this interim measure. Work to be conducted under this interim measure prior to the Secretarial Determination will include 1) continued development of a water quality accounting and tracking framework, 2) evaluation of treatment provided by wetlands, 3) testing of an intake cover for water quality control at Iron Gate reservoir, 4) pilot testing of environmentally-safe algaecide on Copco reservoir water, 5) evaluation of J.C. Boyle reservoir dissolved oxygen improvement technologies, and 6) evaluation of organic matter removal from Keno reservoir and the Upper Klamath River. These studies and pilot projects are underway and will inform the selection and implementation of water quality improvement projects following an affirmative Secretarial Determination, should that occur.

#### **Interim Measure No. 12 – J.C. Boyle Bypass Reach and Spencer Creek Gaging**

PacifiCorp completed installation of the J.C. Boyle bypass reach gage in mid-August and the gage is functional and logging data. PacifiCorp recently conducted field work to develop a rating for this gage during high flows in the Klamath River. For the Spencer Creek gage, PacifiCorp is in discussions with the Oregon Water Resources Department about contributing ongoing funding for the maintenance and telemetry of data from this existing gage and for migrating J.C. Boyle bypass gage data to the OWRD website. Gaging data for the Spencer Creek gage is available at the following website:

[http://apps2.wrd.state.or.us/apps/sw/hydro\\_near\\_real\\_time/display\\_hydro\\_graph.aspx?station\\_nr=11510000](http://apps2.wrd.state.or.us/apps/sw/hydro_near_real_time/display_hydro_graph.aspx?station_nr=11510000)

#### **Interim Measure 13 – Flow Releases and Ramp Rates**

PacifiCorp is maintaining flow releases and ramp rates consistent with the existing FERC license and the requirements of applicable biological opinions as contemplated by this interim measure.

#### **Interim Measure 14 – 3,000 cfs Power Generation**

As contemplated by this interim measure and pursuant to the Water Rights Agreement between PacifiCorp and the State of Oregon contained in Exhibit 1 of the KHSA, the Oregon Water Resources Department issued a limited license to PacifiCorp on April 20, 2010 authorizing diversions to the J.C. Boyle powerhouse of up to 3,000 cfs. This limited license was renewed on March 9, 2011. During the August 18, 2010 meeting the IMIC discussed the framework of a protocol to quantify and manage any additional flows in the Klamath River made available through implementation of the KBRA and to coordinate the release of those flows with the operation of the J.C. Boyle facility. The protocol was reviewed and approved by the IMIC at the November 16, 2010 meeting and was subsequently discussed at the December Technical Coordinating Committee and Klamath Basin Coordinating Committee meetings in Redding, California.

#### **Interim Measure No. 15 –Water Quality Monitoring**

PacifiCorp has collaborated with NCRWQB, EPA, BOR, ODEQ, and the Karuk and Yurok tribes to develop a 2011 water quality plan that includes baseline and public health monitoring from Link River dam to the estuary. Monitoring began in February and will continue through December 2011. The baseline monitoring plan occurs on a monthly time step and public health monitoring is performed weekly during the algal bloom period. Monitoring entities include BOR, PacifiCorp, and the Karuk and Yurok tribes. Public health data is distributed every two weeks to inform regulatory entities on the need to post public health advisories. The 2011 monitoring plan includes a special study to compare periphyton species and algal biomass spatial and temporal

trends in the Klamath River from June to October using a standard sampling method. PacifiCorp and the NCRWQCB have cooperated in posting the reservoirs in response to monitoring results to provide notice of public health risks when algal cell counts are above established guidelines. PacifiCorp is working with NCRWQCB and the larger Klamath Basin Monitoring Program (KBMP) to post the plans, data, and summary reports from this measure on the KBMP website.

#### **Interim Measure No. 16 – Water Diversions**

Implementation of this measure is not contemplated to occur until just prior to the reintroduction of anadromous fish above Copco reservoir as a result of potential dam removal.

#### **Interim Measure No. 17 – Fall Creek Flow Releases**

PacifiCorp adjusted instream flow releases in the Fall Creek bypass reach from 0.5 cubic feet per second (cfs) to 5 cfs on May 18, 2010. This flow release was required to be made within 90 days of the Effective Date, which was May 19, 2010. The additional instream flow release is being provided through an existing bypass culvert at the Fall Creek diversion dam. PacifiCorp's operations staff are continuing to monitor this flow release during the course of their routine visits to the Fall Creek diversion dam to ensure that the instream flow is maintained.

#### **Interim Measure No. 18 – Hatchery Funding**

PacifiCorp is now responsible under this interim measure for funding 100 percent of the operations and maintenance costs of Iron Gate Hatchery and is now funding these additional costs. PacifiCorp has also purchased a fish marking system for the Iron Gate Hatchery to continue 25 percent constant fractional marking of chinook salmon produced at the hatchery, which was begun in 2009. The hatchery marking trailer was delivered to the hatchery in December 2010 and will be used for the spring 2011 marking season. The increased marking percentage at Iron Gate hatchery is expected to provide better data on the contribution of the hatchery to basin salmon escapement, which should improve fisheries management.

#### **Interim Measure No. 19 – Hatchery Production Continuity**

PacifiCorp has begun the study to evaluate hatchery production options that do not rely on the current Iron Gate Hatchery water supply. PacifiCorp engineering and environmental staff are researching available water supply options in the area and historic records on hatchery water supply options considered at the time Iron Gate Hatchery was constructed. PacifiCorp has developed some preliminary alternatives for continued hatchery operations that should be evaluated with further engineering and economic study and is evaluating past work conducted during the relicensing process that evaluated hatchery operations. PacifiCorp anticipates hiring an engineering consultant to assist with further study and intends to have this consultant engaged in the near future when the outlines of the engineering study requirements are completed.

#### **Interim Measure No. 20 – Hatchery Funding After Removal of Iron Gate Dam**

No implementation actions have occurred for this interim measure given that this requirement begins only following potential removal of Iron Gate dam.

#### **Interim Measure No. 21 – BLM Land Management Provisions**

The Bureau of Land Management provided PacifiCorp with a proposed 2010 work plan on June 9, 2010 for work activities proposed to be performed under this interim measure. PacifiCorp has reviewed the work plan and had subsequent correspondence with BLM to clarify activities that will be performed and is preparing to transfer funds to support the proposed work activities.