



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

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April 30, 2018

**VIA ELECTRONIC FILING**

Ms. Kimberly D. Bose, Secretary  
FEDERAL ENERGY REGULATORY COMMISSION  
888 First Street, NE  
Washington, DC 20426

Re: **Lake Chelan Hydroelectric Project No. 637**  
**Article 403 – Stehekin Area Implementation Monitoring Plan**  
**2017 Annual Report and 2018 Work Plan**

Dear Secretary Bose:

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 National Park Service (NPS) by April 30. 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 2017 Annual Report and 2018 Work Plan to the Commission, the NPS, the U.S. Forest Service and the Washington Department of Fish and Wildlife.

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

Sincerely,

A handwritten signature in blue ink that reads "Jeffrey G. Osborn". The signature is fluid and cursive.

Jeffrey G. Osborn  
License Compliance Supervisor  
jeff.osborn@chelanpud.org  
(509)661-4176

Enclosure

cc: Annelise Lesmeister, NPS  
Paul Willard, USDAFS  
Graham Simon, WDFW

<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

### 2017 Annual Report and 2018 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 or FERC) 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 2017 and a description of anticipated activities with funding to be provided during 2018. A table is provided at the end of this report that summarizes agency funding provided in 2017, anticipated activities and funding for 2018, and proposed activities for 2019.

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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 2017

### DUST ABATEMENT WORK –

Representatives of the NPS (Vicki Gempko and Jon Riedel) and Chelan PUD (Gene Yow) conferred via e-mail throughout the year, to discuss progress to date and next steps preparatory to further testing.

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

The primary option under consideration for reducing windblown dust from Stehekin Flats is creation of small ridges in the soil surface perpendicular to the prevailing wind direction. Consideration of this approach is based on similar practices used to stabilize farmland. The method is well developed but is not commonly applied in locations such as Stehekin Flats where disturbance of the subsurface soil must be minimized.

In April 2017, three test plots (100m x 30m) were installed. Two of the plots were rolled using an ATV to haul a modified seed roller to form ridges in the soil surface perpendicular to the wind direction. The third plot was the control. Late snow melt, along with consistent spring rain caused the Flats to remain wetted throughout most of the dust season. After the Flats dried, the surface of both the rolled and control plots had formed a thin top crust that prevented wind erosion of the fine sediment. The crust was maintained until spring runoff inundated the Flats. Only a few wind events occurred during this spring and very little sediment was airborne due to the frequent precipitation and the top crust.

#### LC04a, Task 3: Monitoring Evaluation

The nephelometer monitored air quality during April and May. The surface of the plots were checked for soil conditions weekly and visual observations were made during wind events.

Monitoring for comparison with the SAIMP milestones is due at 10 and 20 years (in 2016 and 2026). The intent of the milestone monitoring is to demonstrate success in meeting dust reduction goals. The variability of conditions from year to year and the difficulty of working out issues of access and permission to perform ground-disturbing activities left the NPS and Chelan PUD unprepared for that key monitoring in 2016. After consulting with Vicki Gempko and Jon Riedel of NPS, who work on dust reduction, Vicki agreed that it would be more appropriate to postpone the milestone monitoring to 2018 and 2028.<sup>3</sup> We anticipate that the additional two years will allow us to address access and ground disturbance issues, and to prepare for a meaningful test of the dust abatement method under consideration.

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<sup>3</sup> Per email communication dated April 21, 2016.

## STEHEKIN HABITAT WORK –

On December 22, 2017, Chelan PUD submitted a request to extend the 2017 Riparian Zone Technical Report to March 1, 2018, and modify the future reporting schedule to be March 1 of the subsequent year. The FERC approved the extension request and the new reporting schedule on January 25, 2018. On March 1, 2018, Chelan PUD filed the second Technical Report for the Riparian Zone Plan. With the March filing, Chelan PUD also requested a correction to the modified reporting schedule.

### Riparian Zone Plan

During 2017, the NPS continued restoration efforts in the wetland at the head of Lake Chelan by installing 42 live stakes (shrubs), planting a variety of forb and shrub species and conducting vegetation monitoring, data analysis and report writing for the second Riparian Zone Plan Technical Report, which was submitted on March 1, 2018. The NPS also conducted monitoring for nesting bald eagles and osprey in 2017.

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

Collected 3.8 oz. of seeds from five species including *Spiraea douglassii*, *Scirpus microcarpus*, *Juncus ensifolius*, *Carex rostrata*, and *Carex sp.* to be sown and raised in the Marblemount greenhouse.

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

The NPS was reimbursed for transplanting seedlings from the nursery to the restoration site and for managing nursery stock in 2017. There are still approximately 3,500 plants in the nursery that will be available for future planting efforts. Sowed 13 oz. of seed for five species.

#### LC09c1, Task 1, Item 3: Regrade Deltas

No work completed for this project in 2017.

#### LC09c1 Task 1, Item 4: Contain Canary grass

No chemical control for reed canary grass control was conducted in 2017. However, regenerating reed canary grass was manually removed within the supplemental planting areas.

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

Then NPS was reimburse for crew lead time used in planning, monitoring, transplanting, inventory, and report writing related to the restoration work associated with the Riparian Zone Plan.

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

The NPS did not have any charges for Ecologist time in 2017.

LC09c1, Task 2 Item 3: Osprey and Eagle Surveys

Chelan PUD reimbursed NPS for bald eagle and osprey nest monitoring conducted during 2017. Two osprey nests were documented in 2017. Both nests successfully produced young. Only one adult bald eagle was observed during the bald eagle nest occupancy surveys in 2017. While one bird was observed near the historical nest, breeding could not be confirmed.

***2017 Meeting Activity***

In 2017, representatives of the NPS (Stacy McDonough, Mignonne Bivin, and Vicki Gempko) and Chelan PUD (Von Pope and Kelly Cordell) conferred via email regarding field work and report writing for the second Riparian Zone Plan Technical Report. On November 3, 2018, Von Pope and Kelly Cordell (Chelan PUD) met with Vicki Gemko (NPS) at Stehekin to review work completed in 2017. On November 27, 2018, Chelan PUD had a conference call with NPS to discuss on the overall goals of the Riparian Zone Plan and progress on the Technical Report that was originally due on December 31, 2017. Chelan PUD staff and NPS staff also met on November 22, 2017, to review the project budget and schedule for 2017 and 2018.

## Activity Planned for Calendar Year 2018

### DUST ABATEMENT WORK –

In 2018, the NPS will once again use the roller and ATV to prepare test plots. Details of the work are provided below:

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

The primary dust abatement option under consideration is molding ridges in the soil surface to decrease the ability of wind to pick up soil particles. To test the ridge-forming approach, an ATV will be used to pull a roller modified to form ridges, as in 2017.

Before testing more extensively, it seems advisable to determine what restrictions apply to disturbance of soils at the sites of interest. The process of forming ridges will result in some compaction and reshaping of the surface soils, so this level of disturbance must be permissible for the method to be acceptable. The NPS will seek to determine the limits on soil disturbing activities on Stehekin Flats.

#### 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.

### STEHEKIN HABITAT WORK –

#### Riparian Zone Plan

In 2018, the NPS will continue implementing measures contained in the Riparian Zone Plan. The NPS and Chelan PUD plan to meet during 2018 to discuss challenges observed with establishing vegetation in the drawdown zone at the head of Lake Chelan. While efforts to control reed canarygrass have been somewhat successful, establishing native vegetation has not been very successful to date. While much of the work proposed in the approved Riparian Zone Plan will be implemented, Chelan PUD and the NPS will consider revisions to the Riparian Zone Plan that might improve the success of establishing native vegetation. Any revisions to the Riparian Zone Plan will be submitted to the FERC for approval. Details of the 2018 work are provided below:

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

Plants will be salvaged, especially on sites that are slated for continued weed control. Seeds from native local plants may be collected to be sown and grown for future planting efforts. Live stakes from willow, dogwood and cottonwood (about 200 stakes in total) will be planted in pots and maintained at Stehekin for future plantings.

LC09c1, Task 1, Item 2: Plant Propagation

Seeds, seedlings, and cuttings collected will be cared for and propagated in the NPS Marblemount greenhouse facility in 2018.

LC09c1, Task 1, Item 3: Regrade Deltas

Concerns for permitting challenges associated with this task may lead to it being dropped from the plan. In 2018, Chelan PUD and the NPS will discuss revisions to the Riparian Zone Plan that in lieu of this task.

LC09c1, Task 1, Item 4: Contain Canary Grass

Weed cloth will be placed at 12 sites to control reed canary grass at sites adjacent to existing woody vegetation. These site will be planted with potted woody plants in the future years.

LC09c1, Task 1 Item 5: Plant Nursery Stock

The amount of planting in 2018 will be depend on the discussions regarding increasing native plant success.

LC09c1, Task 1, Item 6: Crew Lead

Labor and oversight related to implementing measures approved in the Riparian Zone Plan for 2018.

LC09c1, Task 1, Item 7: Plant Ecologist

Labor and oversight implementing measures in the Riparian Zone Plan. Summarizing and compiling data for a 2018 annual report.

LC09c1, Task 2 Item 3: Osprey and Eagle Surveys

Bald Eagle and Osprey nest monitoring is scheduled for the spring and summer of 2018.

## **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 2018 annual work plan, including estimated funding amounts, 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 2018 dollars using the CPI adjustment as of January 31, 2018, as outlined in Section 19.1 of the Settlement Agreement.



**LAKE CHELAN PROJECT NO. 637**  
**FUNDING PROVISIONS – YEAR 2017 SPENT – YEAR 2018 ACTIVITIES – YEAR 2019 PROPOSED ACTIVITIES**  
**Calendar Year Beginning 2018**  
**April 2018**

AGMT ARTICLE	DESCRIPTION	2017 SPENT	2018 ACTIVITIES	ESTIMATED COSTS 2018	2019 PROPOSED ACTIVITIES	ESTIMATED COSTS 2019	BALANCE AVAILABLE AS OF JANUARY 2018 <sup>4</sup>
LC04a One Time (Combo)	NPS Stehekin Dust Abatement (SAIMP)	\$100.00	Task 1: Abatement..... Task 3: Monitoring and Evaluation.....	\$2,000.00 \$2,000.00	No activity planned.....	\$0.00	Balance Available: \$177,961.68
LC09c1 (Combo)	NPS Stehekin Habitat (made part of SAIMP)	\$27,657.94	Task 1, Item 1: Collect Plants..... Task 1, Item 2: Propagate Plants .... Task 1, Item 5: Plant Nursery Stock..... Task 1, Item 6: Crew Lead .....  Task 2, Item 3: Osprey/Eagle Surveys .....	\$3,000.00 \$6,350.00 \$3,100.00 \$7,950.00  \$3,500.00	Task 1, Item 4: Contain Reed Canary Grass..... Task 1, Item 6: Crew Lead.....  Task 3: LWD Monitoring .....	\$8,296.56 \$17,000.00  \$11,206.67	Balance Available: \$38,714.25  2018 Contribution: \$13,623.74  Total with NPV: \$288,396.66
LC09c2B One Time (Combo)	NPS Lake Chelan Basin Riparian Habitat (made part of SAIMP)	\$0.00	No activity planned.....	\$0.00	Task 1: Riparian Habitat.....	\$1,440.00	Balance Available: \$68,118.69
	<b>TOTALS</b>	<b>\$27,757.94</b>	<b>2018 Year Start</b>	<b>\$27,900.00</b>	<b>2019 Proposed</b>	<b>\$37,943.23</b>	

<sup>4</sup> For all measures: Balance Available – All contributions, including current year, minus net amount of expenditures.  
For measures with annual contributions: 2018 Contribution – 2018 contribution amount adjusted for CPI (2.13%).  
For measures with annual contributions: Total with NPV – Total of current balance and remaining net present value of future contributions calculated at an assumed 7% discount rate and 2.5% inflation.