

**APPENDIX B TO SULLIVAN CREEK SETTLEMENT AGREEMENT**

**PROPOSED LICENSE SURRENDER CONDITIONS**

## **APPENDIX B**

### **Proposed License Surrender Conditions For Sullivan Creek Project (Project) Surrender of FERC License No. 2225**

#### **USDA Forest Service Colville National Forest, Region Six**

Pursuant to 18 CFR Section 6.2, Section III C of the Federal Energy Regulatory Commission (Commission) Policy Statement for Project Decommissioning (Docket No. RM93-23-00), and the Federal Land Policy and Management Act (90 Stat. 2743) the following conditions are deemed necessary by USDA Forest Service (USFS) to restore or occupy lands of the Colville National Forest that contain facilities of the Sullivan Creek Project (Project) authorized by the Commission in License No. 2225. These conditions are based on those resources enumerated in the Organic Administration Act of 1897 (30 Stat. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wilderness Act or Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved Land and Resources Management Plans prepared in accordance with the National Forest Management Act. Therefore the following conditions covering specific requirements for the restoration and occupancy of National Forest System (NFS) lands shall be included in the license surrender order issued by the Commission for the Project.

#### **Condition No. 1 – Compliance with the Settlement Agreement**

The Licensee shall completely and fully comply with the provisions of Appendix A to the Settlement Agreement which relate to restoration of NFS lands occupied by facilities proposed to be removed in the license surrender application and modification and/or operation of facilities proposed to remain on National Forest until such time as continued occupancy of NFS lands by remaining Project facilities is authorized by a Special-use Authorization (SUA) issued by USFS.

#### **Condition No. 2 – Reservation of Authority in the Event the Settlement Agreement is Materially Modified by the Commission**

In the event the Commission's License Surrender Order materially modifies or omits the conditions provided herein or the Licensee fails to comply with Condition 1, USFS reserves its authority to supplement or modify its conditions pursuant to the authority provided in 18 CFR Section 6.2 as necessary for the adequate restoration of NFS lands subject to the supervision of USFS.

### **Condition No. 3 – USDA Forest Service Special Use Authorization**

The Licensee shall obtain a SUA as required by 36 CFR §251 for occupancy and use of NFS lands from the USFS for Project facilities that will remain on NFS lands after the Project License is terminated by FERC. NFS lands authorized for use by the Licensee by the special-use authorization shall be subject to laws, rules, and regulations applicable to the NFS lands. The terms and conditions of the USFS special-use authorization are enforceable by the USFS under the laws, rules, and regulations applicable to the NFS. The Licensee shall file the executed SUA with the Commission to demonstrate compliance with this condition.

### **Condition No. 4 – Mill Pond Decommissioning**

The Licensee shall implement the Mill Pond Decommissioning Plan included in Appendix E to the Settlement Agreement and in Section B.4.2 of the Sullivan Creek License Surrender Application. Pursuant to the Decommissioning Plan, the Licensee shall prepare, in consultation with Seattle City Light, permitting agencies, Kalispel Tribe, Washington Department of Ecology, and USFS, and file a Final Design Plan for approval of the Commission within 24 months of the issuance of the license surrender order. Prior to filing the Final Design Plan with the Commission, the Licensee shall obtain the approval of the USFS and the Washington Department of Ecology.

- A. The Licensee shall implement the Final Design Plan upon FERC approval. The Final Plan shall be a refinement of the Mill Pond Decommissioning Plan and contain final site specific designs, drawings, and adaptive management provisions.
- B. The Licensee shall undertake appropriate measures to mitigate for impacts to heritage resources as a result of removal of Mill Pond Dam. The Licensee shall conduct an archaeological survey and monitoring within the Area of Potential Effect prior to and during stream restoration activities. The Licensee shall consult with the Washington State Historic Preservation Office, the USFS, FERC, Kalispel Tribe, and other regulatory agencies consistent with Section 106 requirements to develop mitigation measures to address adverse effects of the proposed Mill Pond Dam removal to National Register of Historic Places eligible resources. The agreed upon mitigation measures will be expressed in a Memorandum of Agreement (MOA) to be signed by the Licensee, the USFS, the Washington State Historic Preservation Officer, the Advisory Council on Historic Preservation (if they choose), and others as may be necessary. The Licensee shall file the MOA with the Commission for approval.

### **Condition No. 5 – Cold Water Release Facility**

The Licensee shall undertake the design, permitting, construction, monitoring, operation, and maintenance of a cold water release facility at Sullivan Lake Dam and Reservoir consisting of a 48 inch diameter pipe, with fish screens that meet NOAA design criteria of 0.2 feet per second (fps) approach velocity, at the inlet and routed through one of the three existing low-level outlet gates at Sullivan Dam as described in the Cold Water Release Facility Plan set forth in Appendix F of the Settlement Agreement and Section B.4.1.2 of the Surrender Application.

The Licensee shall not commence implementation of habitat or ground-disturbing activities on NFS lands until the USFS and the Commission have approved site-specific project plans and issued a notice to proceed. Site specific plans shall be prepared by the Licensee in consultation

with Seattle City Light, permitting agencies, Kalispel Tribe, Washington Department of Ecology, and USFS and include:

- a. Detailed construction plans and drawings.
- b. A Spill Prevention and Control, and Hazardous Materials Plan for hazardous materials storage, spill prevention and cleanup on NFS lands, as needed, will be provided to USDA Forest Service for review and approval before work commences.

## **Condition No. 6 - Reservoir Level Operations and Requirements**

### Interim Operations

Prior to the construction of the Cold Water Release Facility, the Licensee shall operate Sullivan Lake Reservoir as follows:

#### A. Spring Operations:

Each year the Licensee shall start refilling Sullivan Lake on or before April 1st and shall seek to achieve and maintain a full Sullivan Lake elevation of 2588.6 ft MSL (as measured at Sullivan Lake Dam) subject to hydrologic conditions, water availability and dam discharge flow requirements defined in Conditions Nos. 7, 9, and 10 below. Refilling rates shall also be adjusted as necessary to accommodate the Harvey Creek Bedload Mobilization activities, as described in Condition No. 9 below.

#### B. Summer Operations:

1. During the summer period, defined as June 1 through Labor Day each year, the target Sullivan Lake level will be 2588.6 (full pool). Although lake level modeling indicates that in dry years the lake may not be completely full by June 1, the Licensee shall use its best efforts to reach and maintain that level.
2. The Licensee shall comply with the required minimum dam discharge flows during the summer period as described in Condition No. 7 below.

#### C. Fall Operations:

1. Drawdown shall be initiated the day following Labor Day each fall and shall be conducted in a manner that reaches the maximum flow target as quickly as possible, given the following constraints.
2. Discharge flows shall be managed to meet state water temperature standards (WAC 173-201A-200) and will under no circumstances cause the combined waters of Outlet Creek and Sullivan Creek as measured at "below confluence water temperature gage" to exceed 16 degrees C.

3. Drawdown shall strive to reach a target lake water surface elevation of 2577 feet by no later than November 15.
4. Discharge flows will ramp up no more than 80 cfs per day but not to exceed a change of more than 2 degrees C in average daily temperature per day as measured at the below confluence water temperature gage. This criterion shall be subject to monitoring and adaptive management, as approved by the Resource Committee, as described in Section 8 of the Settlement Agreement, and subject to approval by the Commission and the USFS.
5. Discharge maximum flow target shall be 200 cfs during periods of normal or below normal precipitation, and 225 cfs during periods of higher than normal precipitation.
6. Down ramping rate shall not exceed 10 cfs per hour.
7. Drawdown shall be managed with the goal of reaching a Lake water surface elevation of 2570 feet by December 31.

#### Post Cold Water Release Facility Construction

Upon completion of construction of the cold water release facility, the Licensee shall operate Sullivan Lake Reservoir in the following manner each year:

##### D. Spring Operations:

Each year the Licensee shall start refilling Sullivan Lake on or before April 1st and shall seek to achieve and maintain a full Sullivan Lake elevation of 2588.6 ft MSL (as measured at Sullivan Lake Dam) subject to hydrologic conditions, water availability and dam discharge flow requirements defined in Conditions Nos. 7, 9, and 10 below. Refilling rates shall also be adjusted as necessary to accommodate the Harvey Creek Bedload Mobilization activities, as described in Condition No. 9 below.

##### E. Summer Operations:

1. During the summer period, defined as June 1 through Labor Day each year, the target Sullivan Lake level will be 2588.6 (full pool). Although lake level modeling indicates that in dry years the lake may not be completely full by June 1, the Licensee shall use its best efforts to reach and maintain that level.
2. The Licensee shall comply with the required minimum dam discharge flows during the summer period as described in Condition No. 7 below.
3. The Licensee shall manage the discharges from the cold water pipe and the Sullivan Lake Dam gates: (1) to meet state water temperature standards (WAC 173-201A-200); (2) with the goal of preventing the daily average “below confluence water temperature” from exceeding 14 degrees C; and (3) with the goal of preventing the daily average “below confluence water temperature” from deviating from the daily average Sullivan Creek “above confluence water

temperature” by more than 1 degree C, when daily average “above confluence water temperature” is less than 14 degrees C.

F. Fall Operations:

1. Drawdown shall be initiated the day following Labor Day each fall and shall be conducted in the manner described below.
2. The Licensee shall manage the discharges from the cold water pipe and the Sullivan Lake Dam gates: 1) to meet state water temperature standards (WAC 173-201A-200); 2) with the goal of preventing the daily average “below confluence water temperature” from exceeding 14 degrees C; and 3) with the goal of preventing the daily average “below confluence water temperature” from deviating from the daily average Sullivan Creek “above confluence water temperature” by more than 1 degree C, when daily average “above confluence water temperature” is less than 14 degrees C.
3. The Licensee will strive to maintain the operation described in F.2 (3) above until fall turnover. Once fall turnover occurs in Sullivan Lake (mid-October), Sullivan Creek temperatures may fall below Outlet Creek temperatures by several degrees, and it may not be possible to maintain a 1 degree C water temperature difference.
4. Subject to the temperature constraints above, the Licensee shall strive to maximize discharge flows through the cold water pipe and minimize the use of the low-level gates at the dam during fall drawdown. When low level gates are used, releases shall be made from two gates simultaneously.
5. Discharge flows shall be ramped up no more than 80 cfs per day as measured at the Outlet Creek gage.
6. Draw downs shall be managed to reach a target lake water surface elevation of 2577 feet by no later than November 15. After November 15, the Licensee shall strive to release all water through the cold water pipe.
7. Discharge flows shall be forecasted and posted online one week in advance to support recreational use. To the extent consistent with other constraints in this subsection, drawdown will be managed to provide discharge flows between 180 and 220 cfs on at least 3 weekends in September or October to support whitewater paddling.
8. Down ramping rate when changing release flows shall not exceed 10 cfs per hour as measured at the Outlet Creek gage.
9. To prevent thermal shock of the downstream system, flows shall be up ramped or down ramped to prevent waters below the confluence from changing daily average temperature more than 2 degrees C per day.

10. Drawdown shall be managed with the goal of reaching a lake water surface elevation of 2570 feet by December 31.

**Condition No. 7 - Sullivan Lake Dam Minimum Discharge Flows**

The Licensee shall annually maintain minimum discharge flows in Outlet Creek, measured by the Outlet Creek USGS gauging station, as follows:

- A. June 1 through June 30, minimum discharge flows shall be 30 cfs.
- B. July 1 through the end of fall drawdown (when elevation reaches 2570.0 ft) minimum discharge flows shall be 20 cfs.
- C. From the date the Lake reaches elevation 2570.0 ft until the beginning of spring filling (per Condition No. 6 above) outflow shall equal inflow from Harvey Creek.
- D. From April 1 through May 31, minimum discharge flows shall be 10 cfs or inflow, whichever is less.

**Condition No.8 - Limitations Regarding Sullivan Lake Surface Elevations and Discharge Flow Requirements**

- A. The Licensee shall comply with the Sullivan Lake water surface elevations and discharge flow requirements at all times, but subject to short term deviations due to equipment failures, maintenance activities, electric and mechanical device limitations, safety inspections, testing, natural disasters, such as floods, and Harvey Creek Bedload Mobilization activities described in Condition No. 9 below.
- B. The Licensee shall use the existing USGS stream gage on Outlet Creek and install a new Sullivan Lake level recording gage at Sullivan Dam to record data to demonstrate compliance with discharge flow requirements. If USGS ceases to maintain the Outlet Creek stream gage, the Licensee will thereafter maintain the gage.

**Condition No. 9 - Harvey Creek Bedload Mobilization**

Subject to the approval of the Commission and USFS, the Licensee shall manage Sullivan Lake surface elevations to facilitate the mobilization of Harvey Creek bedload consistent with the provisions of this Condition and subject to future study and/or decision-making through consultation and approval of the Resource Committee.

These measures shall be referred to as the Harvey Creek Bedload Mobilization Project (“Harvey Creek Project”). The various lake operating scenarios to implement the Harvey Creek Project

and the explanation of the basis for these measures are as described in the report entitled: “Sullivan Lake – Decisions About Filling and Draining Rates- An Interactive Approach” by EES Consulting, dated November, 2009.

The Harvey Creek Project shall be implemented as summarized in the Decision Tree matrix (Exhibit 1 of Settlement Agreement Appendix A) as follows:

- A. The Licensee, in consultation with the Resource Committee, shall begin to examine available regional flow projections, snow pack data, and run-off forecasts by April 1 each year to determine if the spring run-off can reasonably be expected to be at least 120% of the long term average.
- B. If the Resource Committee agrees, by April 20 each year, based on the forecasts above, that the forecasts predict it will be a 120% or greater Spring run-off year, the decision will be made to hold Sullivan Lake level at no more than elevation 2575.0 until May 20 of that year, and the operating provisions described below will be implemented, subject to final approval by the Commission and USFS.
- C. Flows in Harvey Creek will be monitored. If before May 20, Harvey Creek reaches a flow of 250 cfs or more, when the flow begins to recede from its peak, the lake filling can resume at its normal rate.
- D. On May 20, regardless of Harvey Creek flows, lake filling will resume at its normal rate.
- E. After each year that the “lake level hold-down” is attempted as part of the Harvey Creek Project, the Resource Committee will meet after July 1 and examine the effectiveness of the lake level hold-down, whether or not the forecasts were correct, whether or not a high flow event actually occurred on Harvey Creek, and whether or not the Harvey Creek flow was adequate to move sediments and bedload, achieving the goal of reducing sediment buildup at the Harvey Creek stream entrance to the lake. After four lake level hold-downs, the Resource Committee will meet to recommend to the Commission and/or the USFS whether or not further operating changes are warranted or whether the Harvey Creek Project should be discontinued.
- F. The Licensee shall install a new stream gage on Harvey Creek to USGS standards and shall operate and maintain this gage to collect flow data required to implement the Harvey Creek Project.

### **Condition No. 10 - Water Supply Program**

Pursuant to the Water Supply Program described in Appendix A of the Settlement Agreement and Section B.4.1.8 of the Sullivan Creek License Surrender Application, the Licensee shall release water at a rate described in Table 1, not to exceed 2.0 times the minimum discharge flow

requirement of Condition No. 7 above. Water shall be released at as steady a rate as possible, as measured by the day-to-day change in daily average cfs.

The higher discharge flows listed in Table 1 will occur in wet and average water years. In dry water years, the lower flows shown in Table 1 shall be released. Whether or not a dry year is occurring will be decided by May 20 each year by the Resource Committee utilizing the decision tree shown in Exhibit 2 of Settlement Agreement Appendix A.

Table 1 shows the range of water supply discharge flows, which includes the minimum discharge flows (as described in Condition No. 7 above).

<b>Table 1. Water Supply Discharge Flows</b>	
<b>Period</b>	<b>Discharge Flow (cfs)</b>
June Week 1	50-60
June Week 2	50-60
June Week 3	50-60
June Week 4	50-60
July Week 1	40-45
July Week 2	35-40
July Week 3	30-35
July Week 4	30-35
Aug Week 1	30-35
Aug Week 2	30-35
Aug Week 3	30-35
Aug Week 4	30-35
Sept Week 1	30-35

The Licensee shall manage the discharges shown in Table 1 above: 1) to meet state water temperature standards (WAC 173-201A-200); 2) with the goal of preventing the daily average “below confluence water temperature” from exceeding 14 degrees C; and 3) with the goal of preventing the daily average “below confluence water temperature” from deviating from the daily average Sullivan Creek “above confluence water temperature” by more than 1 degree C, when daily average “above confluence water temperature” is less than 14 degrees C.

The Licensee shall, in consultation with Sullivan Lake dock and launch facility owners, evaluate the functionality of existing facilities under the operational regime of this Condition and shall, prior to beginning of operational changes under this Condition mitigate all functional deficiencies for facilities that were in existence at the end of 2009. Improvements to any USFS facilities must meet USFS standards and be approved by the USFS.