Greene SCL Boundary Licensing Ord ATT 1 November 12, 2009 Version 2

### Agreement in Principle Boundary Project Relicensing September 23, 2009

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## Procedural

## AIP

# EXHIBIT 1

#### Agreement in Principle Boundary Project Relicensing September 23, 2009

Seattle City Light ("SCL"), the Bureau of Indian Affairs, the Bureau of Land Management, the National Park Service, the US Fish and Wildlife Service, the US Forest Service, the Kalispel Tribe, the Washington State Department of Fish and Wildlife, the Washington State Department of Ecology, Pend Oreille PUD No. 1, and the Selkirk Conservation Alliance (collectively, the "Parties") agree to the following good faith Agreement in Principle regarding the relicensing of SCL's Boundary Project (FERC No. 2144) (the "Project").

#### I. Definitions

A. **Acronyms**. The following acronyms have the stated meanings:

AIP	this Agreement in Principle
AIR	Additional Information Request made by FERC pursuant to 18
	C.F.R. § 5.21
BIA	U.S. Department of Interior, Bureau of Indian Affairs
BLM	U.S. Department of Interior, Bureau of Land Management
CWA	Clean Water Act, 33 U.S.C. §§ 1251 et seq.
ESA	Endangered Species Act, 16 U.S.C. §§ 1531 et seq.
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act, 16 U.S.C. §§ 791a et seq.
KT	Kalispel Tribe of Indians
LA	License Application for the Project to be filed in September 2009,
	including any resource management plans
NEPA	National Environmental Policy Act
NPS	U.S. Department of Interior, National Park Service
m.s.l.	mean sea level (elevation), expressed in NAVD 88
PME	Protection, Mitigation and Enhancement, as the term is used for
	hydropower licensing under Part 1 of the FPA
POPUD	Pend Oreille Public Utility District
SCA	Selkirk Conservation Alliance
SCL	City of Seattle, City Light Department
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Department of Interior, Fish and Wildlife Service
WDOE	Washington State Department of Ecology
WDFW	Washington State Department of Fish and Wildlife

- B. **Other definitions**. The following terms have the stated meanings:
- 1) "401 Certification" means the water quality certification decision to be made by WDOE in connection with Project relicensing pursuant to Section 401 of the CWA, 33 U.S.C. § 1341.

- 2) "Appropriate agencies" means one or more of the resources agencies and/or FERC as appropriate in a given context.
- 3) "Ground Rules Agreement" means the agreement regarding confidentiality and ground rules dated as of May 19, 2009 among certain of the Parties.
- 4) "Mandatory Conditions" means conditions to be submitted to FERC under Section 4(e) or 18 of the FPA, 16 U.S.C. §§ 797(e), and 811.
- 5) "REA Notice" means the notice accepting the LA for filing, finding the LA is ready for environmental analysis, requesting comments, protests and interventions, requesting preliminary terms and conditions, and preliminary fishway prescriptions, establishing the date for amendment to the LA, and updating the procedural schedule, to be issued by FERC for the Project pursuant to 18 C.F.R. § 5.22.
- 6) "Resource agencies" means BIA, the Kalispel Tribe, NPS, USFS, FWS, WDOE, and WDFW.
- 7) "Settlement Agreement" means the settlement agreement to be developed based upon this AIP.

#### II. Overview

The Parties' mutual goal is to achieve a comprehensive Settlement Agreement, to be submitted to FERC as an Offer of Settlement under 18 C.F.R. § 385.602, for relicensing of the Project. As a step in that process, this AIP identifies the procedural commitments and actions; identifies the conceptual agreements on substantive PME provisions; and contains the general terms of agreement that the Parties have reached at the time of executing this AIP in the negotiation of the comprehensive Settlement Agreement. The Parties recognize that this AIP is an outline of the elements that will make up a comprehensive settlement agreement, including detailed PMEs, proposed license articles, and resource management plans. The Parties further recognize that this AIP is a temporary document, and will terminate as set forth in Article V below. Any unresolved issues, internal inconsistencies or ambiguities in this AIP will be resolved through negotiations on the Settlement Agreement.

#### A. **Procedural Commitments and Actions.** The Parties commit that this AIP:

- Provides an agreed-upon basis for the development of a comprehensive Settlement Agreement, including proposed license articles and a joint explanatory statement, with the goal of submission to FERC by February 1, 2010;
- 2) Identifies the procedural steps and actions the Parties expect to take before FERC to address the timing necessary to conclude settlement negotiations;

- 3) Identifies the Parties' negotiating commitments and restrictions during the period of the AIP; and
- 4) Identifies the expectations for continued negotiation of the Settlement Agreement.
- B. **PMEs and Assurances.** The Parties have general agreement on:
- 1) PME measures to be included in the Settlement Agreement related to the effects of Project operations on resources within and adjacent to the Project boundary and intended to promote protection and enhancement of natural, recreational, and cultural resources associated with the Project that are important to the Parties (recognizing that if the Parties so agree they may add PME measures to the Settlement Agreement). The PME measures are set forth in Attachment 1.
- 2) As described in Section IV.B below, the Parties' expectation of assurances in support of the Settlement Agreement and in support of FERC's future action incorporating the Settlement Agreement without material modification.
- 3) Measures to address potential linkages between the relicensing proceeding for the Boundary Project and FERC's surrender proceeding for the Sullivan Creek Hydroelectric Project, FERC No. 2225 ("Sullivan Creek").

#### III. Procedural Commitments and Actions

#### A. **FERC Procedural Actions**

The Parties agree to the following procedural matters with respect to FERC's relicensing process during the term of this AIP:

- 1) <u>Motion to Suspend</u>. The Parties will make a joint motion no later than September 30, 2009, requesting that FERC immediately suspend the procedural schedule for the Project through February 1, 2010. This AIP will be an exhibit to such motion.
- 2) <u>FERC Tendering Notice</u>. The Parties expect that FERC will likely issue a tendering notice regarding the filing of the LA during the term of this AIP, but that FERC will not issue the REA Notice until after termination of this AIP. In the event that FERC issues the REA Notice prior to termination of this AIP, the Parties shall use their best efforts to complete the Settlement Agreement within thirty days of such notice; provided, however, that a) any Party may withdraw from the AIP as set forth in Section V.A.2 below, and b) some or all of the Parties may by mutual agreement continue settlement discussions after such deadline.

- 3) <u>FERC Suspension of Schedule; Assurances During AIP</u>. The Parties agree that if FERC suspends its procedural schedule, during the period of such suspension no Party will take any position on matters addressed by this AIP in any proceeding relating to issuance of a new license that is inconsistent with the AIP except as follows:
  - a) The Parties recognize that the LA will not be consistent with the AIP.
  - b) If FERC issues an AIR to SCL, SCL may respond to the AIR in a manner that is not consistent with the AIP.
  - c) The Parties anticipate that if FERC suspends its procedural schedule there will not be any requests for comments other than SCL's response to any AIR. Parties may submit comments to SCL's response to an AIR that are inconsistent with the AIP. SCL and other Parties may respond to such comments in a manner that is inconsistent with the AIP.
  - d) Any Party submitting a response or comments to an AIR pursuant to subparagraph (b) or (c) of this Section will attempt to avoid making comments that would undermine the basis for the PMEs described in this AIP to the extent it can do so while carrying out its statutory and regulatory obligations.
- 4) <u>Confidentiality.</u> The Parties agree and hereby consent that filing of the motion to suspend and AIP do not violate the Ground Rules Agreement. Pursuant to the Ground Rules Agreement, however, any statements made during the negotiations of this AIP and other "Confidential Information" within the meaning of the Ground Rules Agreement shall remain confidential.
- 5) <u>FERC Interventions</u>. SCL will not oppose the intervention of any Party in FERC's relicensing proceeding.
- 6) <u>Procedure upon Settlement</u>. In the event that the Parties enter into a Settlement Agreement, they shall work together to file an Offer of Settlement with FERC and SCL shall amend its LA if and to the extent necessary or appropriate.
- 7) <u>Additional Studies</u>. The Parties may agree to include provisions in the Settlement Agreement that call for studies. No Party, however, will request FERC to require additional studies or otherwise contest the adequacy of the LA as to such Party during the term of this AIP.

#### B. Party Assurances and Communications During the AIP

<u>Consistent Positions</u>. During the period of this AIP, no Party will make any filing or take any public position in any proceeding relating to issuance of a new license that is inconsistent with the AIP except as set forth in Section III.A(3) above.

- 2) <u>Not Decisional</u>. Nothing in this AIP is intended or shall be construed to be a pre-decisional determination by USFWS, BIA, USFS, WDFW or WDOE. Nothing in this AIP is intended to, or shall be construed to, affect or limit the authority or obligation of any Party to fulfill its constitutional, statutory, and regulatory responsibilities or to comply with any applicable judicial decision or order.
- 3) <u>Communications During AIP</u>. All communications by Parties to FERC, except communications relating to documents that were filed with FERC prior to execution of the AIP, or communications submitted pursuant to Section III.A(3) above, shall be consistent with this AIP while it is effective.
- 4) This AIP shall be binding on all successors and assigns of all signatories.

#### C. Negotiation of Settlement Agreement

- 1) This AIP is preliminary in nature. To complete the Settlement Agreement, the Parties will develop and seek agreement regarding the following: Detailed provisions to be proposed as license articles and that the Parties intend will be incorporated as the substance of the terms, conditions, recommendations and comments; resource management plans; joint explanatory statement; and other matters appropriate for a complete agreement, such as, but not limited to, effective date of obligations, dispute resolution, force majeure, venue and controlling law, notices and communications, enforceability, remedies, regulatory approvals, actions upon executions, withdrawal provisions and signatory authority.
- 2) Best Efforts. The Parties agree and commit to make best efforts to achieve a comprehensive Settlement Agreement during the term of this AIP.
- 3) Partial Settlement Agreement. In the event that a comprehensive Settlement Agreement cannot be reached among all Parties, then some or all of the Parties may enter into a Settlement Agreement for some or all of the issues covered by this AIP.

#### IV. PMEs and Assurances

#### A. **PME Provisions**

- 1) The Parties have reviewed the information that has been provided to date and have raised all issues of which they are presently aware.
- 2) The Parties expect, subject to their reservation of rights under Section III.B(2) above and review of any new information or changed circumstances, that the PMEs indentified in this AIP, when incorporated into a complete Settlement Agreement, will be found to be adequate to meet SCL's obligations under the FPA, the CWA and the ESA for issuance of a new license.

3) The Parties to this AIP agree that, for purposes of developing the Settlement Agreement, the PME measures set forth in Attachment 1 will address ongoing effects associated with the Project and its operation during the new license term. The Parties anticipate that the Settlement Agreement will include a statement, as appropriate, on behalf of all Parties to provide reasonable support for the Settlement Agreement in all relevant regulatory proceedings in which they participate regarding the Boundary Project during the course of the relicensing proceeding.

#### B. Assurances for Settlement Agreement

As a general matter the Parties expect the Settlement Agreement to address issues and provisions similar to those typically found in other Pacific Northwest FERC settlement agreements, including but not limited to:

- The Settlement Agreement (SA) will generally provide details on the Parties' actions, individual or collective, between completion of the SA and FERC's action on the Offer of Settlement. The Parties expect the settlement will address completion of the other legal processes, including but not limited to CWA, NEPA and ESA, required prior to FERC's decision on license issuance. The Parties contemplate filing a Joint Explanatory Statement that will, among other things, articulate the resource management basis for the SA.
- 2) The SA will address the Parties' individual or collective opportunities and actions in the case a third party appeals the FERC license order or the order is otherwise inconsistent with the SA. The SA will likely address the contractual status of the SA and relationship to the FERC process.
- 3) The SA will likely address internal SA working relationships including but not limited to: committees, licensee support for committee processes, license implementation in the context of committee consultation, other agency approvals, and dispute resolution.
- 4) The SA will likely address implementation of the license details including but not limited to: plan development and consultation, consultation on license article implementation, annual or periodic reports to FERC, disputes, enforcement, and withdrawal from SA.
- 5) The SA will likely address new information, changed circumstances, new methodologies, license amendment, and reopeners.
- 6) The SA may address relationships to other proceedings and other agreements, if any.
- 7) The SA will likely address general and miscellaneous provisions common to other settlements filed before FERC.

- 8) The Settlement Agreement will include USFS administrative terms and conditions as set forth in Attachment 2 to this AIP.
- 9) The Settlement Agreement will address enforcement mechanisms for any of its provisions that are beyond FERC's enforcement authority.
- 10) The Settlement Agreement will address requests for trial-type hearings and proposals for alternatives to mandatory conditions pursuant to Energy Policy Act of 2005.
- 11) The Settlement Agreement will likely reserve FERC's authority to review actions of the Licensee prior to implementation. The Settlement Agreement will include reservations of authority for appropriate resource agencies.

#### V. General Terms of Agreement

#### A. Term, Termination and Withdrawal

- 1) This AIP will become effective upon execution by the Parties and will remain effective (i) through February 1, 2010, (ii) until 30 days after FERC's issuance of the REA Notice, or (iii) until a Settlement Agreement that supersedes this AIP is reached by some or all of the Parties and filed at FERC, whichever occurs first.
- 2) Any Party may withdraw from this AIP upon 30 days' advance written notice to the other Parties; provided however if FERC issues the REA Notice a party may withdraw upon five days' written notice.
- 3) Some or all of the Parties may agree to extend the term of this AIP beyond February 1, 2010, or beyond 30 days after FERC's issuance of the REA Notice, to continue settlement discussions toward a Settlement Agreement. Any such extension shall be in writing and shall specify a new deadline for the expiration of the AIP.
- 4) If the term of this AIP is extended as set forth in subsection 3 of this section, any Party that does not agree to such extension shall be deemed to have withdrawn from this AIP on February 1, 2010 or 30 days after FERC's issuance of the REA Notice, as applicable.
- 5) If any Party fails to perform its obligations either through action or inaction under this AIP, any other Party that is materially affected may, upon five days written notice, withdraw from the AIP or continue to negotiate the Settlement Agreement only with those abiding by this AIP.
- 6) A Party withdrawing shall state its reasons for withdrawal and, upon request from one or more other Parties, prior to the effective date of its withdrawal,

shall meet and confer with such other Parties regarding the possibility of continued negotiations.

7) A Party that withdraws shall remain bound by the good faith, confidentiality and press provisions of the Ground Rules Agreement until completion of the licensing proceeding.

#### B. **Reservations Upon Withdrawal**

- 1) Each Party reserves its rights to take any position regarding the license or otherwise exercise its rights in the event that a Settlement Agreement has not been reached by the time of termination of the AIP.
- 2) In the event of withdrawal, the withdrawing Party shall not be bound by the PME provisions of this AIP, and shall not be bound by the procedural provisions of this AIP except as set forth in subsection V.A.(7) above.
- C. **Confidentiality; Ground Rules Agreement**. The confidentiality and other provisions of the Ground Rules Agreement will continue to govern the Parties' conduct throughout the term of this AIP; provided, however, that in the event of a conflict between the AIP and the Ground Rules Agreement, the AIP shall take precedence.
- D. **Notice**. Any notice required under this AIP shall be given in the manner set forth in Section 5 of the Ground Rules Agreement.

#### E. No Admission; Not Evidence.

- 1) Neither this AIP nor any part or draft thereof shall be construed as an admission against interest or be offered or used in any legal or regulatory proceeding by a Party or former Party against any other Party or former Party except as set forth in Section III.A.1 above.
- 2) Nothing in this AIP nor any part or draft thereof shall be construed as an admission or determination by any Party that any of the actions anticipated by this AIP are necessary or required as a matter of any state or federal law.
- 3) In the event that any third party seeks to rely upon the provisions of the AIP as evidence for any purpose in any proceeding, any Party that participates in such proceeding shall object to such use of the AIP and shall take the position that the AIP has no probative value.
- F. Attachments. The following attachments are part of this AIP: Technical Provisions of AIP (Attachment 1); USFS Administrative Terms and Conditions (Attachment 2).
- G. **Signature.** The undersigned representatives of the Parties to this AIP certify that they are authorized to enter into the terms and conditions of this AIP, to

execute the AIP, and to bind legally each Party to this document subject to the limitations contained herein. This AIP shall become effective as to each Party when executed by that Party or its counsel. This AIP may be signed in counterpart.

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Boundary Project Agreement in Principle

#### ATTACHMENT 1 TO AGREEMENT IN PRINCIPLE FOR

#### **BOUNDARY PROJECT RELICENSING**

#### Specific Protection, Mitigation, and Enhancement Provisions

#### A. Administrative Provisions

- 1) Pursuant to provisions that will be set forth in the SA, resource specific working groups will be established to assist SCL with implementation of new license conditions and protocols will be developed to guide the activities of these working groups. Working groups will include, but not be limited to, a Fish and Aquatics Working Group (FAWG), Terrestrial Resources Working Group (TRWG), Recreation Resources Working Group (RRWG), Water Resources Working Group (WRWG) and Cultural Resources Working Group (CRWG). The working groups will include members from the Parties, and others as agreed to by the Parties. The Parties may develop rules or procedures allowing for non-parties' participation in implementation of the settlement. Working groups will coordinate implementation of resource management plans for the term of the new license and facilitate consultation among SCL and the resource agencies and other interested Parties. Provisions shall include, but not be limited to, working group roles and responsibilities, plan review and updates, resource monitoring and adaptive management, membership, decision making, communication protocols, and support, as applicable.
- 2) SCL, in consultation with the Parties and subject to the approval of appropriate agencies, shall prepare resource management plans to accompany the SA. As used throughout this AIP, the term "appropriate agencies" means one or more of the resource agencies and/or FERC as appropriate in a given context. The resource agencies are BIA, the Kalispel Tribe, NPS, USFS, USFWS, WDOE and WDFW. Management plans will provide an implementation schedule for resource mitigation measures over the new license term. Specific resource management plans shall be developed in coordination with other resource areas. The Parties recognize that in general, references to approvals are not intended to expand existing agency authority.
- 3) In general, resource management plans will provide for annual reporting and consultation, with updates to the plan as needed. The draft annual report will be provided to the appropriate working group 30 days prior to the annual meeting and will provide details for the out-years' planned activities (different timeframes may be appropriate for each working groups; specific timeframes will be included in each resource management plan). Working group members will have a minimum of 30 days to comment and make recommendations on the annual report before SCL finalizes the report and

files it with FERC. Any related dispute resolution provisions shall be set forth in the SA.

- 4) SCL shall provide funding for the implementation of all measures identified within proposed license articles or resource management plans developed as part of the SA.
- 5) SCL will propose Project boundary changes related to the following provisions identified in this AIP: 1) inclusion of new terrestrial mitigation land parcels, and 2) inclusion of new developed recreation sites. In addition SCL will also propose necessary adjustments to the boundary that it has determined are needed to bring the main Project access road, the Boundary Wildlife Preserve (BWP), and the Project maintenance area north of the dam into the boundary. Finally, SCL will make minor adjustments to the Project boundary to "true up" the boundary with the existing boundary definition. Besides these planned modifications, the Parties agree that SA will be drafted to the extent possible to minimize any additional expansion of the Project boundary.
- 6) The SA will contain dispute resolution provisions that will also be available to resource working groups.
- 7) All monetary amounts are in 2007 U.S. Dollars, subject to adjustment with an appropriate consumer price index (CPI), unless otherwise stated.
- 8) Implementation of the PME measures included in the SA, including but not limited to reporting, design, construction, operation, implementation, monitoring and evaluation will be conducted within an adaptive management framework and all measures will be implemented in consultation with the appropriate working groups and with the approval of the applicable agencies and FERC.

#### **B. Project Operations**

1) From Memorial Day weekend (starting Friday evening) through Labor Day weekend (on Monday evening), forebay water surface elevations will be maintained at or above 1,984 feet NAVD 88 from 6:00 am through 8:00 pm to facilitate recreational access and use. From 8:00 pm through 6:00 am, forebay water surface elevations will be maintained at or above elevation 1,982 feet NAVD 88.

The 1,984 and 1,982 foot NAVD 88 elevations will be license requirements that must be complied with except under conditions or events such as equipment failures, unanticipated events during maintenance activities (e.g., rare circumstances that may extend scheduled repair and maintenance outages), electrical and mechanical device limitations, safety inspections, testing, natural disasters (e.g. lightning), load and reserve support (e.g., NERC/WECC required testing to maintain Project and regional energy

stability and reliability), capacity and energy emergencies, and any event that triggers the Project Emergency Action Plan (EAP). In the event of such conditions, SCL shall notify the Parties following an event in a manner set forth in the SA.

To reduce total dissolved gas (TDG) under normal, non-spill operations, SCL will operate Units 55 and 56 above 125 MW and sequence their startup and shutdown so that they are the last units to be brought on line and the first units to be shut down. During the new license term, SCL will upgrade equipment at the Boundary Dam power plant consistent with a schedule to be included in the SA. Upgrades to the turbines may reduce or eliminate the conditions that in the past have led to TDG production during non-spill operations. When the proposed turbine upgrades are completed, SCL plans to reevaluate the need for the unit sequencing identified above, in consultation with the Parties, and adjust the approach to, or eliminate, the sequencing restrictions as agreed to by the Parties.

2) SCL will install new high efficiency turbines in Units 55 and 56. The turbine runner upgrades will increase efficiency, i.e., they will use the same flow to produce a greater amount of energy and have a higher total generation capacity. The turbine runner efficiency upgrades will be performed concurrently with planned electrical generator rewinds. The generator rewinds are scheduled for Years 2 and 3 after license issuance and turbine runner upgrades for Years 2 through 4 after license issuance. SCL plans to replace the turbine runners for units 51, 52, 53, and 54 within 20 years of issuance of the new license. Generally, turbine runners can be expected to need replacement approximately every 30 years. For any turbine replacements, SCL will consider and evaluate fish friendly technology available at the time during design and engineering of new turbines.

#### C. Water Resources and Water Quality

- 1) SCL will pursue the acquisition of flood easements from identified private land owners to address modeled incremental Project effects related to peak flood flow conditions above Metaline Falls.
- 2) POPUD and SCL will jointly study the feasibility to utilize cold water releases from Sullivan Lake to cool water temperatures in Sullivan Creek or provide cooler water input to the Pend Oreille River and to evaluate the effects of such withdrawals on Sullivan Lake. This study shall begin no later than 24 months after the Boundary Project license issuance.

A group of technical experts from the Parties shall assist in the development of the study design and review the results of the study and make recommendations. Final decisions shall be made by the Parties. Sources of funding for this work could include but are not limited to Columbia River Basin Water Management Program funding.

If this study demonstrates that cold water releases from Sullivan Lake can be an effective method (to be defined in the SA) to cool water temperatures and improve native salmonid habitat conditions in Sullivan Creek, that do not negatively impact Sullivan Lake, or provide cooler water input to the Pend Oreille River, POPUD and SCL shall jointly undertake the necessary design, construction, and operation of a facility to make the cold water releases. Cold water releases shall be consistent with the flow regime as defined in the Sullivan AIP (Attachment 1, Section B.5) and State water quality standards.

Construction work shall be completed within 36 months following a decision that cold water releases will be beneficial.

The SA shall include SCL's specific obligations with respect to the cold water release.

- 3) SCL will provide the locations and amount of native riparian plantings and other tributary habitat activities detailed in the Fish and Aquatics Management Plan (FAMP) that are intended to provide enhancement of water temperature conditions in Boundary Reservoir.
- 4) WDOE reserves the right to implement all authorities it has to enforce the 401 certification, state water quality standards, or other appropriate requirements of state law. The Parties reserve the right to appeal the temperature Total Maximum Daily Load (TMDL) for the applicable segment of the Pend Oreille River.
- 5) WDOE reserves the right to require from SCL any additional information regarding water quality issues related to the Boundary Project that are needed in order to issue the 401 certification.
- 6) All water quality attainment and monitoring plans identified in subsection 9) below and annual reports shall be submitted to WDOE for review and written approval.
- 7) SCL will develop all water quality plans identified in subsection 9) below in consultation with the Parties.
- 8) All water quality monitoring plans shall include a Quality Assurance Project Plan (QAPP) approved by WDOE.
- 9) SCL shall include the following information in its application to WDOE for a 401 water quality certification for development of the 401 Certification:

- i) The Preliminary Licensing Proposal for the Boundary Hydroelectric Project FERC Project No. 2144 April, 2009.
- ii) The Updated Study Report for the Boundary Hydroelectric Project FERC Project No. 2144, March 2009.
- An operations analysis report including modeled temperature runs investigating the opportunity to provide any enhancement of water temperature conditions in Boundary Reservoir through operational changes.
- iv) A water quality attainment plan for total dissolved gas per WAC 173-201A-510(5)(b), that identifies all reasonable and feasible improvements that could be used to meet the TDG criteria, including physical and biological monitoring plans that evaluate the expected reduction of % saturation TDG and effects on aquatic life.
- v) A water quality attainment plan prepared in accordance with WAC 173-201-510(5)(b) for dissolved oxygen and temperature.
- vi) SCL, WDOE and other interested Parties shall conduct a technical consultation during negotiations on the SA to determine what, if any additional information regarding pH is needed. If information is needed, SCL shall prepare a work plan in consultation with Ecology and other interested Parties to produce that information. Any such plan shall be submitted to WDOE for review and final written approval.
- vii) A plan for collecting and analyzing tissue samples from sport fish, and sucker (spp.) in Boundary reservoir regarding lead and zinc concentrations. Data will be collected and provided to WDOE and Washington Department of Health (WDOH) to assess human health risks from fish consumption one year after license issuance. If health advisories are warranted, WDOE and WDOH will determine the next steps for tissue sampling or health advisory issuance.
- viii) An Aquatic Invasive Species (AIS) plan as identified in Section I of this AIP that shall be updated annually or as determined by the necessary work group.
- ix) A Spills Prevention and Counter Measure and Control plan shall be provided to WDOE every five (5) years as updated per 40 CFR 112 requirements.

#### D. Reduction of Project Related Entrainment Mortality

To address Project entrainment, the following section describes a program to be implemented by SCL over the license term. The intent of this program is to fully mitigate for the effects of entrainment on target species (bull trout, westslope cutthroat trout, and mountain whitefish) throughout the license term by either: (1) preventing entrainment at the Project; (2) reducing entrainment at the Project and mitigating for the remaining effects; or (3) fully mitigating for the effects of entrainment through other measures. The decision as to whether entrainment is best addressed through options 1, 2 or 3 as defined above, will be made by the FAWG based on site specific information developed under the following program. Such decisions may be subject to the approval of the appropriate agencies.

In Years 1-18, SCL shall develop and implement a study, research and monitoring phase (not to exceed \$23M over the 18 years) to address Project entrainment mortality effects on target species. This Research and Monitoring (R&M) Study Plan shall be sufficient to quantify the effect of entrainment on target species and to determine whether any population may be uniquely or substantially affected by Project entrainment. SCL shall develop this R&M Study Plan in consultation with the FAWG subject to the approval of the appropriate agencies.

All studies shall follow best available science (BAS) and use the most appropriate techniques available at the time of the study. During development of the SA, the Parties agree to consider the role of a population advisory committee (PAC) to assist the FAWG. Studies shall be designed to achieve a high level of statistical rigor and precision, in consideration of fish available for study, satisfactory to the FAWG. The Parties anticipate that efforts to address Project entrainment will be conducted pursuant to the following schedule:

- a) <u>Years1-2:</u> Peer reviewed development of R&M Study Plan and initiation of study components.
- b) <u>Years 3-15:</u> Studies to determine the swimming performance, behavior, and migratory pattern of target fish species shall be conducted to provide sufficient information to determine whether any population of the target species may be uniquely or substantially affected by Project entrainment and to determine the appropriate location of any entrainment reduction facilities that may be needed in the future.

R&M Study Plan implementation with process reviews and re-evaluation every 3 years based on data collection results. Annual reports prepared in consultation with the FAWG shall be filed with FERC.

c) <u>Years 16-18</u>: Dam survival shall be calculated as the survival of target species passing through the Boundary powerhouse, sluiceways and spillways. Dam survival evaluations shall be conducted according to a study design developed under the guidance of a committee composed of regional experts (i.e., Technical Advisory Committee (TAC)) using the most appropriate techniques available at the time of the study, and shall be designed to achieve a high level of statistical rigor and precision, in consideration of fish available for study, satisfactory to the FAWG and subject to the approval of the appropriate agencies.

A study to identify hydraulic conditions in the forebay of Boundary Dam shall be conducted by SCL in order to evaluate conditions under all Project operations. The study shall include field measurements and may require development of a computational fluid dynamic, or physical scale model of the Boundary Dam and appurtenant facilities.

- d) <u>Year 18 Decision Point:</u> The FAWG shall determine, based on information developed during the R&M Study, whether a population (i.e., a unique population that constitutes a substantial percentage of fish in the Project area or that has a unique evolutionary niche that requires special protection) or a substantial number of target fish, continue to be affected by Project entrainment. A decision on downstream entrainment measures as described below will be made at the conclusion of the R&M Study by the FAWG in consultation with the TAC and subject to the approval of the appropriate agencies.
- e) <u>Years 19-33:</u> If entrainment reduction measures are determined to be necessary at the year 18 decision point, based on Project specific information, SCL shall make available up to \$47m through year 33 (plus any unexpended funds from the \$23M allocated for the Years 1-18 R&M Study) to take one of the following actions.
  - i) If Boundary Dam survival of target species > 4 inches is less than 60 percent, SCL shall design, build, operate, maintain, monitor, and, as needed, modify facilities to reduce entrainment effects. Facilities shall be subject to review and approval by the FAWG, in consultation with the TAC, and FERC.
  - ii) If Boundary Dam survival of target species > 4 inches is greater than 60 percent, SCL shall implement non-operational measures to improve Project survival commensurate with the Project's effects on a target species. Non-operational measures shall be identified, prioritized, implemented and monitored at the direction of the FAWG.
- f) <u>Year 34 Re-evaluation of Project Entrainment Effects:</u> Based upon the monitoring conducted between years 19-33, the FAWG in consultation with the TAC, shall re-evaluate Project entrainment effects. Based upon the results of the re-evaluation, SCL shall take one of the following actions.
  - If Boundary Dam survival of target species > 4 inches is less than 60 percent, SCL will construct a new facility, expand the existing facility, or make operational changes to reduce entrainment only if it has been determined by the FAWG, in consultation with the TAC and subject to the approval of the appropriate agencies that

(i) a population (i.e., a unique population that constitutes a substantial percentage of fish in the Project area or that has a unique evolutionary niche that requires special protection) or a substantial number of target fish, continue to be affected by Project entrainment; and (ii) the proposed facility or operational change has a high likelihood of reducing entrainment effects on any target species. Any facility will be subject to approval by the FAWG in consultation with the TAC and FERC. The FAWG may determine that continuing Project effects are better addressed through alternative forms of mitigation that shall be implemented by SCL at a level of effort commensurate with the Project's effects on a target species.

 ii) If Boundary Dam survival of target species > 4 inches is greater than 60 percent, SCL will implement new or continuing nonoperational measures as needed to address Project effects with a level of effort commensurate with the Project's effects on a target species. Such non-operational measures shall be determined in consultation with the FAWG and subject to the approval of the appropriate agencies.

#### E. Upstream Fish Passage

- 1) SCL shall install, operate, maintain and monitor a single upstream trap-and haul fishway facility (upstream fishway) in the Boundary Project tailrace. The purpose of this facility is to provide safe, timely, and effective passage of the bull trout, cutthroat trout, and mountain whitefish species in the Project area (target fish species) for the license term and any subsequent annual licenses. The fishway will include a fixed entrance(s) and a release location(s) at least one mile upstream of the Boundary Dam. Provided the fishway is constructed according to a design that has been approved by the FAWG and by the appropriate agencies and is operated consistent with an approved installation, operation and maintenance plan as set forth in section 2 below, and subject only to such minor modifications as are described in paragraph 2(a) below, the fishway will satisfy all applicable upstream fish passage requirements.
- a) SCL shall design and construct this upstream fishway using the best available scientific information, including but not limited to the NMFS 2008 Anadromous Salmonid Passage Facility Design Manual (Design Manual), taking into account the site specific conditions at the Project and other relevant information. In no case shall attraction flows exceed 1,650 cfs (3% of maximum generation discharge). SCL must demonstrate that any departures from the Design Manual will be effective at achieving the purposes of the facility in providing safe, timely and effective passage for target species. The final design will be subject to the approval of the appropriate agencies.

- b) SCL shall undertake a research and development phase of up to 12-years to evaluate the fishway entrance design, entrance location, and attraction flow volumes that will achieve the purposes of the facility.
- c) For design purposes, safe, timely, and effective passage will be evaluated through the use of the best available scientific information, including mark and recapture studies using the most appropriate technology available, as determined by the FAWG in consultation with a technical advisory committee to be formed to assist in the design of upstream fish passage studies and analysis of study results. Target fish species to be evaluated will represent the size distribution of migrating species in the Project area.
- d) Within 2 years of license issuance, SCL shall develop a plan for collecting sitespecific biological and engineering information required to site, design, and install the upstream trap and haul fishway. Plan implementation shall continue for up to 8 years and shall include methods for identifying, among other things:
  - i) Site-specific hydraulic conditions in the tailrace of Boundary Dam, under all operating scenarios;
  - ii) Proper location of the upstream fishway and entrance(s) given site specific considerations of the Boundary Dam spillway, sluiceway, powerhouse, and tailrace area;
  - iii) Information on swimming performance, behavior, and migratory pattern of target fish species downstream of the dam sufficient to determine the appropriate location of the fishway entrance(s) under all operating scenarios and related environmental cues, including but not limited to temperature, TDG, water velocity and lighting;
  - iv) Structures, devices and measures to allow adjustment of the fishway entrance(s) and auxiliary flow as necessary to effectively attract target fish species into the upstream fishway including the influence of cooler attraction flow water if incorporated into the test facility;
  - v) Structures, devices, and measures to allow adjustment of water flow, water velocity and water surface elevations within the upstream fishway as needed to effectively convey target fish species into the fish trapping device;
  - vi) The influence of Boundary Project operations including turbine discharge, turbine sequencing (e.g., first on, last off), and spill on the tailrace environment;
  - vii) Provisions for counting and evaluating fish passage through the upstream fishway; and

- viii) Provisions for transport and release of fish upstream of the dam.
- e) SCL may evaluate prototype facilities within the 8 year research and development phase.
  - 2) Within 12 years of license issuance (2 planning years, 8 research years and 2 design years), SCL shall file with FERC for approval, a plan to install, operate and maintain an upstream trap and haul fishway. SCL shall complete construction of the upstream fishway within 2 years of receiving FERC approval.
- a) The plan for the upstream fishway shall include, but not be limited to: (1) functional design drawings; (2) quantification of flows needed to operate the fishway; (3) a proposed operations and maintenance plan; (4) a schedule for installing the facilities; (5) provisions for short and long-term monitoring; and (6) provisions for modifying the fishway as needed to achieve the purposes of the facility. The need for any such modifications shall be determined within 5 years of initiating operations of the fishway. SCL shall make available an amount up to approximately 5% of facility construction costs to make minor modifications as needed to increase fishway effectiveness.
- b) SCL shall develop a design for the single fishway based upon the best available scientific information, including the Design Manual. Any departures from the Design Manual will be considered by the FAWG based on compelling evidence and in consultation with the PAC and the TAC. SCL must demonstrate that any departures from the Design Manual will be effective at achieving the purposes of the facility in providing safe, timely and effective passage for target species. The final design will be subject to the approval of the appropriate agencies.
- c) The plan shall also include, but not be limited to, the fishway location, operational period, design flow range, trap holding pools, crowder and brail systems; sorting and transport provisions; and sample/anesthetic/recovery tanks. The plan will include structures, devices and measures to allow adjustment of auxiliary flow at the fishway entrance(s) as necessary to effectively attract target fish species into the upstream fishway.
- 3) SCL shall develop all plans and the fishway design in consultation with the FAWG and subject to approval of the appropriate agencies. As described above, SCL shall convene a technical committee consisting of fish passage design experts (the TAC) to assist in developing all plans and designs. SCL will select the fish passage design experts in consultation with and subject to approval by the FAWG. The TAC will provide recommendations to the FAWG pertaining to the site, design and installation of the upstream fishway as well as determine whether development of a computational fluid dynamic or physical scale model of the Boundary Dam and appurtenant facilities are necessary. Decisions regarding fish passage design and evaluation are subject to the dispute resolution provision of the SA.

SCL shall allow a minimum of 30 days for the FAWG to comment and make recommendations before filing any designs and plans with FERC. When filing designs and plans, SCL shall include documentation of consultation; copies of comments and recommendations; and specific descriptions of how comments and recommendations were accommodated by SCL. If SCL does not adopt a recommendation from the FAWG, the filing shall include its reasoning based on Project specific information.

Fishway design drawings (including drawings for any prototype or test facilities to be evaluated) shall be provided to the FAWG for review at the 30% (functional design), 50% and 90% completion stage and SCL shall consult with the FAWG at each stage.

#### F. Native Salmonid Supplementation Program

- 1) In consultation with the FAWG, SCL will fund the design, construction, operation, and maintenance of a fish propagation facility to produce native salmonids to be released into tributaries to Boundary Reservoir. The facility will be operational within 6 years of license issuance. Fish will be released to supplement existing populations, or to introduce native salmonids to reaches where they are not currently present. The initial target capacity for the facility will be up to 45,000 eyed eggs, or fry or fingerling (3 to 4 inch) fish per year (capacity of 1,000 pounds). Annual production will be commensurate with the need to outplant fish in areas where non-native suppression/eradication has occurred. The facility will be designed to incorporate techniques to increase fitness and survival after release. Outdoor rearing facilities will consist of a naturalized, sinuous channel with cobble and gravel substrate, underwater feeding system, natural shading, and instream woody habitat. Broodstock holding and spawning facilities will consist of a naturalized pond designed to allow water drawdown and crowding, fish lift and spawning area. Holding facilities for native fish removed temporarily during non-native eradication/suppression activities will be included. A propagation building will house administrative offices, incubation room, and early rearing troughs. The facility will be designed to produce eyed eggs, alevins, fry and fingerling-sized fish. For planning purposes, the primary distribution of fish is assumed to be fingerlings, but may include stream-side incubators or artificial redds to minimize potential domestication.
- a) Initial target species to be westslope cutthroat trout, but facility will be designed to simultaneously propagate two species of fish; selection of species, stocks and lifestages to be developed in coordination with FAWG members.
- b) Target release sites will include those reaches where non-native trout have been actively suppressed or where high quality, but underutilized, habitat is available.

- c) Supplementation of native salmonids is expected to complement non-native trout suppression and stream habitat improvement activities.
- d) For planning purposes, the propagation facility will be at the Usk Skookum Creek Hatchery.
- e) Gravity water supply of up to 7 cfs is assumed from natural springs; some passive or active heating may be required to increase source water temperature.
- f) Locally adapted broodstock will be used to maintain long-term fitness traits; facility will be operated to minimize genetic divergence from local naturally spawning stocks. A hatchery genetics management plan will be developed.
- g) Compliance monitoring will consist of annual reports identifying numbers, lifestages, size and species of fish produced, and timing and locations of releases.
- h) SCL will be open to cost-sharing and other partnering arrangements that would allow expansion and/or use of the facility to meet fish propagation needs beyond those of the Project.
- i) Maximum capacity of the facility will be no more than 20,000 lbs.

#### G. Tributary Aquatic Habitat Measures

- 1) Mill Pond Dam Removal, Sediment Management and Channel Restoration
- a) SCL shall develop a plan, in consultation with the appropriate work groups and, subject to the approval of the appropriate agencies, to implement the measures at the Mill Pond site. These measures shall be implemented within 5 years of Boundary Project license issuance.
- b) SCL shall implement the following measures related to dam removal and sediment management at the Mill Pond site:
  - i) Remove both the concrete and log crib dams and artificial foundations to facilitate natural stream functions.
  - ii) Use wooden material from the log crib dam in stream channel restoration efforts, as appropriate, or dispose of off-site.
  - Retain existing bridge to heritage interpretative site, if possible. If necessary, construct/install a new bridge. SCL will not be responsible for the maintenance of the bridge following the completion of construction.
  - iv) Take appropriate measures to protect fish in Sullivan Creek during the dam removal and stream channel restoration activities.
- v) Remove the minimum amount of sediment from Mill Pond necessary to facilitate dam removal and stream channel restoration.
- vi) Permanently dispose of sediment not left in place or utilized in restoration efforts at a non-National Forest System (NFS) site.
- c) SCL shall implement the following measures related to channel restoration at the Mill Pond site:
  - i) Restore the Mill Pond reservoir inundated area. The inundated area is defined as 2,520 feet NAVD 88, the average pool elevation when the concrete dam (1922) was completed.

(1) Provide for the prevention, suppression, containment, eradication and/or control of invasive, non-native plant species and implement an effective monitoring program consistent with subsection b)iv)(5) below.

ii) Stabilize sediment left in place.

(1) On flats, hydro mulch with native herbaceous seeds, then plant with desired conifer species.

(2) On newly exposed slopes outside of new stream banks, hydromulch with native herbaceous seeds and plant native trees (riparian and conifer species) suitable to the site.

iii) Restore Sullivan Creek stream channel in Mill Pond to selffunctioning system consistent with Sullivan Creek channel upstream and downstream of Mill Pond.

(1) Stabilize new stream channel banks initially with keyed-in logs with root wads and large boulders then plant with native herbaceous and woody riparian species.

 iv) Restore Sullivan Creek stream channel, from upstream of Mill Pond Dam site to Outlet Creek, to self-functioning system consistent with Sullivan Creek channel upstream and downstream of Mill Pond. Specific measures may include:

(1) Actively direct the Sullivan Creek channel to connect with its upper most historic channel in Mill Pond.

(2) Monitor the head cutting up Sullivan Creek and apply adaptive management principles to reduce severe head cutting.

(3) Placement of boulders and/or whole trees as check structures to reduce severe head cutting up Sullivan Creek will be coordinated with the FAWG, RRWG, and other interested organizations, including American Whitewater.

(4) Stabilize the new stream channel banks with native herbaceous and woody riparian species.

(5) Monitor and control noxious weed infestations along Sullivan Creek and adjacent areas in the affected area.

## v) Instream or shoreline structures to provide:

(1) Resting and hiding cover for small fish and foraging habitat for all life stages.

(2) Stream bank erosion protection.

(3) Pool habitat through scouring and spawning habitat through collection of smaller size stream bed material.

- d) The restored stream channel will be designed to function up to a 100-year flood event.
- e) After completion of the restoration effort, SCL shall monitor the site for 10 years and once every 8 years thereafter to ensure: that the stream channel is functioning in accordance with the design criteria; that vegetation is becoming established; and to control non-native plant species. SCL shall develop a monitoring plan in consultation with the FAWG and subject to approval by the appropriate agencies, to identify the criteria by which decisions will be made that require SCL to take corrective action if monitoring shows that any component of the restoration effort has been ineffective. In addition, after any major flood event in Sullivan Creek post-completion of channel restoration activities, SCL shall evaluate the site to determine whether the stream channel continues to meet design criteria. SCL will undertake any measures necessary to assure that the stream channel is meeting agreed to design parameters. In the event of flows greater than a 100-year flood event, SCL will not be responsible for the proper functioning of the restored stream channel.
- f) In the period between execution of an AIP and finalization of a SA for the Boundary Project, SCL will undertake necessary engineering and design efforts in consultation with the other parties, to define and describe the activities and features in item b) above in sufficient detail to support FERC's National Environmental Policy Act (NEPA) analysis and decision-making with regard to SCL's relicensing proceeding and the POPUD's surrender proceeding.
- g) If, for reasons beyond the control of the Parties, SCL is not able to pursue the agreed to stream channel restoration efforts at the Mill Pond site, the Parties will

convene to determine, pursuant to decision making provisions that will be outlined in the SA, what alternative aquatic habitat measures should be undertaken by SCL at a level of effort comparable with that envisioned in the SA for the stream channel restoration at the Mill Pond site.

- 2) Tributary Habitat Restoration Proposal
- a) SCL shall restore 211 miles (304 acres) of habitat within tributaries to the Boundary Project reservoir. The measures identified in Appendix A satisfy this requirement and shall be completed by SCL within 25 years of license issuance to satisfy this requirement. Within six months of license issuance, SCL shall file with FERC a schedule for completing the specific measures identified in Appendix A. The schedule shall prioritize the measures consistent with Appendix A and include milestones for completing design, consultation, regulatory review, permitting, and construction for each measure.
  - i) SCL shall develop specific plans for each measure pursuant to the schedule identified in section G.2) a) above. Each plan shall include specific goals, objectives, cost estimates, anticipated restoration techniques, maintenance requirements, and monitoring plans and methods. Specific, measureable, success criteria shall also be included for each measure. For each measure that includes a construction component, the plan will include final construction drawings. Where applicable, measures should be addressed on a programmatic basis.
  - SCL shall develop all plans required by this section in consultation with the FAWG and subject to approval of the appropriate agencies. SCL shall allow a minimum of 30 days for the FAWG to comment and make recommendations before filing the plans with the FERC. When filing a plan, SCL shall include documentation of consultation; copies of comments and recommendations; and specific descriptions of how comments and recommendations were accommodated by SCL. If SCL does not adopt a recommendation, the filing shall include their reasoning based on Project specific information. If SCL files a plan without obtaining necessary agency approvals, they shall include specific reasons for doing so.
  - iii) SCL shall be responsible for obtaining all applicable permits, environmental reviews (e.g., NEPA), and approvals from Federal and State agencies.
  - iv) Once a restoration measure has been completed (i.e., the success criteria have been met), SCL shall evaluate the measure every eight years for the term of the license to ensure the measure is meeting the success criteria. If a restoration measure falls below

success levels as determined through 8-year compliance monitoring, SCL shall immediately develop a plan for repairs, for approval by the FAWG, to correct the deficiencies. SCL shall begin implementing these repairs within 30-days of permit approval or as determined appropriate by the FAWG. Subsequent monitoring will occur as determined by the FAWG.

- v) SCL shall maintain each restoration measure as required in the plan. It is understood that with regard to measures (e.g., culvert improvements and road grading) related to NFS and Pend Oreille County roads that SCL will not be responsible for routine maintenance. SCL shall also routinely visit each restoration site (at least annually, as well as following significant weather events, or as reasonably required by the FAWG) to ensure that no substantive adverse impacts have occurred at the restoration site. Formal reports will not be required as a result of these routine visits, although brief written updates shall be provided by SCL to the FAWG upon request. It is understood that the NFS will be responsible for routine visits to measures on NFS roads as part of their regular road monitoring and maintenance activities.
- vi) It is anticipated that scheduled measures will be reviewed annually with the FAWG to allow the opportunity to recommend any desired changes in the upcoming year's efforts, including identifying possible replacement measures. Based on FAWG approval of the desired measures for implementation SCL will proceed with the development of specific plans, permitting and environmental reviews according to the schedule, including any updated milestones.
- vii) In the event that additional tributary restoration measures are required during the license term, pursuant to the conditions of the SA, SCL shall develop the measures in consultation with and subject to approval by the FAWG, consistent with this section.
- 3) Tributary Habitat Restoration for Tributaries to Sullivan Lake
- a) SCL shall take the following action in connection with improvement of habitat in tributaries to Sullivan Lake.
  - i) SCL shall provide funding rather than implementing specified measures or meeting specified performance criteria for tributaries to Sullivan Lake.
  - ii) SCL shall pay \$2.5 million into a fund within one year of issuance of the new license. SCL shall have no obligation other than this

funding obligation for conducting analysis pursuant to NEPA or SEPA or for permitting any of the funded measures.

iii) Distributions will be made from the fund for the following measures based on a process and schedule to be established by the Parties other than SCL.

(1) A study to evaluate measures to restore lower Harvey Creek habitat;

(2) Measures to replace Harvey Creek Bridge or substitute measures; and

(3) Measures at Noisy Creek and Jungle Creek as identified in Appendix A.

# H. Mainstem Aquatic Habitat Measures

The procedural components of the mainstem aquatic habitat measures described below shall be implemented consistent with the procedures outlined in G.2) a) i-iii (Tributary Habitat Restoration Proposal).

1) Large Woody Debris Placement in Tributary Deltas

In consultation with the FAWG, SCL shall enhance tributary delta habitat by providing additional cover for salmonids holding in the coldwater refugia at tributary mouths. Large woody debris (LWD) jams will be placed and maintained in the thalweg within the upper delta regions of four tributaries to Boundary Reservoir. Two LWD jams will be placed at the Sullivan Creek delta and one LWD jam will be placed at the deltas of Sweet, Slate, and Linton creeks (total of 5 LWD jams). The Sullivan Creek logjams will have a total target volume of 1,700 ft<sup>3</sup>, while each logjam in Slate, Sweet and Linton creeks will have a target volume of 529 ft<sup>3</sup> (1 key piece and 5 large pieces).

- a) LWD jams will be located in the upper end of tributary deltas to minimize use by non-salmonids.
- b) Orientation and construction of each LWD jams to be based on site-specific hydraulic and channel conditions. For planning purposes, shoreline construction access assumed for Sullivan and Linton creeks, access to Sweet and Slate creeks by floating barge.
- c) Design of Sullivan Creek logjams will be coordinated with the Recreation Working Group and American Whitewater to assure that boating safety considerations are taken into account.
- d) Compliance monitoring will document implementation and evaluate need for modification or repair.

- e) Effectiveness monitoring will consist of snorkeling to evaluate use of logjams by non-salmonids. The procedures for defining and evaluating effectiveness will be determined by the FAWG. In the event that any LWD placement is determined to be ineffective, the FAWG will identify commensurate future measures to be undertaken.
- f) Implementation schedule for Sullivan Creek logjams dependent on Mill Pond Dam removal activities.
- g) If it is determined necessary by the FAWG, alternate tributaries may be selected for treatment.
  - 2) Mainstem Gravel Augmentation

SCL will increase mountain whitefish spawning habitat by adding gravels and small cobbles to the Upper Boundary Reservoir in a reach known to support whitefish spawning, but with poor spawning substrate. Initial gravel placement will consist of spreading gravels one foot deep in six locations totaling 40,500 ft<sup>2</sup> in area for a total volume of 1,500 yd<sup>3</sup>. Large boulders (3-4 ft diameter) will be placed in horseshoe-shaped clusters to help retain and stabilize gravel delivered to the river. For planning purposes, SCL has assumed that 25 percent of the gravel/cobble volume will be replenished every 5 years.

- a) Gravel and small cobbles to be placed at channel bed elevations that will remain wetted through range of pool level fluctuations under proposed Project operations.
- b) Tentative sites have been identified at Project River Mile (PRM) 33.7 (0.8 mile below Box Canyon Dam), but final site selection to be developed in coordination with the FAWG.
- c) Compliance monitoring will document implementation and identify the appropriate frequency of gravel replenishment.
- d) Egg mats or some other method as agreed to by the FAWG, will be used to evaluate effectiveness.
- e) Gravel and small cobbles (< 8-inch diameter) will be placed using a gravel shooting conveyor on a floating pier constructed from Flexi floats.
- f) Boulder placement will be completed from a barge using an excavator.
  - 3) Channel Excavation at "Cobble Sisters"

SCL will modify trapping pools at the Cobble Sisters area of the Upper Reservoir Reach, also known as Stranding and Trapping Region 10. Modifications will include excavating a 1,800 foot channel down to elevation 1979 feet NAVD88 connecting three large trapping pools. This excavated channel will maintain a wetted connection to mainstem

flows under proposed operations. Excavated materials will be used to fill the trapping pool located at the channel margin.

- a) Side slopes of excavated channel will exceed 4 percent gradient to minimize stranding risk.
- b) Site access for heavy equipment will be through existing road.
- c) Estimated 100,500  $yd^3$  of material to be excavated.
- d) Longitudinal excavated channel expected to maintain velocities sufficient to minimize sediment deposition and macrophyte development.

## I. Aquatic Invasive Species Control and Prevention Plan

- 1) An aquatic invasive species control and prevention plan will be developed by SCL in consultation with the WRWG and FAWG. The plan will be completed within 2 years of license issuance and will include goals, objectives, success criteria, and adaptive management provisions for:
- a) Installing bottom barriers within 3 years of license issuance to suppress macrophytes in Boundary Reservoir at four specified locations to reduce interaction between boats and other water recreational vehicles with milfoil. The barrier installations will extend below elevation 1984 feet NAVD88.
  - i) <u>Everett Island side channel (PRM 19.4)</u> A bottom barrier will be placed to maintain a lane from the informal recreation site upstream (south) through the middle of the side channel to reduce contact between boats and invasive macrophytes. The bottom barrier will also reduce the risk of fish stranding and trapping during reservoir drawdown. The bottom barrier will be placed to create and maintain a 30-foot wide swath extending about 650 feet to the mainstem channel.
  - ii) <u>Metaline Pool, across from the Town of Metaline (PRM 28.7)</u> A bottom barrier will be placed to reduce boat contact with macrophytes where a dense macrophyte bed is located adjacent to a region of open channel. This area was identified by the field crews that conducted relicensing studies as a location where boats commonly come in contact with macrophytes. The exact location of the barrier will be determined in consultation with the WRWG FAWG following license issuance (estimated area = 200 x 100 feet).
  - iii) Fish Stranding and Trapping Region 9 (PRM 28.8) A bottom barrier will be placed in a location beginning just downstream of the midpoint of the side channel, adjacent to the shoreline and extending downstream (north) through the channel thalweg to

reduce the risk of fish trapping during reservoir drawdown. The barrier will be placed in a 20-foot wide swath covering about 700 linear feet on the downstream side of side channel where velocities during high flow conditions would be low.

- iv) <u>Fish Stranding and Trapping Region 11 (PRM 30.3)</u> To reduce the risk of fish trapping during reservoir drawdown, a bottom barrier will be placed beginning at the south shoreline to create a 20-foot wide swath that will extend about 400 feet through the middle of the trapping pool and end at the upper end of the narrow channel that drains the trapping pool.
- b) Evaluating potential macrophyte suppression needs and implementing measures as part of the modifications proposed for the Metaline Park and forebay boat launches. Following the completion of the launch modifications SCL will monitor the new site conditions and, in consultation with the WRWG and the FAWG, and subject to agreement of appropriate agencies, will determine whether macrophytes reestablish to the degree requiring implementation of suppression measures. SCL will implement suppression measures as determined appropriate in consultation with the WRWG and the FAWG. Due to dam operations considerations, bottom barriers are not considered a viable control option for the forebay site.
- c) Monitoring and maintaining macrophyte suppression efforts as will be detailed in the aquatic invasive species control and prevention plan.
- d) Evaluating new macrophyte control technologies, including harvesting, that may become available for their possible implementation at the Project.
- e) Implementing a monitoring and prevention program for zebra mussels, quagga mussels, New Zealand mud snails, and any other newly listed aquatic nuisance species that are identified by appropriate state aquatic nuisance species committees. Should any of these species become established and problematic as determined by WRWG and FAWG, SCL will consult with the appropriate entities to determine potential management strategies.
- f) Implementing interpretation and education (I&E) measures related to aquatic invasive species as part of the Project's comprehensive I&E program.
- g) SCL shall participate and engage in information exchanges and regional efforts to coordinate monitoring, prevention, and control activities.

## J. Boundary Reservoir Fish Community Monitoring

1) SCL will conduct fish community surveys in Boundary Reservoir, Boundary Dam Tailrace, and selected tributaries beginning in year 5 of the new license and at five-year intervals thereafter to obtain information on trends in the abundance and species composition of the fish community. Information for

Boundary Reservoir will be collected for each of the three major reaches: Forebay, Canyon, and Upper Reservoir. The level of effort and techniques used would be similar to those of McLellan (2001) so that trend data would be comparable across years. At a minimum, the techniques to be used will include electrofishing, gill netting, and snorkeling. A study plan will be prepared in collaboration with the FAWG prior to each field season and a survey completion report prepared within one year following each survey. Future monitoring efforts will be determined by the FAWG.

As a component of the study, SCL shall quantify the number and biomass of native salmonids that are being consumed by predatory fish at tributary deltas and determine consumption rates consistent with Baldwin et al. 2003 as applied to select Boundary reservoir tributaries with significant salmonid outmigrants. This component shall be conducted twice in the first 18 years of the new license. The need for and frequency of additional surveys shall be discussed during the development of the SA.

#### K. Recreational Fishing

- SCL will stock fish in 18 lakes within a fifteen-mile area around the Project. The species stocked annually in these lakes can vary and may depend on whether the lake is a closed system or has connection to a tributary. Trout species stocked in these lakes may include Westslope cutthroat, Rainbow, Rainbow triploid, and Tiger trout, and may include fall fry, fingerlings, spring fry or catchable size fish. It is preferred that these fish be annually produced and planted by WDFW, with commercial production available as a fallback. The amount of fish to be stocked is estimated at 11,678 pounds as outlined in Appendix B.
- 2) Annual Monitoring and Evaluation (M&E) for these lakes will include yearly pre-Opening Day index gillnetting to confirm recruitment of fry plant trout, trout growth rates, relative trout abundance, and detection of illegally introduced and/or undesirable fish species. Opening Day creel census should be performed on a subset of the target lakes per WDFW protocol. Approximate cost of the M&E component is estimated as outlined in Appendix B.

#### L. Terrestrial Resources

SCL, the resource agencies and other interested stakeholders have agreed to include and describe in detail all terrestrial resource mitigation measures in a comprehensive Terrestrial Resources Management Plan.

- 1) Additional Project Habitat Lands
- a) SCL shall bring additional Project Habitat Lands (PHLs) into the Project boundary. These lands are comprised of three SCL-owned parcels and the 89 acre parcel adjacent to the BWP. The combination of these additional lands in

addition to the acquisition of one or more additional parcel(s) described below (in Section L.2.b-Acquisition of Project Habitat Lands) will adequately mitigate for the projected 6.1 acres of Project-related shoreline erosion and loss of habitat. The additional PHLs are:

- i) Tailrace East (87 acres) Primary wildlife values include big game forage, amphibian breeding sites, and travel corridor. The mix of forest cover, open meadows, and scattered fruit trees accounts for the high use of the area by elk, mule deer, whitetailed deer, and black bears.
- Everett Creek (83 acres) Primary wildlife value is a travel corridor for big game. The creek bottom of Everett Creek supports a stand of mature conifer trees important to a variety of wildlife.
- Sullivan Creek (17 acres) Primary wildlife values include breeding habitat for a wide variety of wildlife. This complex includes ponds, channeled wetlands, dense willow stands, mature black cottonwood stands, young mixed conifer, snowberry shrubland, and the mouth of Sullivan Creek.
- iv) BWP Addition (89 acres): The primary wildlife values of this parcel include its function as a buffer/unroaded connection between the existing Boundary Wildlife Preserve and Colville National Forest lands, cover and foraging habitat for big game, and breeding ponds for amphibians.
- 2) Acquisition of Project Habitat Lands

SCL agrees to prioritize acquisition of properties with adjacency to water and attempt to acquire those properties in fee title. Once the lands have been acquired, they will be brought into the Project boundary and plans for the future management of these lands will be developed by the TRWG and will be described to the extent possible in the TRMP to accompany the SA and may be further described in future revisions of the TRMP.

- a) The Parties have identified two parcels of land that they would like SCL to evaluate with the goal of acquiring one of the two. One parcel is approximately 135 acres in size and is located in T39N, R43. The parcel is used by elk and it contains a large area of pasture and a linear water feature. The second parcel is located in the vicinity of T40N, R43E. While a specific parcel has not been delineated, the area of interest includes a lake, pasture, and surrounding mixed deciduous/conifer forest. SCL has engaged a third party to assist in contacting the landowners.
- b) In the event neither parcel is available for purchase, SCL, in consultation with the Parties, will select an alternative parcel(s) for acquisition. The Parties have

developed mitigation targets for the amount of habitat acreage to be added to the Project boundary (not including the BWP) and the amount of shoreline associated with water features. The targets are approximately 158 acres for continued loss of habitat and approximately 24,193 lineal feet of land immediately adjacent to water for shoreline erosion impacts. Targets may be accomplished and applied to the same parcel of land providing applicable criteria are met. Water means perennial flat-water, stream, creek, wetland, pond, or seep. The Parties acknowledge that these are targets and do not represent absolute amounts that must be added to the Project.

- c) The following criteria should guide property acquisition:
  - High habitat diversity (3 or more habitat types), adjacent to water, security from disturbance (e.g open roads, towns,), <u>or</u> a natural community that is relatively scarce or dwindling in the watershed, has unique landscape or habitat elements, or rare species occurrences;
  - Large block(s) of habitat rather than small, scattered parcels (to manage for species with large home ranges and to provide for diverse landscapes) that are contiguous with other protected parcels of land (i.e., BLM and USFS ownership), form a strong corridor link, or are connected by a viable corridor to protected land;
  - iii) Habitats that benefit any of the following wildlife species groups (especially known use of a specific parcel):
    - (1) Threatened, endangered, candidate, and special status species
    - (2) Big game
    - (3) Waterfowl
    - (4) Upland game birds (i.e., forest grouse and turkey)
    - (5) Amphibians
    - (6) Aquatic furbearers
    - (7) Neotropical migrant birds
  - Property that is "on site," which is defined as the area between the near ridgelines east and west of the Project and identified as the secondary study area in the Revised Study Plan for Rare, Threatened, and Endangered Wildlife Species (Study No. 18) (SCL 2007). The eastern boundary roughly aligns with Boundary

Ridge, Crowell Mountain, and Sand Creek Mountain and the ridge between Boundary Reservoir and Sullivan Lake. On the west side, the boundary follows a line connecting Frisco, Abercrombie, Litton, and Baldy mountains.

- The Parties will seek to identify and secure suitable lands prior to January 11, 2010. In the event that suitable lands are not secured by that date, the SA will contain provisions to address this resource goal.
  - 3) Erosion Program
- a) Shoreline Erosion Restoration: Restore and maintain the following selected erosion sites.
  - i) *Control Erosion at Site 17W1 (Forebay Recreation Area)* Bank erosion at this site will be controlled by installing seeded erosion control blankets or turf reinforcement mats. Minor slope grading prior to installation may be required. Toe protection is not required; however, the erosion control fabric should be anchored at the toe of the slope and at the top of the bank. Future erosion from above will be addressed by controlling surface runoff from the recreation area. Runoff from the picnic area currently flows in a drainage swale that discharges at the bank and contributes to erosion. Armoring the outlet of the swale where it discharges to the bank, or rerouting the swale to discharge closer to the boat ramp, would reduce bank erosion.
  - Control Erosion at Site 19W9 (BLM Boundary Recreation Area) -Bank erosion at this site will be controlled by a combination of biotechnical stabilization techniques such as tree revetments, live cribwalls, live siltation, coconut logs, and the placement of native rock to protect the toe of the bank. The bank itself will be revegetated using brushlayering, branch packing, and/or live cribwalls. Any stabilization technique should be carefully planned to minimize further destruction of established vegetation on the bank. The site could be further improved by constructing more formal public access to the reservoir and between campsites using terraced log cribwalls and eliminating the existing casual trails by revegetating and blocking access with downed trees or other natural materials.
  - iii) Control Erosion at Site 21W19 (Dispersed Recreation Day Use/Overnight Campsite on BLM-Managed Land) - Bank erosion at this site will be controlled by a combination of biotechnical stabilization techniques such as brushlayering, branch packing, and/or live cribwalls. Bank toe protection may be accomplished with the use of native rock. Other soft toe protection techniques

could be employed; however, the soft, friable nature of the bank toe should be considered when designing the toe protection. Constructing more formal public access using terraced log cribwalls and minimizing the number of access points to the reservoir would reduce the amount of human-caused bank erosion.

- b) Shoreline Erosion Monitoring: Develop with the TRWG an Erosion Monitoring Plan with specific, measurable goals and objectives, monitoring methods, and schedule. Erosion monitoring will use the results of the relicensing erosion study as a baseline so that data collected during the new license term will be comparable to information generated during the relicensing study program. Methods will allow the erosion rates and volumes to be determined for each site and tracked over time.
  - i) Upon completion of the erosion control measures at the three specific sites identified above, conduct annual effectiveness monitoring for the first 3 years to confirm that the stabilization objectives have been met. Subsequently, the sites will be monitored once every 10 years for the remainder of the new license term.
  - For all other existing erosion sites and any new erosion sites, monitoring will occur once each 10 year period and physical measurements will be taken at 15 erosion sites, proportionally distributed between H, M and L sites, once each 10 year period.
- c) A debit/credit process will be used to track shoreline erosion at all existing and any new sites along the reservoir shoreline during the new license period. When monitoring reveals that erosion in the new license term has exceeded the 6.1 acres of erosion loss predicted by the erosion model developed in the relicensing erosion study, SCL will, in consultation with the TRWG, discuss what further mitigation actions may be necessary. Additionally, if erosion is shown by monitoring to be occurring at a high value resource area as defined in the Erosion Updated Study Report (Section 5.4.2, page 50), SCL will confer with the TRWG as to the need for and/or feasibility of addressing erosion at the specific site.
  - 4) Botanical resources include an Integrated Weed Management Plan (IWMP) and a Rare, Threatened and Endangered (RTE) plant monitoring program.

The IWMP and RTE plant programs will include monitoring and reporting at regular intervals and an adaptive management program to address resource needs in coordination with the TRWG.

a) The IWMP will specify SCL's obligations regarding the prevention, suppression, containment, eradication and/or control of invasive, non-native species, according to goals by species and location and will address management of

noxious weeds within and adjacent to the Project boundary that are Project related, along with SCL's obligations for coordinating efforts with others to address invasive non-native plants in areas adjacent to the Project boundary. Specific elements to be addressed in the IWMP include:

- i) Develop communication and coordination protocols,
- ii) Define geographic scope,
- iii) Identify noxious weed management goals and objectives,
- iv) Develop weed species and habitat overview and descriptions
- v) Describe the desired conditions for SCL-owned lands and other lands where Project-related effects have created resource concerns,
- vi) Consult annually with the Pend Oreille County Weed Board to discuss the need to conduct surveys for newly listed species. If a new species is listed that requires control, the Weed Board will advise SCL as to whether a survey should be conducted that year for the species (for fast-spreading species) or whether it is sufficient to wait until the next scheduled survey,
- vii) Develop and implement annual treatment programs for select species,
- viii) Resurvey the Project area every 3 years to standards current at the time of survey, and
- ix) Implement effectiveness monitoring and adaptive management program.
- b) Rare, Threatened, and Endangered Plant Monitoring Program
  - Applies to plant species protected under the Endangered Species Act or candidates for protection; USFS and BLM listed Special Status Species; and species with State status (WNHP) within the Project boundary.
  - Monitor confirmed sites of selected sensitive species and develop population trends. For species that are locally abundant (least bladdery milk vetch, yellow mountain avens, black snake-root), 25 percent of the occurrences of each species will be sampled every 6 years. In addition, areas with known occurrences that are vulnerable to disturbance (i.e., near roads, campgrounds, or Project facilities) will be included in every survey period. For species with more limited populations or that are particularly rare or vulnerable,

a complete census will be conducted every 3 years. These species include bristleleaf sedge, hair-like sedge, Steller's rock-brake, Canadian St. John's-wort, wirestem muhly, adder's tongue, northern blue-eyed grass, kidney-leaved violet (and other species that may be listed in the future that occur in the Project area). Areas where catastrophic events have occurred (e.g., fire, major landslide) will be included in the next 3 year survey period. Any new PHL will be surveyed for RTE plant species.

- Survey for any newly listed Regional Forester Special Status Species (RFSSS) in appropriate habitats every 3 years, to coincide with the monitoring described above.
- iv) Include monitoring, reporting, and adaptive management.
- 5) Wildlife Monitoring Program
- a) Rare, Threatened and Endangered Wildlife
  - i) Bald Eagle

(1) Develop bald eagle nest management plans, where appropriate, for nests occurring within the Project area,

(2) Conduct two bald eagle nest surveys, one early in the season (April) and one late (June) of each year to determine occupancy for known nest sites in the Project boundary. Record productivity data, including the number of adult birds, and growth stage and number of young. To the extent possible determine productivity based on the two surveys.

- Peregrine Falcon Conduct annual counts twice during the breeding season to determine occupancy for known nest sites in the Project boundary. Record productivity data, including the number of adult birds, and to the extent possible, growth stage and number of young. Also to the extent possible, determine productivity based on the two surveys.
- Other RTE species Include provisions to develop monitoring programs if substantial use of the Project area by rare species (woodland caribou, Canada lynx, grizzly bear, or gray wolf) is documented.
- b) Species of Concern
  - i) Bank Swallow Conduct two nest surveys annually (May and June) and collect the following data:

(1) Bank swallow colony location and number of burrows

(2) Evidence of disturbance or other management concerns

(3) If unanticipated Project-related effects to wildlife are identified during monitoring, SCL, in consultation with the TRWG, will address the identified effects.

6) Shoreline Management: This program will address FERC requirements, potential development along the Project shoreline, and the integration of the Pend Oreille County Shoreline Master Program requirements.

#### M. Recreation and Aesthetics

- Recreation Resource Management Plan (RRMP) SCL will develop a RRMP to guide recreation use and management at the Project during the new license term. The RRMP will capture all applicable Project-related recreation measures and facilitate providing and managing recreation sites and use within the Project area during the term of the new license. The RRMP will contain several management programs that will help guide SCL's recreationrelated decision-making process during the new license term including:
- a) Capital Facility Development,
- b) Operations and Maintenance,
- c) Shoreline Dispersed Recreation Management,
- d) Recreation Monitoring,
- e) Integration and Coordination with other resources
- f) Aesthetic and Visual Resource, and
- g) I&E programs (will include all resource areas).

Each of these programs will consist of a set of appropriate measures, as described below, as well as implementation, schedule, and budget guidance.

- Capital Facility Development Measures Specific measures that will be included in the Capital Facility Development Program are listed below. Accessibility will be addressed during the planning and design phase of all new and upgraded developed recreation facilities.
- a) Boundary Dam Forebay Recreation Area
  - i) Enhance campground facilities at this site: increase the number of designated RV and tent campsites (phased up to approximately

24 total), better delineate campsites, provide appropriate signage, use vegetation and/or other site features (e.g., rocks) to create separation between campsites and day use picnic sites, and limit vehicle access to roads and parking areas.

- ii) Enhance day use picnic sites with signage, improved access, and separation from campsites.
- iii) Provide additional I&E signage and/or other visitor I&E opportunities (see I&E Program).
- iv) Extend an existing boat ramp lane so that boats may be launched/retrieved during the primary recreation season (Memorial Day weekend to Labor Day weekend) without problems due to fluctuating reservoir water surface elevations. Provide adequate parking, signage, and circulation at the boat launch.
- b) Vista House Recreation Area
  - i) Add I&E signage and/or other opportunities at the overlook platform.
- c) Tailrace Recreation Area/Machine Hall Visitors' Gallery
  - Update I&E signage, displays and visitor opportunities at the Machine Hall Visitors' Gallery (see I&E Program) (the extent of upgrades at this site needs to be consistent with the level of anticipated use; security restrictions contribute to low use levels).
- d) East Peewee Falls Trailhead, Trail, and Overlook
  - i) Extend existing NFS road (3165315) and develop a new trail head, accessible trail and viewpoint of Peewee Falls.
- e) Riverside Mine Canyon Overlook
  - i) Develop trailhead on existing NFS road (<u>3100172</u>), accessible trail and viewpoint overlooking canyon.
- f) Falls Portage Trail
  - i) Subject to acquiring necessary property rights and any applicable agency approvals, a new portage trail in the vicinity of the falls to provide non-motorized boaters an alternative to running the rapids at the falls. In the event that acquisition of the necessary property rights cannot be achieved, SCL in consultation with the RRWG,

shall identify and implement the appropriate next best option for providing a portage trail at the falls.

Subject to acquiring necessary property rights and any applicable agency approvals, construct a non-motorized boat access point, including parking, signage, and sanitation, on SCL-owned land just north of the town of Metaline Falls and the mouth of Sullivan Creek. In the event that acquisition of the necessary property rights cannot be achieved, SCL in consultation with the RRWG, shall identify and implement the next best option for providing a non-motorized boat access point.

## g) Dispersed Recreation Sites

- i) Construct, operate and maintain, to a Recreation Site Development Scale #2-3, shoreline recreation sites on NFS lands at Lime Creek and Monument Bar, and on BLM lands near Flume Creek, on the west side of Boundary reservoir near PRM 21.9, and the BLM Boundary Recreation area near Everett Island. Provide fire rings, a bulletin board (for informational and possible interpretive signage), tent pads, trail access from the shoreline as needed to protect Project resources, watercraft landing/tie-up area, and sanitation facilities.
- Construct, operate and maintain, to a Recreation Site
   Development Scale #2-3, a shoreline recreation site on NFS lands at Wolf Creek identified during relicensing study 21. Provide a bulletin board (for informational and possible interpretive signing), parking and trail access to the shoreline.
- Manage and monitor use at approximately 10 existing unimproved dispersed recreation sites along the reservoir. If monitoring reveals resource concerns or other problems at the sites, SCL will address such problems (details on the number of sites and the monitoring standards and indicators will be developed in the RRMP). The development scale at these sites will be maintained at level 0-1. Appropriate sites will be placed on a map and promoted as part of the water trail effort in consultation with the RRWG.
- Provide funding annually for a seasonal River Ranger position for the period from Memorial Day weekend to Labor Day weekend to address the monitoring and education elements of the RRMP. SCL shall consult with the USFS, NFS, BLM and other interested parties on the position's roles and responsibilities. The River Ranger's responsibilities will be focused on monitoring (including the Sullivan Creek dispersed recreation sites proposed for closure and restoration per Appendix A), not enforcement.

- i) Construct and maintain an eastside trail, to USFS standards, that connects the PeeWee Falls and Riverside Mine Canyon overlooks on NFS lands. The design standards will be for a non-accessible, non-motorized trail to accommodate hiking, biking, and cross-country skiing. SCL will not be responsible for any grooming during the cross-country skiing season.
- j) Metaline Waterfront Park
  - Replace the existing boat launch and extend a boat ramp lane so that boats may be launched/ retrieved during the primary recreation season (Memorial Day weekend to Labor Day weekend) without problems due to fluctuating reservoir water surface elevations.
  - ii) Provide adequate roadway access to the boat ramp, improved circulation and parking for single vehicles and vehicles with trailers, and other boat launch support facilities (e.g., signage, boarding float, toilet).
  - 3) Implementation Schedule for Capital Facility Measures

The schedule for completion of improvements/development will be as follows:

- a) Metaline Waterfront Park within 3-5 years of license issuance.
- b) Boundary Dam Forebay Recreation Area within 3-5 years of license issuance.
- c) Vista House Recreation Area within 8-10 years of license issuance.
- d) Tailrace Recreation Area/Machine Hall Visitors' Gallery within 8-10 years of license issuance.
- e) Falls Portage Trail within 6-7 years of license issuance.
- f) Peewee Falls Overlook and Riverside Mine Canyon Overlook within 6-7 years of license issuance.
- g) Lime Creek (Site 5NR LC-1) and Monument Bar (Site 5NR MB-1) within 6-7 years of license issuance.
- h) Wolf Creek (Site 6SR WC-1) within 6-7 years of license issuance.
- i) Existing dispersed recreation sites on BLM lands
  - i) Near Flume Creek within 6-7 years of license issuance.
  - ii) BLM site on the west side of the Boundary Reservoir near PRM 21.9 within 6-7 years of license issuance.

- iii) BLM Boundary Recreation area near Everett Island within 6-7 years of license issuance.
- j) Eastside hiking trail shall be completed within 10 years of license issuance.
  - 4) Future repair and/or replacement of Capital Facility Measures
- a) Replace and/or repair recreation site facilities, infrastructure, and amenities, as needed, based on monitoring facility conditions and normal facility life cycles, during the new license term.
- b) If needed, consider additional recreation capital facility development based on periodic monitoring during the new license term (see RRMP Monitoring Program).
  - 5) Programmatic and Operations and Maintenance (O&M) Measures
- a) O&M Program
  - i) Develop an O&M Program for Project-related recreation sites and use areas.
  - ii) Provide required O&M of Project-related recreation sites and use areas.
  - iii) Periodically re-assess public access/security policies at the Tailrace Recreation Area and Machine Hall Visitors' Gallery.
- b) Resource Integration and Coordination Program
  - i) Develop and implement a Resource Integration and Coordination Program to help make coordinated, timely, and informed decisions related to the implementation of the RRMP and other Project-related resource management plans (e.g., TRMP, HPMP, etc.).
  - Recognize the development of a regional water trail program by the Pend Oreille River Water Trail Planning Group. SCL's role will be limited to specific actions in the Project area (e.g., shoreline campsites/rest stops, put-in/take-out, portage trail at the falls signage, etc). SCL will also consider supporting a portage opportunity around Boundary Dam pending an evaluation of safety and security policies. Cooperate with the Pend Oreille River Water Trail Planning Group by developing recreation amenities along Boundary reservoir per the new license such that they do not preclude use of the river as a water trail. SCL will coordinate with Pend Oreille River Water Trail Planning Group and affected land management agencies to ensure that recreational

information materials developed by SCL are consistent with any broader River Water Trail marketing approach.

- c) Recreation Monitoring Program (More details, including triggers for management actions, will be provided in the RRMP)
  - i) Develop and implement a periodic recreation monitoring program that includes:
    - (1) Annual site monitoring as part of O&M activities.

(2) On-site observations to assess site capacity and dispersed site conditions every 6 years.

(3) A visitor survey to assess perceived crowding and reported conflict levels every 12 years.

#### d) I&E Program

- Develop a comprehensive I&E Program that establishes themes, messages, and media that would be considered at recreation sites throughout the Project. All Project resources will be addressed in one integrated I&E Program: recreation, aesthetics, geology, engineering, scenic byway, fisheries/aquatics, cultural/historic, and terrestrial resources.
- Develop and/or fund the development of materials to address the Boundary reach of the water trail in coordination with the Pend Oreille River Water Trail Planning Group. Materials may include printed and web-based map/guide.
- iii) Communicate to the public the seasonal changes in flows, spring runoff conditions, and Project operations that may affect conditions at the falls north of the SR 31 bridge, as well as reservoir fluctuation related issues.
- 6) Aesthetic and Visual Resources
- a) Develop aesthetic and visual management guidelines for future Project recreation facilities, such as facility colors and specifications regarding surrounding vegetation.

#### N. Project Related Roads

 SCL will be authorized for the term of the new license to construct, reconstruct, use, and maintain roads across NFS lands necessary for long term maintenance and operation of Project facilities and for Project-related recreational use of Boundary Reservoir. These roads and the specific authorizations associated with each road are summarized in Appendix C. Construction and reconstruction of roads listed in Appendix C shall conform to plans, specifications and written stipulations approved by the USFS prior to beginning construction and reconstruction work. Roads listed in Appendix C shall be maintained to the standards listed in these tables.

2) Vista House Road - Within 6 months after the execution of the SA, SCL and Pend Oreille County may enter into an agreement providing for the County's operation, maintenance, and reconstruction of the Vista House Road under a USFS road easement. If SCL and the Pend Oreille County do not enter into an agreement, SCL shall apply for a special use authorization from the USFS for up to a 30 year term for the operation, maintenance and reconstruction of the Vista House Road within twelve months after license issuance. As the USFS can only issue a special use authorization up to 30 years, SCL shall renew its special use authorization to cover any remaining term of the license prior to the expiration of the existing special use authorization. If Pend Oreille County acquires and later vacates the road easement, SCL shall apply for a special use authorization from the USFS for the remaining term of the license for the operation, maintenance and reconstruction of the Vista House Road within twelve months after Pend Oreille County vacates the road easement.

## O. Monitoring Wells and Related Road Decommissioning

1) SCL shall decommission groundwater monitoring wells and roads previously used for accessing those wells per the Monitoring Wells and Related Road Decommissioning Plan (Appendix D). The plan was developed by SCL, in consultation with the USFS.

## P. Surveying and Posting

- 1) SCL will post signs at all public access points within the Project boundary, informing the public of the general location of the Project boundary. At this time, these locations are anticipated to include the following sites: Metaline Waterfront Park, Boundary Forebay Recreation Area, BLM recreation site across from Everett Island, and at any new overlooks and trail access points. SCL and USFS shall discuss additional locations where there may be public access that requires posting of signs. SCL shall post signs at such additional locations as agreed to by SCL and USFS.
- 2) SCL will survey, mark and post to federal standards the locations on Appendix E: designated on the legend as "NFS Boundary to be surveyed."

## Q. Cultural Resources

1) SCL will implement the provisions of the final Historic Properties Management Plan anticipated to be included in the new license for the Project in addition to the anticipated, associated Programmatic Agreement.

#### **R.** Issues for discussion in the SA

In order to prepare a comprehensive settlement agreement based on this AIP, the Parties expect to discuss many issues relating to the above provisions. The issues to be discussed, refined and resolved in a manner that is acceptable to the Parties for the purposes of inclusion in the SA include but are not limited to the issues on the following list.

- 1) Discuss and develop in greater detail the framework for review, consultation, and approval of annual reporting of management plan activities.
- 2) Develop the appropriate consumer price index for measures that include monetary information.
- 3) SCL and the USFS will work to modify existing spill plans to require USFS notification of any spills on NFS lands.
- 4) Address the need to remove delinquent structures on any lands that are acquired by SCL so that the habitat can be fully functioning for wildlife.
- 5) Discuss the need to conduct surveys for peregrine falcon productivity more than twice during a breeding season.
- 6) Discuss the effects of truing up Project boundary and any potential land ownership and title issues (Section A.5).
- 7) Work group roles and responsibilities.
- 8) License term.
- 9) Establish biological and management objectives for upstream/downstream passage of target species.
- 10) Regarding the last sentence in section G.1) e), define SCL's responsibilities and flexibility of tributary habitat program, if any in the aftermath of an event greater than a 100-year flood on Sullivan Creek at the Mill Pond restoration site.
- 11) Define the details of "the fund" for tributaries to Sullivan Lake.
- 12) Discuss involvement of BLM.
- 13) Further discuss the process if erosion is occurring at high value resource areas.

### List of Appendices

The following appendices are part of this AIP:

Appendix A –Off-site Tributary Habitat Restoration Measures Appendix B – Recreational Fish Stocking Details Appendix C – Road Authorization and Responsibility Roads needed for Boundary Dam Operation and Maintenance Appendix D – Monitoring Wells and Road Decommissioning Plan Appendix E – Map of Survey and Posting Locations

Location (Limiting Factors)	Schedule	Actions		
SLATE CREEK WAU				
Lime Creek				
Presence of non-native fish	Years 16-20	Eradicate** brook trout from approximately 1.5 miles of stream and Lake Lucerne pending land owner approval, follow with LWD placement in Lime Creek (contingent upon brook trout removal). Instream placement of 284 pieces of LWD <sup>1</sup> for approximately 1.3 miles from the mouth to the Hwy 31 crossing. Logjams not necessary.		
Slate Creek				
Presence of non-native fish	Years 11-15	Selectively remove** brook trout from mouth to end of fish bearing habitat (approx. 6.5 miles).		
Slumber Cr.				
*Culvert, riparian conditions, LWD, pool frequency and quality	Years 11-15	Replace the culvert located at RM 0.2 and incorporate LWD placement. Provide fish passage and avoid road failure during flood flows.		
Styx Cr.				
*Culvert, riparian conditions, LWD, pool frequency and quality	Years 11-15	Replace the culvert located at RM 0.1 and incorporate LWD placement and eradicate brook trout for approximately 3 miles.		
Uncas Gulch Cr.	1			

<sup>&</sup>lt;sup>1</sup> For each LWD and ELJ placement action, the size and number of pieces of LWD will be determined by the FAWG. Site-specific characteristics will need to be considered.

Location (Limiting Factors)	Schedule	Actions
Presence of non-native fish	Years 11-15	Selectively remove** brook trout from mouth to end of fish bearing habitat (approx. 2 miles).
Flume Creek	1	
Presence of non-native fish; 2 culvert fish passage barriers; Low frequency of LWD and overwintering pool habitat.	Years 11-15	Eradicate** brook trout for approximately 6.2 miles from the mouth to the upper ends of fish bearing habitat. Culvert replacement on County Rd. 2975 and FS Rd 350. Instream placement of 140 pieces of LWD for approximately 1600 m from the mouth to the confluence with the South Fork of Flume Creek. Of these pieces, at least 20 shall be 12" or greater in diameter and a minimum of 35' in length. No logjams needed
Pee Wee Creek	1	
Presence of non-native fish	Years 16-20	Selectively remove** non-native fish –watershed wide.
SULLIVAN CREEK WAU		
Sullivan Creek	1	
Mill Pond Dam – fish passage barrier	Years 1-5	Dam removal and stream restoration of 1.5 miles of Sullivan Creek - includes adding LWD, planting, slope stabilization.
Presence of non-native fish above and below Mill Pond Dam.	Years 1-10	Selectively remove** non-native fish –on Sullivan Crk and tribs up to Sullivan Lake dam and North Fork Sullivan dam. For Sullivan Creek above and below Mill Pond dam remove non-native fish for approximately 15 miles. *and potentially add/introduce native fish (i.e., Westslope cutthroat trout or bull trout).
Impacted riparian habitat, stream bank degradation	Years 1-10	SCL shall develop a management plan in coordination with the FAWG and subject to the approval of the USFS for the closure of dispersed recreation sites along Sullivan creek. SCL shall implement restoration and closure of up to 38 sites contingent

Location (Limiting Easters)	Schedule	Actions
(Limiting Factors)		when the maximum of alternative dispersed represention sites
		upon the provision of alternative dispersed recreation sites
		included as terms of the management plan. SCL shall not be
		responsible for the provision of these alternative dispersed
		recreation sites.
*RM 0.3-0.6	Years 1-10	Riparian planting along left bank for 0.5 km (0.3 mi), LWD
Riparian condition, Streambank		placement (>15 pieces), large boulder placement (>5), and
condition, LWD, pool frequency and		channel modification for 0.5 km (0.3 mi) in Reach 1
quality, pool depth, temperature		downstream of the Highway 31 bridge.
*RM 0.3-0.6	Years 1-10	Riparian planting along left bank for
Riparian condition, streambank		0.31 km (0.19 mi) in Reach 1 downstream of the Highway 31
condition, temperature		bridge.
*RM 2.30 – 2.70	Years 1-10	Engineered Log Jams (ELJs) constructed ( $\geq$ 3), placement of
Floodplain connectivity, Channel		large boulders (>5), channel modifications (reach), and
stability, Channel substrate, LWD, pool		riparian plantings (reach) in Reach 2 and along Road Segment
frequency and quality, pool depth		3.
*RM 2.50 – 3.00	Years 1-10	Engineered Log Jams (ELJs) constructed ( $\geq 4$ ), placement of
Floodplain connectivity, Channel		large boulders (>5), channel modifications (reach), and
stability, Channel substrate, LWD, pool		riparian plantings (reach) in Reach 3 and along Road Segment
frequency and quality, pool depth		4.
*RM 2.3 – 3.25	Years 1-10	Decrease bank angle through flow redirection, structural,
Channel stability, LWD, pool frequency		and/or biotechnical techniques for 0.14 km (0.09 mi) along the
and quality		hydrologically connected Road Segment 3.
*RM 2.3 – 3.25	Years 1-10	Decrease bank angle and amount of riprap through flow
Channel stability, LWD, pool frequency		redirection, structural, and/or biotechnical techniques for 0.097
and quality		km (0.060 mi) along the hydrologically connected Road
		Segment 4.
LWD limited in upper Cr. Above Mill	Years 1-10	From Mill Pond Dam to Rainy Creek: instream placement of
Pond Dam – 3 sections		681 pieces of LWD for approximately 10,880 m. Of these
		pieces, at least 136 shall be 12" or greater in diameter and a
		minimum of 35' in length.

Location	Schedule	Actions		
(Limiting Factors)				
		From confluence with Rainy Creek to Gypsy Creek: instream placement of 330 pieces of LWD for approximately 3,680 m. Of these pieces, at least 46 shall be 12" or greater in diameter and a minimum of 35' in length. From confluence with Gypsy Creek to end of fish bearing habitat: instream placement of 728 pieces of LWD for approximately 6,080 m. Of these pieces, at least 76 shall be 12" or greater in diameter and a minimum of 35' in length. Logjams are needed as part of LWD amounts above.		
County Rd. 9345 in SCL segment 4; RM 2.5-3.0 Stream bank erosion, sediment delivery, limited riparian habitat, flood plain connectivity.	Years 6-10	Either road relocation/reconstruction or stream channel diversion at one site on Sullivan Creek (county rd. 9345 in SCL segment 4; RM 2.5-3.0); road reconstruction in places on Sullivan Creek Road within approximately 12 miles to improve drainage and reduce sediment introduction into Sullivan Creek. Logjam construction will be needed where Sullivan Creek's streambank and Sullivan Creek Road fill slope are continuous and the stream is eroding these areas.		
N. Fk. Sullivan Cr.				
Barrier culvert at highway crossing, low density of LWD	Years 11-15	Replace culvert with fish passable structure. Instream placement of 70 pieces of LWD for approximately 500 m from the mouth to the dam. Of these pieces, at least 6 shall be 12" or greater in diameter and a minimum of 35' in length. No logjams needed.		
Pass Cr.				
Brook and rainbow trout presence	Years 1-10	Selectively remove** non-native brook and rainbow trout in lowest reach.		
Rainy Cr.				
Brook trout presence in lower reach	Year 1-10	Selectively remove** non-native Brook trout (from mouth for approximately 0.1 mile upstream).		

Location	Schedule	Actions	
(Limiting Factors)			
Thor Cr.			
Brook trout presence	Years 1-10	Eradicate non-native Brook trout (from mouth for approximately 0.2 mile to FS Rd 300 crossing).	
Kinyon Cr.			
Brook trout presence in lower reach, 1 culvert fish passage barrier	Years 1-10	Selectively remove** non-native Brook trout from mouth to Sullivan Creek Road crossing (approx. 0.2 miles). Replace culvert on Sullivan Creek Road with fish passable structure.	
Gypsy Cr.			
Brook trout presence in lower reach	Years 1-10	Selectively remove** non-native Brook trout (from mouth for approximately 0.1 mile upstream).	
Copper Cr.			
Brook trout presence in lower reach	Years 1-10	Selectively remove** non-native Brook trout (from mouth for approximately 0.1 mile upstream).	
Deemer Cr.	·		
Brook trout presence in lower reach	Years 1-10	Selectively remove** non-native Brook trout (from mouth for approximately 0.5 mile upstream).	
Leola			
Brook trout presence in lower reach	Years 1-10	Selectively remove** non-native Brook trout (from confluence with Deemer Creek for approximately 0.1 mile upstream).	
Stony Cr.			
Brook trout presence in lower reach, culvert fish passage barrier	Years 1-10	Selectively remove** non-native Brook trout (from mouth for approximately 0.5 mile upstream). Replace culvert with fish passable structure.	
Johns Cr.			
Brook trout presence in lower reach, culvert fish passage barriers (2)	Years 1-10	Selectively remove** non-native Brook trout. Removal of the lowest culvert barrier and streambank restoration within the road imprint of FS Rd 505. Replacement of the next upstream culvert on FS Rd 500 with fish passable structure.	
Mankato Cr.			
Brook trout presence in lower reach	Years 1-10	Eradicate** non-native brook trout (from mouth for	

Location	Schedule	Actions	
(Limiting Factors)			
		approximately 0.1 mile).	
Fireline Cr.			
Brook trout presence in lower reach	Years 1-10	Eradicate** non-native brook trout (from mouth for approximately 0.1 mile).	
Sullivan Lake Tributaries - all measure Attachment 1, Section G.3 of the Agreem	s for tributaries to Sulliv ent In Principle.	an Lake shall be implemented through a fund as described in	
Noisy Cr.	<b>^</b>		
Old road along steep canyon section is washed out and contributes sediment	Years 21-25	Stabilization of old road fill and cutslope.	
Harvey Cr.			
Existing bridge is impinging upon the stream's floodplain and constricting proper function of stream to move its bedload	Years 6-10	Replace existing bridge with another properly sited and designed bridge.	
Poor riparian/channel habitat conditions	***Years 1-10	Obtain a conservation easement(s) for the lowest reach of Harvey Creek within private lands. Contingent upon purchase of the easement(s), the results of a hydraulic/hydrologic assessment and landowner approval, implement instream habitat restoration including LWD placement and riparian planting.	
Jungle Creek			
Low frequency of LWD and overwintering pool habitat	Years 21-25	Instream placement of 206 pieces of LWD for approximately 1,470 m. Of these pieces, at least 18 shall be 12" or greater in diameter and a minimum of 35' in length	
BOX CANYON WAU			
Lunch Cr./Sweet Cr.			
Habitat conditions	***Years 1-20	Obtain a conservation easement(s) for the lowest reach of Sweet/Lunch Creek within private lands. Contingent upon purchase of the easement(s) and landowner approval, implement instream habitat restoration including riparian planting and instream placement of 166 pieces of LWD for	

Location (Limiting Easters)	Schedule	Actions	
(Limiting Factors)		approximately 060 m. Of these pieces at least 12 shall be 12"	
		or greater in diameter and a minimum of 35' in length.	
Sweet Cr.	I		
*RM 0.0 – 0.5 Not Applicable; Opportunity is intended to protect habitat	***Years 1-20	Habitat protection from RM 0.0 to 0.5 through Conservation Easements; Land Acquisition; Restoration Grants.	
*RM 0.0 – headwaters and all tributaries Non-native fish presence	Years 1-20	Eradicate** non-native fish species throughout the drainage and potentially add/introduce native fish (i.e., Westslope cutthroat trout or bull trout).	
*RM 0.4 – 0.5 Streambank condition, LWD	Years 1-20	Placement of LWD (>10) jams with channel spanning key pieces (>5) of LWD and perform bank reshaping at LWD locations within 170 m (557.7 ft) downstream of the Highway 31 culvert at RM 0.5.	
*RM 0.4 -0.5 Riparian condition, streambank condition	Years 1-20	Conifer planting along right bank on upper terrace adjacent to Selkirk High School football field and track for approximately 0.29 acres.	
*RM 0.5 Culvert – fish passage barrier	Years 1-20	Improve access to culvert Located at RM 0.5 under Hwy 31. Improvement through adding baffles, weirs, and/or aprons on the downstream end would facilitate upstream fish passage.	
Linton Creek	1		
*RM 0.0 – 0.24 Culverts, Riparian condition, Streambank condition, Floodplain connectivity, Channel stability, Channel substrate, LWD, Pool frequency and quality, pool depth, Off-channel habitat, Temperature	Years 16-20	Replace all culverts, reconstruct channel, place LWD (>20), place gravel (numerous locations), and conduct riparian planting opportunity between RM 0.0 and 0.24.	
Pocahontas Cr.			
*RM 0.34	Years 16-20	Replace the two culverts located at RM 0.34.	

Location	Schedule	Actions	
(Limiting Factors)			
Culvert - Fish Passage Barrier			
Sand Cr.			
Brook trout presence in lower reach;	Years 16-20	Eradicate** non-native brook trout (from mouth for	
Low frequency of LWD and		approximately 0.25 mile to County Rd 3669 crossing).	
overwintering pool habitat in upper		Placement of LWD to create 10 pools between RM 4.1 and	
reach		6.8. Logjams not necessary.	
Unnamed Tributaries**** (tributary	Years 20-25	Possible eradication** of non-natives, LWD placement,	
streams not previously surveyed by		culvert replacement, and riparian planting are contingent on	
stakeholders)		habitat evaluations conducted by SCL and discussions with the	
		FAWG.	

\*Represents line item from SCL Study 14 - Tributary Habitat Aquatic Productivity Assessment

\*\* Non-native eradication or selective removal would be initiated during this time period. It should be understood that non-native removal, if needed, will continue throughout the new license period. Non-native salmonid eradication and suppression will be adaptively managed in consultation with the FAWG based on reach-specific conditions and objectives.

The level of effort for suppression may vary between stream reaches but will be consistent with an average of six electrofishing efforts per reach every 10 years from the start of implementation through the remaining term of the license. Each effort would consist of 1-3 electrofishing passes to be determined in consultation with the FAWG. Eradication of non-native salmonids will be consistent with a level of effort associated with three chemical treatments assuming the use of antimycin, rotenone or an equivalent piscicide.

\*\*\* The time period for these opportunities starts at year 1 to allow SCL to obtain an easement if and when it is available and to potentially reduce the cost be obtaining these at early date.

\*\*\*\* Unnamed tributaries are defined as all tributary reaches identified in Study 14( Assessment of Factors Affecting Aquatic Productivity in Tributary Habitats) that were not categorized as primary opportunities and that are not already included in the table above.

N.B. Project start and completion dates shall be evenly distributed within their scheduled period of time.

#### Appendix B to Attachment 1 to Boundary AIP: Recreational Fishing PME

#### **Boundary Hydroelectric Project**

#### FERC Project No. 2144

The purpose of this measure is to mitigate for reduced or lost salmonid recreational fishing opportunities in Boundary Reservoir due to Project impacts on aquatic habitat, loss of fish through Project entrainment and predation. Fish stocking in Boundary Reservoir, as a traditional means of mitigating for these impacts, is not supported due to potential competition with native trout and poor fish habitat conditions. Therefore, an off-site mitigation proposal was developed as an alternative.

In evaluating the need for providing and enhancing recreational fishing opportunities associated with the Boundary Project, lakes within a fifteen-mile buffer around the Project area were selected. There are a total of 18 lakes within this area: the species stocked annually in these lakes vary and may depend on whether the lake is a closed system or has connection to a tributary. Trout species stocked in these lakes may include Westslope cutthroat, Rainbow, Rainbow triploid, and Tiger trout, and may include fall fry, fingerlings, spring fry or catchable size fish. It is preferred that these fish be annually produced and planted by WDFW. The request amounts to 11,678 pounds of fish which costs approximately \$57,070 (Table 1).

Annual Monitoring and Evaluation (M&E) for these lakes includes yearly pre-Opening Day index gillnetting to confirm recruitment of fry plant trout, trout growth rates, relative trout abundance, and detection of illegally introduced and/or undesirable fish species. Opening Day creel census should be performed per WDFW protocol. Cost of the M&E component is approximately \$6,361 (Table 2).

	Dominant size		
Spp. stocked	stocked	Data	Total
Cutthroat	fall fry	Sum of lbs stocked	105.00
		Sum of Price of	0.077.05
		stocking(\$)	2,077.95
	fingerling	Sum of lbs stocked	1,744.00
		Sum of Price of	E 400 40
		Stocking(\$)	5,406.40
	( ሲ		1,849.00
Cutthroat Sum of Price of stock	ing(\$)		7,484.35
Rainbow	fall fry	Sum of Ibs stocked	2,660.00
		Sum of Price of	8 246 00
	opring fry	Sum of the stocked	625.00
	spring iry	Sum of Price of	025.00
		stocking(\$)	12.368.75
Rainbow Sum of lbs stocked	3,285.00		
Rainbow Sum of Price of stocki	ng(\$)		20,614.75
Rainbow (triploid)	catchable	Sum of lbs stocked	3,400.00
		Sum of Price of	
		stocking(\$)	13,940.00
	spring fry	Sum of lbs stocked	316.67
		Sum of Price of	
		stocking(\$)	6,266.83
Rainbow (triploid) Sum of lbs sto	ocked		3,716.67
Rainbow (triploid) Sum of Price	of stocking(\$)		20,206.83
Tiger trout	fingerling	Sum of lbs stocked	2,827.00
		Sum of Price of	0 700 70
		stocking(\$)	8,763.70
I ger trout Sum of Ibs stocked			2,827.00
Inger trout Sum of Price of stocking(\$)			8,763.70
Total Sum of Ibs stocked	11,677.67		
Total Sum of Price of annual stocking(\$)			*57,069.63

#### Table 1 Recreational Fishing PM&E – Species, Sizes, Pounds and Costs

(\*2009 dollars; O&M included)

#### Table 2 WDFW Costs for Monitoring and Evaluating the Recreational Fishing Program.

Manage and Administer Projects (WDFW)	\$240
Collect/Generate/Validate Field and Lab Data (Trout Index Netting)	\$4,834
Collect/Generate/Validate Field and Lab Data (Opening Day Creel)	\$326
Analyze/Interpret Data (Trout Index Netting)	\$240
Analyze/Interpret Data (Opening Day Creel)	\$240
Produce Annual Report (Trout Index Netting)	\$240
Produce Annual Report (Opening Day Creel)	\$240
Total	\$6,361

# Appendix C to Attachment 1 to Boundary AIP: Road Authorization and Responsibility Roads needed for Boundary Dam operation and maintenance Table 1

Road	Access Points	Authorization Across FS	SCL	CNF
Name/Number		Land	Maintenance/Reconstruction	Maintenance/Reconstruction
			Responsibility	Responsibility
West Side	Main access road	SCL will be authorized	SCL to maintain for Project	None
Access Road	from Pend Oreille	to use, maintain and	and public access.	
(1)	Co. Rd. 2975 to	reconstruct this existing	To be maintained to	
	Boundary Dam	route across NF land by	Maintenance Level 5.	
		including it in the		
		project boundary		
FS 6200348	Access to main	SCL will be authorized	Share by first use. <sup>1</sup>	Share by first use. <sup>1</sup>
(6)	transmission line	to use, maintain and	To be maintained to	To be maintained to
	towers between	reconstruct a portion of	Maintenance Level 2.	Maintenance Level 2.
	Boundary Dam	this route across NF		
	and BPA yard.	land by including it in		
		the project boundary		
Pend Oreille	Main access route	SCL will be authorized	See Agreement in Principle,	None
Co. Rd.	between State	to use, maintain and	Section N(2).	
3990/FS	Route 31 and the	reconstruct a portion of	To be maintained to	
3165000 (7)	east side of	this route across NF	Maintenance Level 5.	
	Boundary Dam	land (see Agreement in		
	and the Vista	Principle, Section N(2)).		
	House			
FS 3165350	Road across dam,	SCL will be authorized	SCL to maintain for project	None
(8)	connecting Pend	to use, maintain, and	operation and maintenance	
	Oreille Co. Rd.	reconstruct this existing	use.	
	3990 with the	route across NF land by	To be maintained to	
	West Side Access	including it in the	Maintenance Level 2.	
	Road	project boundary		

Roadproject boundaryI Share the road maintenance and reconstruction by who needs the road first. When the road is needed, the organization that needs the road first will perform<br/>the maintenance and reconstruction needed to accommodate their use. If the road is currently closed, once the road is no longer needed, it will be closed and<br/>maintained to a Forest Service maintenance level 1 configuration.

# Table 1, Cont.

Appendix C to Attachment 1 to Boundary AIP: Road Authorization and Responsibility Roads needed for Boundary Dam operation and maintenance

Road	Access Points	Authorization Across	SCL	CNF
Name/Number		FS Land	Maintenance/Reconstruction	Maintenance/Reconstruction
			Responsibility	Responsibility
FS 3165200	Road accessing	Access is not needed	None	
(10)	down stream dam	for project operation		CNF will maintain to
	deflection	and maintenance in the		Maintenance Level 2 (gated).
	monitoring point	proposed license		
	and BPA	period. No SCL use		
	transmission tower	authorization needed.		
Unauthorized	Road accessing	Access is not needed	None	None
Road off FS	down stream dam	for project operation		
3165200 (10)	deflection	and maintenance in the		
	monitoring point	proposed license		
	and BPA	period. No SCL use		
	transmission tower	authorization needed.		
FS 3165340	Road accessing up	Access is not needed	SCL to close with an	None
(11)	stream dam	for project operation	earthen berm after the	
	deflection	and maintenance in the	unauthorized road segment	
	monitoring point	proposed license	is decommissioned.	
	off of Pend Oreille	period. SCL use		
	Co. Rd. 3990/FS	authorization needed		
	3165000	for road		
		decommissioning only.		
Unauthorized	Road accessing up	Access is not needed	SCL to decommission road	None
Road off FS	stream dam	for project operation	and stabilize the 2 mass	
3165340 (11)	deflection	and maintenance in the	wasting sites	
	monitoring point	proposed license		
	off of the 3165340	period. SCL use		
	Road	authorization needed		
		for road		
		decommissioning only.		
# Table 2

Appendix C to Attachment 1 to Boundary AIP: Road Authorization and Responsibility Roads needed for Boundary Dam reservoir overlook access

Road	Access Points	Authorization Across	SCL	CNF Maintenance/Reconstruction
Name/Number		FS Land	Maintenance/Reconstruction	Responsibility
			Responsibility	
FS 3100172	Access to	SCL will be	SCL to reconstruct and	CNF will maintain and restore the
	Riverside Mine	authorized to use,	maintain for public access.	segment of road commensurate with
	reservoir overlook	reconstruct and	To be maintained to	CNF commercial use.
	from SR 31 to	maintain this existing	Maintenance Level 3.	To be maintained to Maintenance
	junction with FS	route across NF land		Level 3.
	3100178 and	by including it in the		
	trailhead	project license		
FS 3165325	Access to PeeWee	SCL will be	SCL to reconstruct and	CNF will maintain and restore the
	Falls overlook	authorized to use,	maintain for public access.	segment of road commensurate with
	from POC	reconstruct and	To be maintained to	CNF commercial use.
	3990/FS 3165000	maintain this existing	Maintenance Level 3.	To be maintained to Maintenance
	to junction with	route across NF land		Level 3.
	FS 3165315	by including it in the		
		project license		
FS 3165315	Access to PeeWee	SCL will be	SCL to reconstruct the	CNF will maintain and restore the
	Falls overlook	authorized to use,	existing segment of road	segment of road commensurate with
	from FS 3165325	reconstruct and	and construct an extension	CNF commercial use.
	to trailhead	maintain this existing	of this road (if needed) to a	To be maintained to Maintenance
		route across NF land	proposed trailhead and	Level 3.
		by including it in the	maintain for public access.	
		project license	To be maintained to	
			Maintenance Level 3.	

# Boundary Hydroelectric Project (FERC No. 2144) Monitoring Well and Road Decommissioning Plan

**Prepared by Seattle City Light** 

September 2009

### Introduction

Seattle City Light (SCL) installed a series of wells along the lower portion of Boundary reservoir (from the town of Metaline downstream to the vicinity of the dam) in the late 1950s as a means to monitor groundwater levels. In order to install the wells, SCL was granted permission to use existing roads or construct new roads (or short access "spurs") over private and federal land. SCL no longer has a need to monitor the water levels and is taking steps to decommission the wells (per Washington Administrative Code 173-160-381) and associated roads. This Road Decommissioning Plan (Plan) addresses the treatment of the wells and roads on federal land. A brief description of the well head decommissioning process is included in this document as restoration of the areas around the well heads will be conducted at the same time that the roads are decommissioned. Further, one additional road on National Forest Service land (the spur off of Forest Road 3165340; also referred to as Road #11 in the Updated Study Report) has been used in the past to access a survey monument. This road is no longer needed for Project purposes and will be decommissioned at the same time as the monitoring well roads; as such, this road is addressed in this Plan.

Attachment 1 includes a spreadsheet that details the work that will be conducted at each site.

## Development of Decommissioning Plan

SCL developed this Plan in consultation with representatives of the Colville National Forest (CNF). On June 30, 2009, SCL and CNF staff met in Colville, Washington to discuss in detail the appropriate treatment for each road and to conclude a tentative agreement. The Bureau of Land Management (BLM) has not been available for direct consultation with SCL; however, CNF staff have conferred with the BLM and reported that if the road decommissioning on BLM land is conducted to USFS standards, that will satisfy the BLM's needs. Subsequent to the June 30 meeting, SCL prepared this Plan that captures the elements agreed to at that meeting; the CNF reviewed the draft plan in August 2009 and their review comments were incorporated into this final document. Pending any additional comments from the CNF during the review period for the License Application, the Plan is considered to be a final draft and upon approval by FERC, it will be implemented by SCL.

## Schedule

SCL will complete the road decommissioning tasks outlined in this Plan no later than two (2) years after issuance of a new Boundary license by FERC. Subsequent to completion of the work, SCL will monitor, for two (2) years, the status of the revegetation efforts to ensure that adequate revegetation has occurred at each site. After the two (2) year monitoring period has elapsed, SCL and USFS staff will review the sites and determine if revegetation efforts have been successful.

## **CNF** Review and Approval

Prior to issuing construction documents for decommissioning the wells and roads, SCL will submit the draft plans and specifications to the CNF for review and approval. The work will be done to the satisfaction of the CNF and will not be considered complete until accepted by the CNF.

#### Permits and Approvals

SCL will be responsible for obtaining all necessary permits and/or authorizations to gain access to sites and to conduct work (e.g., Shoreline Substantial Development Permit, Hydraulic Project Approval, etc., as needed). Cultural resource and Rare, Threatened and Endangered Plant surveys will be conducted, as necessary, prior to site disturbance. SCL may enter into a cost recovery agreement with the CNF to allow for CNF staff to complete such surveys. As it relates to the National Environmental Policy Act, SCL will cooperate with the CNF to ensure compliance.

## Fire Protection and Suppression

SCL will ensure that a fire protection and suppression plan will be developed prior to the commencement of work and that the plan is acceptable to the CNF.

## Pre-Construction Meeting

SCL plans to have the work conducted by a contractor. CNF staff will be invited to attend the pre-construction meeting.

## Revegetation/Weed Control

To prevent the spread of weeds, all equipment used to decommission wells and roads will be washed before entering NFS lands. Further, while disturbance to existing vegetation is expected, the footprint for the disturbed area will be minimized as much as possible; all disturbed soil will be seeded with a CNF-approved seed mix after completion of work.

## **Definition of Terms**

The following terms are used in this document and the attached table. They are defined as follows:

*Access Spur:* These are driveway-like structures that lead from main Forest Service roads to the well heads. Most of the well heads are located at the end of access spurs. The spurs generally conform to Forest Service Road Maintenance Level 1 standards. Most of them are short. A few of the wells are located on the shoulders of the main roads and do not have access spurs.

*Access Spur, Repair:* Access Spurs will be repaired to Forest Service Maintenance level 1 standards after decommissioning of wells. Level 1 means that the road has been closed to vehicular traffic. Water bars will be installed crosswise to the road bed per USFS standards. All bare soil will be seeded with grass. Where prior traffic or the passage of vehicles used during the decommissioning process has compacted the soil so densely that vegetation cannot grow, the area will be loosened by ripping with a machine, then seeded with grass.

*Tank Trap Barrier:* Tank traps are earth structures that block access of motorized vehicles. They are constructed by digging a large trench across the road and piling the excavated soil to form a berm on the side of the trench that is still open to traffic. All bare soil will be seeded with grass after construction. *Well Head Decommissioning:* Wells will be decommissioned by filling the wells with cement grout from top to bottom. The concrete pads around the well heads will be demolished, a hole will be dug around the well head, and the well head cut off approximately four feet below the ground surface, if possible. The holes will be backfilled with the excavated material, the ground graded to match the existing topography, and the bare ground surface seeded with grass. All demolition debris and other waste products will be removed from the site and disposed of at a location off of federal land.

# Cost Estimate for Road Decommissioning

The estimated cost for decommissioning of all roads covered under this Plan is \$310,000. This includes administrative costs and monitoring to ensure successful revegetation.

ATTACHMENT 1					
PLAN FOR DECOMMISSIONING MONITORING WELLS AND ASSOCIATED ROADS ON FEDERAL LAND					
Well Name	Active	<u>Abandoned</u>	Decommission ?	Land Owner	Treatment Plan
CS-01	х		Y	USFS	Decommission well head. Repair access spur. No tank trap; the entrance to the access spur is too wide to effectively block vehicle access.
CS-02	Х		Y	USFS	Decommission well head. Repair access spur. No tank trap; the entrance to the access spur is too wide to effectively block vehicle access.
CS-03	х		Y	BLM	Decommission well head. After crossing private land, the road to this well enters BLM land in a flat and open area. The area is too wide for a tank trap to effectively block access; no tank trap will be constructed.
CS-04	Х		Y	USFS	Decommission well head. Repair access spur. Install tank trap at junction with Forest Road 3100191.
CS-05	Х		Y	USFS	Decommission well head. No tank trap needed as there is no access spur. Limited limbing of trees may be required to access area around well.
CS-06	Х		Y	BLM	In order to access the site, the spur will need to be graded. Decommission well head. Repair access spur and install tank trap.
CS-07	Х		Y	BLM	In order to access the site, the spur will need to be graded. Decommission well head. Repair access spur and install tank trap.
CS-14		Х		USFS	The well was submerged when the reservoir was filled. Site cannot be accessed. No action will be taken.
CS-15		Х		USFS	The well was submerged when the reservoir was filled. Site cannot be accessed. No action will be taken.
CS-16		Х		USFS	The well was submerged when the reservoir was filled. Site cannot be accessed. No action will be taken.
CS-18	Х		Y	USFS	Decommission well head. Repair access spur to top of hill, approximately 1/4 mile from the well. Install tank trap near junction with Forest Road 3165328.
CS-19	Х		Y	USFS	Decommission well head. Repair access spur up to driveable portion of spur. Install tank trap.
CS-20	Х		Y	USFS	Decommission well head. Repair access spur. No tank trap needed.

PLAN FOR DECOMMISSIONING MONITORING WELLS AND ASSOCIATED ROADS ON FEDERAL LAND (cont'd)					
CS-21	x		Y	USFS	This artesian well is located at the end of a long access spur just after it crosses Lime Creek. Decommission well head, remove the two culverts that pass the braided stream under the road, remove road fill in stream bed, restore stream, obliterate road from stream to top of short rise immediately to the south of stream, repair the remainder of access spur, install tank trap at junction with Forest Road 3100310.
CS-22	х		Y	BLM	Decommission well head. Repair access spur. Install tank trap, if feasible (may not be feasible to effectively block vehicle access).
CS-24	х		Y	BLM	Decommission well head. Repair access spur. Install tank trap as close as possible to the National Forest boundary.
CS-25	x		Y	BLM	Decommission well head. Repair access spur. Install tank trap on access spur if there is enough room (this well is very close to the main road and there may not be enough room to install a tank trap). A limited number of trees may need to be removed in order to access site.
CS-26	x		Y	USFS	Decommission well head. Repair access spur from where it turns abruptly to the northwest to the well. Install tank trap at junction with Forest Road 3100310.
CS-28		х	Y	USFS	This is an artesian well that was abandoned right after it was drilled. It is believed to be located in the bed of Everett Creek. It may not be advisable to dig up the well head and fill it with grout. Another field visit and consultation with the WA Department of Ecology is needed to determine if the well should be decommissioned. SCL will confer with the USFS on how to treat this site when the contract documents are being prepared.
CS-31	x		Y	USFS	An access spur will have to be constructed to provide a connection from Road 3100172 to the access spur. Once constructed, decommission well head, repair access spur, and reconstruct the road prism on Forest Road 3100172, as needed.
CS-32	х		Y	USFS	Decommission well head. Repair access spur. This well is right next to a turn off alongside State Highway 31. Leave turn off in place; no tank trap.
R-01		X		USFS	This well cannot be located. No action will be taken.
R-04	Х		Y	USFS	Decommission well head. Repair access spur. No tank trap; the entrance to the access spur is too wide to effectively block vehicle access.
TC-02		Х		USFS	While this well is shown on maps, there are no records indicating SCL drilled this well or ever monitored it. No action will be taken.

PLAN FOR DECOMMISSIONING MONITORING WELLS AND ASSOCIATED ROADS ON FEDERAL LAND (cont'd)					
<u>Misc.</u>					
Spur off of FR 3165340	Х		Y	USFS	This road crosses wet ground and subsequently there have been small slides onto it. To decommission the road, unstable fill will be pulled back and drainage will be improved by installing water bars so that runoff doesn't saturate the road prism. All existing culverts will be pulled and the natural flow channels they occupy will be restored. A tank trap will be dug at the entrance to the spur.





















# **ATTACHMENT 2 TO AGREEMENT IN PRINCIPLE FOR**

## **BOUNDARY PROJECT RELICENSING**

#### **USFS Administrative Terms and Conditions**

#### General

License articles contained in the Federal Energy Regulatory Commission's (Commission) Standard Form L-5 issued by Order No. 540, dated October 31, 1975, cover those general requirements that the Secretary of Agriculture, acting by and through the USDA Forest Service, considers necessary for adequate protection and utilization of the land and related resources of the Colville National Forest. Under authority of section 4(e) of the Federal Power Act (16 U.S.C. 797(e)), the following terms and conditions are deemed necessary for adequate protection and utilization of National Forest System lands and resources. These terms and 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, pursuant to section 4(e) of the Federal Power Act, the following conditions covering specific requirements for protection and utilization of the National Forest System lands shall also be included in any license issued for the Boundary Hydroelectric Project (Project) and any license amendment issued.

#### **USDA Forest Service Terms and Conditions**

#### **Condition No. 1 – Compliance with the Settlement Agreement**<sup>1</sup>

Note: Based on final configuration and language in the SA, Conditions 1, 2.1, and 3 may be revised, combined, etc.

The licensee shall completely and fully comply with all provisions of the [ ] Settlement Agreement (Settlement Agreement) Concerning the Relicensing of the Project relating to:

<sup>&</sup>lt;sup>1</sup> Note for Conditions 1 and 2. Implementation requirements do not extend to off license agreements or other information provided to FERC along with the Settlement Agreement for information purposes only.

1. All protection, mitigation and enhancement measures and other obligations indentified in the Settlement Agreement, Appendices, Exhibits and Schedules which are on or affect National Forest System (NFS) lands and resources.

2. All commitments in each and every plan referenced in the Settlement Agreement, Appendices, Exhibits and Schedules which implement activities which are on or affect NFS lands and resources

#### <u>Condition No. 2 – Reservation of Authority in the Event the Settlement Agreement is</u> <u>Materially Modified or not accepted by the Commission</u>

USDA Forest Service preliminary terms and conditions are premised on two considerations:

1. The Commission's acceptance and incorporation of the Settlement Agreement, Appendices, Exhibits and Schedules, without material modification into the new Project license.

2. The licensee's immediate and complete implementation of its obligations in accordance with the Settlement Agreement if it provides for any early implementation measures and as it may be modified or conformed by the Parties following issuance of the license by the Commission.

In the event either of these requirements are not met, the USDA Forest Service reserves its authority to supplement or modify its terms and conditions at a later time.

# Condition No. 3 – Implementation of Settlement Agreement License Articles

The licensee shall implement Settlement Agreement License Articles [1-X].

## **Condition No. 4 – Resource Coordination**

Within one year of License issuance, the Licensee shall, in coordination and consultation with the [specify based on parties to the Settlement], and subject to approval by the USDA Forest Service, prepare a Resource Coordination Plan (RCP) and file the plan with the Commission for approval. The RCP shall establish a process for information exchange and coordinate efforts for implementation of License conditions and ongoing Project operations and maintenance (O&M) activities impacting NFS lands affected by the Project. The RCP shall provide for coordination of the implementation of the various management plans required under the License to the extent they impact NFS lands, including but not limited to, [specify based on plans to be submitted with or subsequent to filing of the SA]: The goal of the RCP is to maximize efficiency and integration of implementation and minimize redundancy of reporting].

## Condition No. 5 - Implementation of the License on National Forest System Lands

The Licensee shall not commence implementation of habitat or ground-disturbing activities on National Forest System (NFS) lands until the USDA Forest Service has approved site-specific project designs and issued a notice to proceed.

<u>Additional NFS Lands</u>. If long term occupancy of NFS lands is required for Project related purposes and such occupancy is not authorized by including such lands within the FERC Project boundary, the Licensee shall obtain a special-use authorization for occupancy and use of such NFS lands from the USDA Forest Service. Within six months of License issuance and before conducting any habitat or ground-disturbing activities on such NFS lands, the Licensee shall obtain from the USDA Forest Service and file with the Commission a special-use authorization for occupancy and use of NFS lands.

Additional lands authorized for use by the Licensee in a new special-use authorization shall be subject to laws, rules, and regulations applicable to the NFS. The terms and conditions of the USDA Forest Service special-use authorization are enforceable by the USDA Forest Service under the laws, rules, and regulations applicable to the NFS. Should additional NFS lands be needed for this Project over the License term and such lands not included within the FERC Project Boundary, the special-use authorization shall be amended to include any additional NFS lands.

<u>Approval of Changes on NFS Lands after License Issuance</u>. Notwithstanding any License authorization to make changes to the Project, the Licensee shall receive written approval from the USDA Forest Service prior to making changes in the location of any constructed Project features or facilities on NFS lands, or in Project uses of NFS lands, or any departure from the requirements of any approved exhibits for Project facilities located on NFS lands filed by the Licensee with the Commission. Following receipt of such approval from the USDA Forest Service, and at least 60 days prior to initiating any such changes or departure, the Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the USDA Forest Service at the time it is filed with the Commission.

<u>Coordination with Other Authorized Uses on NFS Lands</u>. In the event that portions of the Project area are under federal authorization for other activities and permitted uses, the Licensee shall consult with the USDA Forest Service to coordinate such activity with authorized uses before starting any activity on NFS land that the USDA Forest Service determines may affect another authorized activity.

<u>Site-Specific Plans</u>. The Licensee shall prepare site-specific plans subject to review and approval by the USDA Forest Service for habitat and ground-disturbing activities on NFS lands affected by the Project required by the License, including such activities contained within resource management plans required by the License to be prepared subsequent to License issuance. The Licensee shall prepare site-specific plans for planned activities one year, or as otherwise agreed to by USDA Forest Service, in advance of implementation dates required by the License, except for those activities planned in the first year after license issuance where the Licensee shall prepare site-specific plans for activities timely to allow USDA Forest Service review in advance of implementation. For emergency situations, where corrective or mitigation actions must be implemented immediately, the Licensee will coordinate with the USDA Forest Service to expedite approvals and/or permits.

Site-specific plans shall include:

- 1. A map depicting the location of the proposed activity and GPS coordinates.
- 2. A description of the USDA Forest Service land management area designation for the location of the proposed activity and applicable standards and guidelines.
- 3. Where required by regulatory procedures, a description of alternative locations, designs and mitigation measures considered including erosion control and implementation and effectiveness monitoring designed to meet applicable standards and guidelines.

- 4. Draft biological evaluations or assessments including survey data as required by regulations applicable to habitat or ground-disturbing activities on NFS lands in existence at the time the plan is prepared.
- 5. An environmental analysis of the proposed action consistent with the USDA Forest Service policy and regulations for implementation of the National Environmental Policy Act (NEPA) in existence at the time the plan is prepared for FERC Licensed projects on NFS lands. Environmental Analysis completed by the Commission or others may be relied upon as appropriate on a project specific basis as agreed to by USDA Forest Service.

<u>Surveys and Land Corners:</u> The licensee shall avoid disturbance to all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments are destroyed by an act or omission of the licensee, in connection with the use and/or occupancy authorized by the license, depending on the type of monument destroyed, the licensee shall reestablish or reference same in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States," (2) the specifications of the County Surveyor, or (3) the specifications of the USDA Forest Service. Further, the licensee shall ensure that any such official survey records affected are amended as provided for by law.

<u>Cost Reimbursement</u>. The Licensee shall provide funding to the USDA Forest Service for costs incurred for the purpose of analysis, review, inspection, and monitoring required for implementing habitatdisturbing and ground-disturbing activities on NFS lands required by the License. [The methodology for reimbursement and the process for a determination of reimbursable costs shall be established by the SA.]

## Condition No. 6 - Surrender of License or Transfer of Ownership

At least 1 year in advance of filing an application for license surrender, the Licensee shall prepare a restoration plan for NFS lands approved by the USDA Forest Service. The restoration plan shall identify improvements to be removed, restoration measures, and time frames for implementation and shall be filed with the Commission as part of the surrender application.

## **Condition No. 7 - Self Insurance**

[During SA negotiations, FS and SCL will develop appropriate terms regarding indemnities related to SCL's use of FS property under the License.]

## **Condition No. 8 - Reservation of Authority**

The Licensee shall implement, upon order of the Commission, such additional conditions as may be identified by the Secretary of Agriculture, pursuant to the authority provided in Section 4(e) of the Federal Power Act, as necessary for the adequate protection and utilization of the public land reservations under the authority of the USDA Forest Service, provided that such additional conditions are necessary, based on compelling evidence, to address changed circumstances.