



**PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY**

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April 6, 2012

Honorable Kimberly D. Bose, Secretary, and  
Nathaniel J. Davis, Sr., Deputy Secretary  
FEDERAL ENERGY REGULATORY COMMISSION  
888 First Street, NE  
Washington, DC 20426

**VIA ELECTRONIC FILING**

Re: **Lake Chelan Hydroelectric Project No. 637-043**  
**Article 403 – Stehekin Area Implementation Monitoring Plan**  
**2011 Annual Report and 2012 Work Plan**

Dear Secretary Bose and Deputy Secretary Davis:

On May 6, 2008, the Federal Energy Regulatory Commission (Commission) issued the “*Order Modifying and Approving Stehekin Area Implementation Plan Under Article 403*”<sup>1</sup> requiring the Public Utility District No. 1 of Chelan County, Washington (Chelan PUD) to file an annual report on work planned and completed with funding provided to the U.S. Forest Service (USFS), U.S. Department of the Interior, National Park Service (NPS) and the Washington Department of Fish and Wildlife (WDFW) by April 30, 2009. The Stehekin Area Implementation Monitoring Plan states that all payments for work conducted will be in accordance with section 19 of the Settlement Agreement.<sup>2</sup>

In accordance with Ordering Paragraph (C) of the above Order, Chelan PUD hereby files the 2011 Annual Report and 2012 Work Plan to the Commission.

Please do not hesitate to contact me regarding any questions or comments regarding this report.

Sincerely,

Michelle Smith  
Licensing and Compliance Manager  
michelle.smith@chelanpud.org  
(509)661-4180

Enclosure

c: Annelise Lesmeister, NPS

<sup>1</sup> 123 FERC ¶ 62,100 (2008)

<sup>2</sup> Chelan PUD, on behalf of the signatories, filed a comprehensive settlement agreement on October 17, 2003.

# LAKE CHELAN HYDROELECTRIC PROJECT NO. 637

## Stehekin Area Implementation Monitoring Plan

### 2011 Annual Report and 2012 Work Plan

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#### Introduction

In accordance with Article 403 of the new License,<sup>1</sup> the Public Utility District No. 1 of Chelan County, Washington (Chelan PUD) filed to the Federal Energy Regulatory Commission (Commission) a Stehekin Area Implementation Monitoring Plan (SAIMP) on November 6, 2007. The purpose of this plan is to provide details on the measures that will be implemented to monitor reductions in dust emissions, establishment of native riparian vegetation, and reduction in non-native plants in the reservoir drawdown zone and along the reservoir shoreline in the area of Stehekin, as specified in the License articles, and the Lake Chelan Comprehensive Settlement Agreement (Settlement Agreement), dated October 8, 2003 (Appendix A of the Project License).

On April 10, 2008, the Commission approved and modified the Wildlife Habitat Plan under Article 406. The plan submitted to the Commission provided details on the implementation of riparian habitat improvements. The improvements or enhancements to the Stehekin area habitat overlap with measures to be implemented under Article 403, so the U.S. Department of the Interior, National Park Service (NPS) and Chelan PUD agreed to combine these in the SAIMP.

Additionally, on May 6, 2008, the Commission issued the “*Order Modifying and Approving Stehekin Area Implementation Plan Under Article 403*”<sup>2</sup> requiring Chelan PUD to file an annual report on work planned and completed with funding provided to the U.S. Forest Service (USFS), NPS and the Washington Department of Fish and Wildlife (WDFW). However, most of the actions for the SAIMP will be undertaken by the NPS. The SAIMP states that all payments for work conducted by the NPS will be in accordance with section 19 of the Settlement Agreement. The annual report is to be submitted by April 30 each year, beginning April 30, 2009.

The following report provides a summary of SAIMP activities completed with funding provided by Chelan PUD during 2011 and a description of anticipated activities with funding to be provided during 2012. A table is provided at the end of this report that summarizes agency funding provided in 2011 and anticipated funding for 2012.

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<sup>1</sup> 117 FERC ¶ 62,129 (2006)

<sup>2</sup> 123 FERC ¶ 62,100 (2008)

## Activity during the Previous Calendar Year 2011

### DUST ABATEMENT WORK

In 2011, the NPS explored and tested dust abatement options and submitted the Stehekin Area Dust Emissions 5-Year Report to the Commission on November 3, 2011. The report was approved on January 11, 2012.<sup>3</sup> Details of the 2011 work are provided below:

#### LC04a, Task 1: Dust Abatement Options

A temporary irrigation system was proposed to the NPS Interdisciplinary Team on March 18, 2010. It was decided that a temporary sprinkler system would be installed on a 10 acre site that was identified as the predominant dust source. This test was intended to confirm the effectiveness of the method and the identification of the dust source area.

Due to persistent rain and a smaller-than-usual drawdown during the spring of 2010, the flats did not dry out during that season and there were no noticeable dust events at the landing area. Consequently, the temporary irrigation system was not installed. Testing of the temporary sprinkler system was rescheduled for the spring of 2011.

In early 2011, the NPS purchased and installed a nephelometer at Stehekin Landing to provide quantitative measurement of dust events. The nephelometer was installed prior to testing of the irrigation system so its measurements could assist in evaluating the effectiveness of the irrigation system.

Testing of the temporary irrigation system took place in the spring of 2011. Based on NPS staff observations, the irrigation system produced a substantial reduction in dust reaching the landing area during wind events blowing down lake (predominant direction) and less than 15 mph. Winds coming cross-lake and winds greater than 15 mph continued to produce substantial dust at the Landing and did not appear to be affected by the sprinkler system. Another factor to consider is the extreme drawdown of the lake in 2011 due to a record snowpack. An additional 15 acres of the flats, not typically dry in April and May, remained exposed until June. This area, downwind from the irrigation system, contributed significant amounts of dust at the Landing.

Measurements from the nephelometer did not detect differences in dust levels at the landing during wind events under any conditions in early May. This may be due to the expanded source area downwind of the sprinkler system, the short duration of sprinkler tests or the location of the nephelometer.

The NPS Water Resources Division (WRD) researched options and regulatory procedures to secure water rights for a well. It appears that water rights can be obtained either through the Washington State Department of Ecology or through the use of a

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<sup>3</sup> 138 FERC ¶ 62,015

federal reserved water right. Establishing water rights will not be pursued further until it is confirmed through testing that the irrigation treatment can be effective in reducing dust at the Landing.

Based on the observed results, NPS staff planned further testing for 2012.

#### LC04a, Task 3: Monitoring Evaluation

A nephelometer was purchased and installed at Stehekin Landing in early 2011. An E-sampler ambient particulate monitor with a wind speed/direction sensor was determined to be the preferred instrument to provide air quality measurements for its ability to measure both fine and coarse dust particles.

### STEHEKIN HABITAT WORK

On November 1, 2010, Chelan PUD filed a Riparian Zone Plan (plan) for Commission approval pursuant to Article 403 of Project License. Pending approval of the Riparian Zone Plan, no work was conducted during the first half of 2011. On August 2, 2011, the Riparian Zone Plan was approved.<sup>4</sup> Upon Commission approval, work ensued during the second half of 2011 with collection and propagation of native plant material and establishing baseline transects and photo points. Details of the 2011 work are provided below:

#### Riparian Zone Plan

On August 2, 2011, the Riparian Zone Action Plan was approved by the Commission. NPS was informed of Riparian Zone Plan approval on August 4, 2011 via e-mail.

#### LC09c1, Task 1, Item 1: Collect Plant Material

Plant material (seeds and cuttings) was collected from several woody and tree species in the treatment area.

#### LC09c1, Task 1, Item 2: Plant Propagation

Plant material collected was propagated in the NPS greenhouse facility.

#### LC09c1, Task 1, Item 6: Crew Lead

The NPS crew lead assisted the Plant Ecologist in the collection of baseline transect data for herbaceous, shrub, and tree species and the establishing photo points.

#### LC09c1, Task 1, Item 7: Plant Ecologist

The Plant Ecologist was responsible for crew oversight while collecting baseline transect data and collection and propagation of plant materials.

#### LC09c1, Task 3: Osprey and Eagle Surveys

No additional work was done in 2011.

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<sup>4</sup> 136 FERC ¶ 62,096

### ***2011 Meeting Activity***

The NPS and Chelan PUD met on September 29, November 30 and December 8, 2011, to discuss 2011 activities and estimated costs for proposed 2012 work. In addition to the above meetings, telephone and email correspondence ensued.

## **Activity Planned for Calendar Year 2012**

### **DUST ABATEMENT WORK**

In 2012, the NPS plans to continue exploring dust abatement options and conducting additional small-scaled tests. Details of the 2012 work are provided below:

#### **LC04a, Task 1: Dust Abatement Options**

Similar to 2011, a temporary sprinkler system is to be installed as soon as access to the site is available (preferably in mid April) in 2012 to test its effectiveness in reducing the amount of dust generated by spring winds across Stehekin Flats located at the head of the lake. The system will be expanded slightly to wet a larger area than was wetted in 2011. To improve the quality of data collected from the nephelometer, more sprinkler tests of longer duration will be completed during April and May as weather conditions allow.

The nephelometer will be used to compare dust blown to the landing during wind events when the flats are dry and after selected areas have been wetted. In addition to providing information for design of a long-term irrigation system, this test will provide information to develop an annual water budget for the project.

Data collected during the test will be used to determine the feasibility and effectiveness of irrigating a portion of the flats to reduce dust at the landing area. NPS staff will meet following the test to discuss the results and determine the next steps for proceeding with the dust abatement treatments (additional treatments to be tested or design of a long-term irrigation system). Gene Yow (Chelan PUD) will be updated on the test results and will be invited to participate in the follow-up meeting to discuss the irrigation test and next steps. Once the next step determination has been made, the compliance document will be prepared.

#### **LC04a, Task 3: Dust Monitoring and Evaluation**

The nephelometer installed at Stehekin Landing in 2011 will provide the ability to make quantitative measurements of dust reaching the landing, as well as recording other related factors such as wind direction and speed. This will support evaluation of the sprinkler system test.

## STEHEKIN HABITAT WORK

In 2012, the NPS plans to continue implementing the Riparian Zone Plan. Details of the 2012 work are provided below:

### LC09c1, Task 1, Item 1: Collect Plant Material

Continue collection of seeds, cuttings and propagules. Plants may be salvaged on sites that are slated for weed control.

### LC09c1, Task 1, Item 2: Plant Propagation

Seeds and cuttings collected will be propagated in the NPS greenhouse facility in 2012.

### LC09c1, Task 1, Item 4: Contain Canarygrass

NPS will use an integrated approach to control reed canarygrass per the approved Riparian Zone Plan.

### LC09c1, Task 1 Item 5: Plant Nursery Stock

NPS will begin planting seedlings and cuttings collected in 2011 per the approved Riparian Zone Plan.

### LC09c1, Task 1, Item 6: Crew Lead

Labor and oversight for Task 1, Items 1-5.

### LC09c1, Task 1, Item 7: Plant Ecologist

Labor and oversight for Task1, Items 1-5.

## **Funding Activity**

Section 19.3 of the Settlement Agreement requires Chelan PUD to enter into payment agreements with the NPS prior to allocation of funds. Chelan PUD coordinated with the NPS to obtain a 2012 annual work plan, including estimated funding amounts, by October 1, 2011, as prescribed under Section 19.3 of the Settlement Agreement and in the payment agreement.

The table below provides a summary of funds available, stated in net present value, where applicable. The amounts have been adjusted to 2012 dollars using the CPI adjustment as of January 31, 2012, as outlined in Section 19.1 of the Settlement Agreement.

**FUNDING PROVISIONS – YEAR 2011 ACTIVITIES – YEAR 2012 ESTIMATED COSTS**  
**2012 YEAR START**  
**March 12, 2012**

AGMT ARTICLE	DESCRIPTION	ESTIMATED ACTIVITIES 2011	First Qtr Jan - Mar	Second Qtr Apr - June	Third Qtr July - Sept	Fourth Qtr Oct - Dec	TOTAL SPENT 2011	ESTIMATED ACTIVITIES 2012	ESTIMATED COSTS 2012	TOTAL FUNDING AVAILABLE AS OF JANUARY 31, 2012
LC04a One Time (Combo)	NPS Stehekin Dust Abatement (SAIMP)	Task 1: Abatement Task 3: Monitoring and Evaluation		\$5,150.37	\$3,310.55		\$3,310.55 \$5,150.37	Task 1: Abatement Task 3: Monitoring and Evaluation	\$15,000.00 \$1,521.53	\$179,330.66
LC09c1 (Combo)	NPS Stehekin Habitat (made part of SAIMP)	Task 1, Item 1: Collect Plant Material Task 1, Item 2: Propagate Plans Task 1, Item 6: Crew Lead Task 1, Item 7: Plant Ecologist			\$6,880.78	\$2,304.30 \$6,568.11 \$2,153.43	\$2,304.30 \$6,568.11 \$2,153.43	Task 1, Item 1: Collect Plant Material Task 1, Item 2: Propagate Plans Task 1, Item 3: Regrade Deltas Task 1, Item 4: Contain Canary Grass Task 1, Item 5: Plant Nursery Stock Task 1, Item 6: Crew Lead Task 1, Item 7: Plant Ecologist Task 2: Monitor Riparian Vegetation	\$1,152.30 \$6,568.11 0.00 \$10,124.00 \$2,074.14 \$10,000.00 \$3,361.76 \$0.00	\$319,557.79
LC09c2B One Time (Combo)	NPS Lake Chelan Basin Riparian Habitat (made part of SAIMP)	No activity planned for 2011					\$0.00	No activity planned	\$0.00	\$62,514.68
		2011 Total Spent	-0-	\$5,150.37	\$10,191.33	\$11,025.84	\$26,367.54		\$49,801.84	