

MODIFIED
AVISTA CORPORATION

**WATER QUALITY IMPROVEMENT AND EROSION
CONTROL PLAN
2010 TO 2014**

IDAHO 401 WATER QUALITY CERTIFICATION,
APPENDIX A, SECTION III

Post Falls Hydroelectric Development
Spokane River Hydroelectric Project
FERC Project No. 2545

Prepared By:
Avista Corporation

Date Filed with FERC: June 11, 2010
Date Modified by FERC ORDER 2545-128: October 13, 2010

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1.0 INTRODUCTION

1.1 Background

On June 18, 2009, the Federal Energy Regulatory Commission (FERC) issued a new license for Avista Corporation's Spokane River Project, FERC Project No. 2545-091 for a 50-year license term. The new FERC License (License) became effective on June 1, 2009 and includes operation of the Post Falls Hydroelectric Development (HED) in Idaho. Ordering Paragraph D of the License incorporated the Idaho Department of Environmental Quality's (IDEQ) Section 401 Water Quality Certification (Idaho WQC) for the Post Falls Hydroelectric Development. The conditions of the Idaho WQC can be found in Appendix A of the License.

This Water Quality Improvement and Erosion Control Plan is required by Section III of the Idaho WQC included as Appendix A of the License. Section III of the Idaho WQC states that Avista Corporation (Avista) shall develop and submit a Water Quality Improvement and Erosion Control Plan to IDEQ for approval within the first year after the License becomes effective (June 1, 2009).

Article 401 (a) of the License requires Avista to consult with the U.S. Fish and Wildlife Service (USFWS) and Idaho Department of Fish and Game (IDFG) in the preparation of the Water Quality Improvement and Erosion Control Plan (Plan), that the Plan be submitted to FERC for approval within one year of License issuance (June 18, 2009), and that implementation of the Plan begin once Avista receives FERC approval. **On October 13, 2010, FERC issued an Order modifying and approving the Water Quality Improvement and Erosion Control Plan for the Post Falls Development, Pursuant to Article 401 (FERC Order 2545-128).**

1.2 Post Falls HED

The Post Falls HED includes three dams located on the Spokane River approximately nine miles downstream from the outlet of Coeur d'Alene Lake. Coeur d'Alene Lake is a natural lake created by a natural channel restriction, with the outlet serving as the headwaters of the Spokane River. The Post Falls HED's Project boundary encompasses the Spokane River upstream of the Post Falls Dams, Coeur d'Alene Lake, and the lower reaches of the Coeur d'Alene, St. Joe, and St. Maries rivers (Figure 1) to the normal full pool water elevation of 2,128 feet.

The Post Falls HED influences water levels in Coeur d'Alene Lake and the lower reaches of lake's tributaries from early summer through late fall. During the winter and through most of the spring run-off season the HED does not influence water elevations upstream of the HED during which time the water elevations are controlled by Coeur d'Alene Lake's natural channel restriction.

2.0 LICENSE REQUIREMENTS

The License requires Avista to complete a Water Quality Improvement and Erosion Control Plan (Plan) within the first year of the effective date of the License (June 1, 2010). The purpose of the Plan is to identify and prioritize erosion control actions to protect and improve water quality associated with the Post Falls HED and to protect beneficial uses. Erosion control projects will be further identified and prioritized for the first five-year work cycle (2010 through 2014) following FERC's approval of the Plan. The intent of this Plan is to satisfy the requirements identified in Article 401 (a) and Appendix A, Section III of the License. Avista shall develop the Plan to include the following components as stated in Section III of the Idaho WQC:

- A. Avista shall develop and implement a Water Quality Improvement and Erosion Control Plan. The Plan shall include the following components:

- 1. **Water Quality Improvement and Erosion Control Plan.**

- Avista shall develop a Water Quality Improvement and Erosion Control Plan that identifies and prioritizes actions to protect and improve water quality associated with the Post Falls Project and protect beneficial uses. Avista shall include in the Water Quality Improvement and Erosion Control Plan site-specific erosion control actions. Consultation with stakeholders through the alternative licensing process ("ALP") has provided guidance regarding potential locations and types of erosion control actions that may be included in the Plan. (Stoker, 2004). The current Coeur d'Alene Lake Management Plan, or any revisions to the Lake Management Plan, may also provide Avista with a set of potential actions that could be implemented to reduce sedimentation, reduce nutrient loading, or improve water quality and protect beneficial uses.

- 2. **Five (5) Year Plan:** The Plan shall describe prioritized measures to be implemented in the first five-year period following the issuance of the New License.

- B. Within the first year after the New License becomes effective, Avista shall develop and submit the Plan to IDEQ for approval. Upon approval by IDEQ, Avista shall implement the Plan. Every five (5) years after the New License becomes effective and continuing for the term of the license, Avista shall update and revise the Plan to describe those measures to be implemented within the following five (5) years. The updated Plan shall be submitted to IDEQ for approval, and upon approval by IDEQ, shall be implemented by Avista. Avista shall consult with IDEQ annually regarding those measures to be carried out within the year. Implementation of the Plan and expenditure of funds for specific projects will be governed by Section VIII.A of this certification.

- C. Avista will prepare and submit to IDEQ a summary report every five (5) years documenting implementation of the measures described in the Water Quality Improvement and Erosion Control Plan. The report shall be submitted to IDEQ within

six (6) months of the end of each reporting period. The report will summarize the activities conducted under this condition during the preceding five (5) years and the results achieved, the overall results achieved to date (subsequent to first 5-year period), and the general nature of the activities that will be implemented during the next 5-year period.

- D. By July 1st after the effective date of the New License, and every July 1st thereafter for the term of the New License, Avista shall make available \$75,000 to implement this condition. Any funds not expended within one (1) year shall carry over and can be used in the following year consistent with Section VIII.A. of this certification. Any funds carried over shall be in addition to the annual \$75,000 provided by Avista. The fact that funds have not been expended in one (1) year and are carried over does not diminish Avista's responsibility for providing \$75,000 annually for the term of the New License. Provided, however, that funds which are carried over and not expended within five (5) years shall no longer be available in accordance with Section VIII.A. of the certification. The funding provided by Avista shall be used to pay for work by Avista, IDEQ, or their contractors for planning, implementing, or reporting components of this measure. The \$75,000 annual payment shall be adjusted in accordance with Section VIII.B. of this certification.

Avista's internal administrative costs to implement this measure shall be part of Avista's internal costs for license implementation and compliance. The funds described in Section III.B. shall not be used to support Avista's internal administrative costs to implement this condition.

2.1 Funding

Avista shall make \$75,000 available on an annual basis to implement the approved Plan. Implementation of this Plan and expenditure of funds for specific projects will be governed by Section VIII.A. of the Idaho WQC as follows:

- A. Except as otherwise provided in this Section VIII., all funds to be provided by Avista described in this certification will be subject to the cost caps set forth in the certification and will remain in Avista's control until individual measures or activities required by this certification are implemented. Avista will fund individual measures and activities as they are implemented, in accordance with the plans required by this certification, and in coordination with IDEQ and, when applicable, IDFG. All funds required by this certification to carry out measures or activities include the costs of permitting such measures and undertaking any necessary studies and monitoring. If funds are made available for measures or activities conducted [by] IDEQ or IDFG, IDEQ or IDFG shall provide an accounting/invoice to Avista quarterly. Within 30 days of receipt, Avista shall reimburse IDEQ or IDFG for the costs set forth in the accounting/invoice, up to the cost caps set forth in this certification. Funds not expended in a given year will remain available during the subsequent five (5) years and will not bear interest or be further escalated pursuant to Section VIII.B. below. Any funds provided by Avista pursuant to this certification or any funds carried over may be used to carry out and fund any measures set forth in Sections II,

III, IV and VII of this certification. Funds carried over and not spent within five (5) years will no longer be available to implement the conditions of the certification.

2.2 Reporting and Updating

Avista will prepare and submit a summary report every five (5) years as described in Section III.C. of the Idaho WQC. The summary report will document implementation of the measures described in this Plan, the overall results achieved during the previous 5 years, and the general nature of the activities that will be implemented during the next five-year period. **In accordance with the FERC Order 2545-128 (Appendix C), Avista shall submit the five year reports to the IDEQ, IDFG, and USFWS by June 1 starting in 2014 and then every five years thereafter.**

At the same time, the licensee shall also submit the new five year plan to IDEQ for approval and to IDFG and USFWS for review and comment prior to filing the five year plans for Commission approval. The agencies shall be allowed a minimum of 30 days to review the final reports and plans. The final reports and plans shall be filed with the Commission by August 1 starting in 2014 and every five years thereafter. The final reports and plans shall include copies of any comments received from the agencies and the licensee's response to those comments. If the licensee does not adopt an agency recommendation, the filing shall include the licensee's reasons, based on project specific information.

2.3 Liability

The Bunker Hill Mining and Metallurgical Complex Superfund (Facility) includes mining-contaminated areas with lead being the primary contaminant of concern and additional contaminants of concern including arsenic, cadmium, and zinc. Sediments are the primary contaminated material in the Lower Basin, and as a result, through the implementation of Section III of the Idaho WQC, it is likely Avista will become involved in efforts to reduce erosion along the lower Coeur d'Alene River streambanks, especially in areas with elevated lead concentrations. At these sites, Avista will limit its activities as necessary to avoid incurring liability for the contamination. For example, Avista will not manage, direct, or conduct any operations related to hazardous substances. Avista will work out the details of its involvement in each project on a site-by-site basis and in coordination with the Basin Environmental Improvement Project Commission (BEIPC), including its technical arm, the Technical Leadership Group and other appropriate committees with regard to erosion control efforts in the Coeur d'Alene River. Although Avista may limit its activities to avoid liability, it will meet its obligations under Section III of the Idaho WQC.

3.0 EROSION CONTROL GOALS

Erosion control activities will be implemented to protect and improve water quality associated with the Post Falls HED and to protect beneficial uses, with the goal of reducing sedimentation,

reducing nutrient loading, or improving water quality and protecting beneficial uses. Site-specific erosion control actions are to be identified and prioritized in consultation with the IDEQ, IDFG, and USFWS.

4.0 EROSION CONTROL STUDIES

The following is a list of studies associated with erosion control evaluations and/or mitigation measures which have occurred, or are occurring in the Spokane River upstream of the Post Falls Dams, Coeur d'Alene Lake, and the lower reaches of the Coeur d'Alene, St. Joe, and St. Maries rivers.

4.1 Coeur d'Alene River Stream Bank Erosion – Preliminary Report, 1978

The United States Department of Agriculture (USDA) Soil Conservation Service completed a preliminary report in 1978 on stream bank erosion occurring on the Coeur d'Alene River. The report briefly summarizes the erosion along the Coeur d'Alene River and documents that conditions more than 30 years ago are the same as those today. Four alternatives to reduce erosion are discussed: no action; prohibit boat traffic; install rock rip rap; and install log breakwaters. The report identifies boat wave erosion as a significant bank erosion factor.

The report provides field based maps prepared in cooperation with the Coeur d'Alene Tribe (Tribe) that identify erosion reaches, which are prioritized with a ranking of low, moderate, severe, and critical.

4.2 Coeur d'Alene River Digital Surface Geology Map and Analysis of Channel, Stream Bank, and Floodplain Sediments, 1999, 2001, and 2004

A number of very detailed field-based research studies have been conducted by the United States Geologic Survey (USGS) along the Coeur d'Alene River. These studies include the following:

- A detailed surface geology map (Bookstrom et al 1999).
- An analysis of the mine waste content of the channel, riverbank and floodplain sediment (Bookstrom et al 2001).
- Baseline and historic depositional rates and lead concentrations (Bookstrom et al 2004).

Combined, these studies provide an overview of the geologic materials (and mine wastes), landforms, and processes that have, and continue to form the stream banks of the Coeur d'Alene River. As indicated in these studies, these processes include the transport, erosion, and deposition of sediment along the Coeur d'Alene River in comparison to other rivers in the area. The distribution of the mine waste, lead concentrations, and 1980 Mount Saint Helens Ash layer provide a quantitative look at the rates of stream bank levee construction over the past 100 years. These studies further indicate that on the Coeur d'Alene River the concentration of toxic metals

and other mine waste materials in the stream banks and back marshes are a critical prioritization criteria for bank erosion protection.

4.3 Riverbank Stabilization Inventory, June 2004

In 2004 the Kootenai-Shoshone Soil and Water Conservation District (KSS&WCD) completed a riverbank stabilization inventory of all riverbank stabilization projects that have been installed on the lower St. Joe River (from St. Joe City to its mouth at Coeur d'Alene Lake) and the lower Coeur d'Alene River (from Cataldo to its mouth at Harrison).

The inventory consisted of researching, surveying, and completing a qualitative analysis of erosion control measures implemented along the river. While the inventory was completed for the lower Coeur d'Alene River in March of 2004, it was not completed for the St. Joe River due to river level elevations that submerged portions of the stream bank projects.

The stabilization inventory provides an inventory and qualitative assessment of 24 bank erosion control projects built along the lower Coeur d'Alene River using a variety of bank protection methods, the majority of which include stabilization with riprap and riparian vegetation. Some of the projects included National Resources Conservation Service (NRCS) grant money to assist in protecting private lands. The inventory indicates that of the 33 miles of the lower Coeur d'Alene River, approximately 2.8% (9,552 ft) of the riverbank had been stabilized.

4.4 Spokane River Hydroelectric Project, Phase 2 Erosion Assessment, July 2004

Earth Systems and Parametrix completed a Phase 2 Erosion Assessment for Avista in 2004, during the relicensing of the Spokane River Project. The purpose of Phase 2 Erosion Assessment was to quantify operational induced erosion caused by the Spokane River Project. The assessment identified erosion areas; the processes causing erosion; and the relative contribution of the Post Falls HED's operations within the affected upstream areas, with a specific focus on the St. Joe River levee system.

The Phase 2 Erosion Assessment summarizes information on the hydrology, site conditions, sedimentary deposits, history, estimated boat traffic, changes in vegetation, and ongoing shoreline erosion processes observed during a two year study of shorelines along the St Joe, St Maries, and Coeur d'Alene Rivers, Coeur d'Alene Lake, and the Spokane River upstream of Post Falls.

During the assessment, erosion rates along the St Joe River, St Maries River, and Coeur d'Alene River mouth were measured using the following four approaches: by using overlays of rectified historical aerial photographs and maps (dating back to 1909); with short-term erosion pins; by measuring the distance from the present stream banks (in 2004) to in-place stumps located within

the 2120 to 2123 feet (ft) elevation zone; and by measurement of the width of the stream bank erosion ledge between the 2122 ft bathymetric contour and 2128 ft elevation contour. Results were roughly similar for the four approaches and indicated historical erosion rates of:

- Approximately 5 to 10 ft per 50 years along the upper reaches of the St Joe River.
- Between 10 and 15 ft per 50 years along the lower St Joe River.
- Between 5 and 10 ft per 50 years along the St Maries River.
- Between 3 and 6 ft per 50 years along the Coeur d'Alene River mouth.

The study concludes the primary processes eroding the banks along the entire project area river reaches, and causing the loss of the ribbon like natural levees along the lower five miles of the St Joe River, include: boat wave erosion from heavy summer boat traffic; natural erosion processes including periodic flood erosion of the banks; historical and current removal of trees for private land uses; and inundation of the low natural levees along the lower river that prevents brush and tree growth in the summer inundation zone.

4.5 Spokane River Project Erosion Control Review, August 2004

Earth Systems presented a power point presentation in 2004 to the Terrestrial Resources Work Group during the relicensing of the Spokane River Project, as part of a Phase 3 analysis to develop site-specific and process-specific solutions to erosion mitigation based upon the results of the Phase 2 Erosion Assessment. The presentation summarized how shoreline erosion control methods and materials that have been implemented along the St Joe, St Maries, and Coeur d'Alene Rivers interact with stream processes. The presentation indicated that over the years, a variety of shoreline erosion control methods and materials have been utilized including, but not limited to: large and small rip rap; fabric soil raps; gabions; junk metal; wood piles with 4 by 12 inch planks; log breakwaters attached to the shore or piles; and dense mill slash piles. The presentation recommended that the NRCS rock wedge with live stake plantings appeared to be a good approach for many river reaches, as it used both hard armor and vegetation to address the combined influence of boat waves, flood erosion, and the altered vegetation line.

4.6 Lower Coeur d'Alene Riverbank Stabilization Prioritization, 2009

The KSS&WCD and IDEQ completed a riverbank stabilization prioritization of the lower Coeur d'Alene River in 2009. The stabilization prioritization classifies the stream banks along the lower Coeur d'Alene River into six bank types using a bank erosion matrix approach that includes bank height, bank angle, root density, root depth, surface protection, bank material, and stratification of bank material. Along with these classic geomorphic factors the near bank stress and the river bank lead concentration/depth (deposited from upstream historical mining activities) were also used to prioritize sites. The report documents a river bank recession rate program based on erosion pins installed at 36 sites.

The study provides a prioritization overlay (Figure 2) in Global Information System (GIS) format that will be used to help guide efforts to reduce erosion occurring along the lower Coeur d'Alene River stream banks with high lead concentrations. The overlay program is provided so that ongoing monitoring and additional parameters like bank density and a boat wave parameter can be added. The report states the project was designed to be built on and utilized by others.

4.7 Coeur d'Alene Lake Management Plan, March 2009

The Coeur d'Alene Tribe ("Tribe") and IDEQ collaboratively developed the 2009 Lake Management Plan (2009 LMP) which has the following goal:

"to protect and improve lake water quality by limiting basin-wide nutrient inputs that impair lake water quality conditions, which in turn influence the solubility of mining-related metals contamination contained in lake sediments."

Five objectives were identified in order to achieve the 2009 LMP goal and include the following:

- Objective 1: Improve scientific understanding of lake conditions through monitoring, modeling, and special studies;
- Objective 2: Establish and strengthen partnerships to maximize benefits of actions under existing regulatory frameworks;
- Objective 3: Develop and implement a nutrient reduction action plan;
- Objective 4: Increase public awareness of lake conditions and influences on water quality; and
- Objective 5: Establish funding mechanisms to support the LMP goal, objectives, and strategies.

Objective 3, the development and implementation of a nutrient reduction action plan, is directly relevant to this Plan. One target of a nutrient reduction action plan could include reducing sources of nutrients such as from eroding stream banks. As part of the implementation of Objective 3, IDEQ and the Tribe prepared a Work Plan to further identify nutrient sources into the Coeur d'Alene Lake System. This Work Plan is explained in greater detail in Section 4.9.

4.8 Enhanced Conceptual Site Model for the Lower Basin Coeur d'Alene River, Synopsis and Executive Summary, January 2010

CH2M HILL, on behalf of the Environmental Protection Agency (EPA), completed a synopsis and executive summary in January of 2010 describing the Enhanced Conceptual Site Model (ECSM), which is an update to the 2000 Conceptual Site Model. The Conceptual Site Model had been used to describe contaminant sources, transport pathways, and receptors for the Lower Basin of the Coeur d'Alene River. The ECSM also provides an analysis of the physical processes driving the mobilization and transport of sediment, including: surface water budget, flow paths, geomorphology, sediment budget, lead budget, groundwater, and geochemistry.

Located in the Coeur d'Alene River Basin, the Bunker Hill Mining and Metallurgical Complex Superfund Facility (Facility) includes mining-contaminated areas with lead being the primary contaminant of concern. Additional contaminants of concern associated with the historical mining-related activities include arsenic, cadmium, and zinc. As sediments are the primary contaminated material in the Lower Basin, the synopsis indicates the ECSM was developed to better define and quantify the sources, mobility, and deposition of sediment in the Lower Basin. This was completed to gain an understanding of past and present conditions, impacts, processes, and trends in order to learn how these factors affect the manner in which the river system will respond to future remedial actions.

4.9 Lake Management Plan, 3-Year Nutrient Source Inventory, St. Joe and St. Maries Rivers, Water Quality Sampling Work Plan and Quality Assurance Plan, March 2010

As one of the objectives identified to meet the goal of the 2009 LMP, the Tribe and IDEQ initiated a 3-Year Nutrient Source Inventory Water Quality Sampling Work Plan and Quality Assurance Plan ("Plan") for the St. Joe and St. Maries Rivers in March of 2010. The Plan details proposed measures to implement a 3-year nutrient source inventory which includes a short-term water sampling program at six selected locations within the St. Joe and St. Maries Rivers. The water sampling program is scheduled to begin in March of 2010 and will be implemented as a coordinated effort between IDEQ and the Tribe. The nutrient inventory will also include collection and summaries of historical and current nutrient data collected in the watershed.

This Plan notes that one source of suspended sediment concentrations, and associated levels of total phosphorus measured at the mouth of the St. Joe River, may be traced to active river bank erosion and sloughing occurring along the lower to mid portions of the St. Joe River and possibly sections of the St. Maries River. As such, IDEQ and the Tribe plan to initiate on-the-ground inventories of river bank erosion and develop priority schemes for potential bank stabilization projects as part of the 3-Year Nutrient Inventory. This work will begin in the summer of 2010 and will be guided by a Work Plan that is yet to be developed.

4.10 Avista, 4(e) Condition No. 4: Coeur d'Alene Reservation Erosion Inventory and Assessment, On-going

Avista is currently conducting an erosion inventory and assessment as required by the 4(e) Condition No. 4, (Coeur d'Alene Reservation Lake and Tributary Shoreline Erosion Control), included as Appendix D of the License. To complete the Erosion Inventory and Assessment, Avista has contracted the Tribe and Earth Systems to identify and assess all shoreline erosion occurring on lands within the Coeur d'Alene Indian Reservation, which includes shorelines located along the St Joe River downstream of the City of St Maries, along the lower portion of Coeur d'Alene Lake, and the pertinent lateral lake shorelines.

The Erosion Inventory and Assessment will be submitted to the Department of Interior and FERC for approval within two years of the License issuance (June 18, 2011) and will also include a prioritized list of recommended erosion control sites on the St. Joe River and/or Coeur d’Alene Lake that comprise a total of 50% of the total linear feet of all erosion sites on the St. Joe River.

5.0 PRIORITIZED PROJECTS AND ACTIONS

5.1 Selection Priorities and Evaluation Criteria

IDEQ, IDFG, and Avista (Parties) have developed selection priorities and evaluation criteria for all projects and/or activities that will be implemented through this Plan. Table 1 includes the prioritization and evaluation criteria that will be used for selecting projects for erosion control mitigation measures.

Table 1: Prioritization and Evaluation Criteria for Erosion Control Sites.

Low					High					Prioritization and Evaluation Criteria
1	2	3	4	5	1	2	3	4	5	
				✓						Projects that have a high degree of erosion control urgency
				✓						Projects that are consistent with existing plans and are identified as having significant potential for water quality improvement
				✓						Projects with multiple partners and/or projects providing significant non-Avista funds (regardless of whether the land is privately or publically owned).
			✓							Projects that are publically owned and/or where public access is secured
		✓								Projects with intact cultural artifacts

5.2 Collaborative Parties & Project Identification

Avista and IDEQ will coordinate efforts to work with other entities to identify cost share potentials for river bank stabilization projects. The entities include, but are not limited to, IDFG, the Kootenai Shoshone Soil and Water Conservation District (KSS&WCD), the Benewah Soil and Water Conservation District (BS&WCD), NRCS, Benewah County, Shoshone County, Kootenai County, and the Coeur d’Alene Tribe.

This Plan focuses on evaluating and prioritizing erosion sites located on the St. Maries, St. Joe, and the Coeur d’Alene Rivers. The following provides the mechanism for which the erosion sites and potential cost share opportunities will be further identified.

Project Identification: St. Maries & St. Joe Rivers

For potential project sites along the lower St. Maries River and the St. Joe River (from St. Maries to St. Joe City) there are projects in various stages of planning where landowners are seeking to cost share with USDA Farm Bill programs. In such cases IDEQ will consult with staff of the BS&WCD and the NRCS Plummer field office to explore three-way cost shares which could leverage funds from a landowner, the Farm Bill, and Avista. In addition, the newly formed TMDL Watershed Advisory Group (WAG) for the St. Joe and St. Maries basin may also provide assistance to solicit landowners of eroding river bank property to participate via the BS&WCD.

Project Identification: Coeur d'Alene River

For the lower Coeur d'Alene River, Avista will work with IDEQ to facilitate coordination between KSS&WCD, NRCS, and IDFG on the approximately 60% of riverbanks owned by IDFG. On the Coeur d'Alene River, cost share opportunities could be leveraged with the Clean Water Action Section 319 grants (§319 grant), with 60% of the funds from EPA and 40% from Avista. The KSS&WCD could be the sponsor of §319 grant applications on the lower Coeur d'Alene River. Any proposed project on the lower Coeur d'Alene River would involve consultation with EPA staff to ensure that these river bank stabilization projects would not fall under the purview of current or future Superfund Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedies.

Potential projects and measures may be identified by Avista, IDEQ and any of the entities previously identified. They will be evaluated through a collaborative process with these entities and then prioritized and selected according to the prioritization and evaluation criteria identified in Table 1. Summaries of previous work activities and other pertinent information will be used to help determine project effectiveness. Potential erosion control information may include, but not be limited to: the project name; size; location; ownership; current and estimated future extent of erosion; cultural resources and vegetation present; soil type and drainage; and effectiveness of desired erosion control measures. Other relevant information includes the known presence of contaminated sediments, participating partners, planning and management objectives.

It is essential that adequate funding and project oversight to complete any action is available prior to and during implementation.

**6.0 EROSION CONTROL IMPLEMENTATION STANDARD
METHODS/PRACTICES**

6.1 General Site Approach

Sites selected for projects that have acceptable access and/or cooperative management agreements will be mapped and a basic engineering geology assessment will be conducted to

provide site specific characterization for engineering design, permitting, bid, and monitoring documents.

The following general approach for site characterization will be used for new sites that do not have any existing information (not all sites will need these characterizations as some may already have this type of information documented):

1. Divide each site into segments with similar features.
2. Select location(s) for benchmark(s).
3. Drive rebar benchmark(s).
4. GPS in benchmark(s) for general location. An accuracy of about 3 to 5 ft will be met by averaging points so the site can be relocated at a later date by sight, with a metal detector, or generally located even if the stake had been removed. Include GPS number on field form. Benchmarks will be used to tie in cross sections and any other points located with a total station, survey grade GPS (or tape, compass, and inclinometer), or other survey methods as needed at each site.
5. Survey in cross sections that are typical of each project segment or as needed for topographic mapping. Include water's edge (that will be one method used to establish elevations at some sites), full width of the erosion ledge and slope into the main channel, main erosion notches, toe of bank, undercut, top of bank, vegetation line, and other features as needed for design and specifications at each site. Elevations of most of the study inventory area will be based on the USGS Gages 12415135 St Joe River or by using survey grade GPS or local benchmarks if available.
6. Develop topographic maps as needed for design and bid packages specific to each site.
7. Identify strata, sketch on cross section(s), and classify materials using Unified Soils Classification System.
8. Classify vegetation zones to show on cross section(s), show existing trees and brush zones, and signs of wildlife.
9. Measure typical bank height(s) and angles. Determine how much of the project area it represents.
10. Inspect for cultural, historic, or present infrastructure; describe and locate with GPS or total station as needed.

6.2 Standard Design Methods

Standard methods that will be utilized to guide the design of the erosion controls for each project as appropriate and include the following:

- NRCS National Engineering Manual (NEM).
- NRCS National Engineering Handbook (NEH).
 - Part 650, Engineering Field Handbook (Chapters 14, 16, and 18)
 - Part 653, Stream Corridor Restoration Handbook

- NRCS Cultural Resources Handbook.
- NRCS National Environmental Compliance Handbook.

The NRCS, teamed with the local conservation districts (KSS&WCD and BS&WCD), have completed 12 years of review, design, and construction of over 14 miles of bank erosion control projects along the St Joe and Coeur d'Alene Rivers. Their standard design typically includes a rock wedge with live stake plantings which provides both hard armor and vegetation to address the combined influence of boat waves, flood erosion, and the altered vegetation line. Their standard design will most likely be utilized as the standard approach for most proposed project actions. Additional NRCS guidance's, specific to Idaho that will be utilized to guide the design of stream bank and shoreline erosion controls include:

- NRCS Idaho Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard – Streambank and Shoreline Protection, 580 and Idaho Construction Specifications.
- NRCS Idaho Operation and Maintenance Worksheet, Streambank and Shoreline Protection.
- NRCS Idaho Documentation Check List, Streambank and Shoreline Protection.
- Idaho Plant Materials Technical Note No. 32 Users Guide to Description, Propagation and Establishment of Native Shrubs and Trees for Riparian Areas.
- Idaho Plant Materials Technical Note No. 38 Users Guide to Description, Propagation and Establishment of Wetland Plant Species and Grasses for Riparian Areas.
- NRCS Idaho, The Practical Streambank Bioengineering Guide.
- NRCS-Idaho, Engineering Technical Note 13, "Design of Rock Weirs".
- NRCS-Idaho, Engineering Technical Note 6, "Design of Dumped Rock Riprap Stream Channel Stabilization".
- NRCS-Idaho, Engineering Technical Note 12, "Design of Stream Barbs".
- NRCS-Idaho, Engineering Technical Note 15, "Incorporation of Large Wood into Engineering Structures".

If the licensee (in consultation with appropriate entities) identifies large woody debris or large riprap as the preferred erosion control method at any site under the plan, the licensee shall consult with the USFWS prior to the implementation of those methods. The licensee shall include documentation of the consultation with the resource agencies on the use of large woody debris or large riprap in the five year reports.

7.0 SITE SPECIFIC EROSION CONTROL ACTIONS

Avista evaluated high priority sites based on existing knowledge of shoreline erosion occurring within the Coeur d’Alene Lake Basin inside the project boundary, in addition to consultations with IDEQ, IDFG, and NRCS. As such, Avista will focus erosion control mitigation measures for areas located along the Coeur d’Alene, St. Joe and St. Maries rivers. These mitigation measures will be conducted in cooperation with the other parties’ plans to implement erosion control measures over the first five-year work cycle of the License (2010 through 2014).

It is important to note that multiple erosion inventories and analyses are either currently underway, or are scheduled to begin in late 2010, as summarized in Table 2.

Table 2: Current and/or Upcoming Erosion Inventory and Assessments.

Party	Project Description	Start Date	End Date
Avista & Tribe	<u>Erosion Inventory & Assessment</u> : includes an inventory and assessment of all shoreline erosion occurring within the Coeur d’Alene Reservation (lower third of Coeur d’Alene Lake, the St. Joe River downstream of the City of St. Maries, and associated lateral lakes).	Feb. 2010	June 2011
IDEQ & Tribe	<u>LMP, 3-Year Nutrient Source Inventory</u> : includes a short term water quality sampling program at six locations within the St. Joe and St. Maries Rivers.	March 2010	March 2013
IDEQ	<u>LMP, River Bank Erosion and Prioritization Survey</u> : will include a survey of shoreline erosion occurring along the St. Joe River (upstream of the City of St. Maries) and along the lower St. Maries River.	June 2010	October 2010

As such, erosion control measures will be implemented by Avista and cooperating parties in the third year of the Plan (June 2011 to June 2012) to allow for more effective site identification and prioritization. Additionally, more money will accumulate into the Section III fund and Avista and the participating agencies will have a more thorough understanding of where the most serious shoreline erosion problems are occurring based upon the results of the three projects described in Table 2.

Avista and IDEQ will collaborate annually regarding those erosion control measures identified for implementation to be carried out in each subsequent year.

7.1 Year One: June 2009 to June 2010

1. Develop Water Quality Improvement and Erosion Control Plan

Avista developed the Water Quality Improvement Erosion Control Plan in consultation with IDEQ, IDFG, and USFWS within the first year of the effective date of the License.

7.2 Year Two: June 2010 to June 2011

1. On-going Prioritization of Erosion Control Sites

During the second year, Avista and participating agencies/land managers will continue to evaluate erosion sites and develop a list of several sites that receive a high prioritization ranking based upon the criteria established in Table 1.

To date, the lower Coeur d'Alene and St. Joe Rivers have received an initial evaluation identifying potential erosion control sites through the following independent studies:

- Lower Coeur d'Alene Riverbank Stabilization Prioritization, completed by IDEQ and KSS&WCD. The study provides a prioritization overlay in GIS format that can be used to help guide efforts to reduce erosion of Coeur d'Alene stream banks with high lead concentrations. Figure 2 displays the results of the IDEQ and KSS&WCD Lower Coeur d'Alene Riverbank Stabilization Prioritization.
- Earth Systems (Avista's Erosion Control Consultant) and representatives from IDEQ, IDFG, and the Tribe completed a preliminary prioritization of potential erosion sites observed along the shorelines of the St. Joe River, upstream of the City of St. Maries. The sites were evaluated and ranked with an estimated priority of: very high, high and moderate. Figure 3 illustrates the location of the potential erosion sites and Appendix B provides the site locations, a brief description of each site, and the estimated priority ranking for each site.

In addition, Avista and IDEQ will coordinate efforts to work with other entities to identify the following cost share potentials for river bank stabilization projects.

- IDEQ will identify potential cost share opportunities with private landowners, USDA Farm Bill Programs, and Avista for project sites along the lower St. Maries River and the St. Joe River (from St. Maries to St. Joe City).
- IDEQ will identify §319 grant cost share opportunities between KSS&WCD, NRCS, IDFG, and Avista on project sites owned by IDFG and located along the banks of the Coeur d'Alene river.

Avista, IDEQ, and participating agencies/land managers will identify several sites based upon the available studies and reach a consensus as to the specific erosion control

measures to be implemented at each of these prioritized sites for the time period spanning 2011 to 2014. This list of prioritized sites may be modified, through the on-going prioritization of erosion control sites, as new information becomes available.

2. St. Joe River Bank Erosion Survey

In addition to the IDEQ and Tribe's LMP 3-Year Nutrient Inventory of the St. Joe and St. Maries Rivers, IDEQ will be initiating on-the-ground inventories of river bank erosion and developing priority schemes for potential bank stabilization projects along the lower to mid portions of the St. Joe River and possibly sections of the St. Maries River. IDEQ anticipates this work to begin in the summer of 2010.

While the majority of this project will be funded through the LMP, IDEQ personnel has indicated a need for Avista funds to cover the cost of materials and supplies associated with this work. These funds will be provided through the erosion funds set aside by Section III.D of the Idaho WQC. The project Work Plan, which is yet to be developed, will identify any estimated funding to be provided by Avista.

3. Education and Awareness

Avista will participate in education and awareness programs which are led and coordinated by Agencies with regard to determining the best method(s) to increase public awareness of how to reduce bank erosion with minimal impact to downstream properties and maintain or improve fish habitat. This may include vegetation management combined with other appropriate methods. The targeted audience would consist of waterfront property owners, realtors, and other interested persons or groups.

These efforts will be coordinated by IDEQ with the broader goals of the LMP Objective Number 4, Increase Public Awareness of Lake Conditions and Influences on Water Quality. With regard to the erosion education component, the initial step will be to identify the appropriate audience, develop message points, and to identify the most effective media to deliver this information. Avista will provide financial support with erosion funds established by Section III.D of the ID WQC, to IDEQ as appropriate, for the implementation of the LMP's education and awareness efforts.

7.3 Year Three: June 2011 to June 2012

1. On-going Prioritization of Erosion Control Sites

During the third year, Avista and participating agencies/land managers will continue to evaluate the list of sites that receive a high prioritization ranking based upon the criteria established in Table 1. The list will be refined as new information becomes available, including results from the following studies which will have been completed by the third year of this Plan:

- IDEQ’s LMP, River Bank Erosion and Prioritization Survey which will include survey results of shoreline erosion occurring along the St. Joe River (upstream of the City of St. Maries) and along the lower St. Maries River.
- Avista and the Tribe’s Erosion Inventory & Assessment which will include an inventory and assessment of all shoreline erosion occurring within the Coeur d’Alene Reservation (lower third of Coeur d’Alene Lake, the St. Joe River downstream of the City of St. Maries, and associated lateral lakes).
- IDEQ’s identification of cost share opportunities with private landowners, USDA Farm Bill Programs, and Avista for project sites along the lower St. Maries River and the St. Joe River from St. Maries to St. Joe City.
- IDEQ’s identification of §319 grant cost share opportunities between KSS&WCD, NRCS, IDFG, and Avista on project sites owned by IDFG and located along the banks of the Coeur d’Alene river.
- Additional studies which have not been proposed or identified to date.

2. Shadowy St. Joe Wetland and Riparian Restoration Project

Avista has identified an area located along the St. Joe River in Section 13, T46N R1W, about 10 miles upstream of the city of St. Maries. The project is referred to as the Shadowy St. Joe, and consists of the restoration of a former log landing site into a self-sustaining wetland complex. The wetland project includes 62 acres of land owned by Avista and 62 acres of land owned by IDFG and is identified in Avista’s Wetland and Riparian Habitat Protection and Enhancement Plan, which is required by Section IV of the Idaho WQC. The Wetland and Riparian Habitat Protection and Enhancement Plan anticipates the Shadowy St. Joe project to be a multi-year project including several tasks, which will be implemented in partnership with IDEQ, IDFG, NRCS, and the US Forest Service.

In March of 2010 the shoreline along the Shadowy St. Joe site was evaluated in the field with Avista, IDEQ, IDFG, and the Tribe and was ranked as a very high priority site (Appendix B, Sites 345 to 348). The high priority ranking was based upon the following factors:

- The project is consistent with existing plans and has significant potential for water quality improvement.
- The project would have multiple partners, namely IDFG and the US Forest service, which could potentially providing significant non-Avista funds.
- Half of the project is owned by Avista with the remaining half publically owned.

While Avista will coordinate the implementation of erosion control measures with the restoration of the self-sustaining wetland complex, these resource improvements are

mutually exclusive and can be completed independent of each other. The erosion control implementation costs will be funded through the Avista funds established by Section III.D. for erosion control. The following tasks outline how the erosion control measures would be implemented for this project.

Task 1: Avista and IDEQ will select a qualified and available contractor to complete a site specific characterization and an analysis of erosion control measures for implementation at the Shadowy St. Joe project site which will include vegetation plantings with the potential to remove a concrete landing.

Task 2: The identified erosion control measures appropriate for the site will be presented to the involved agencies for consensus.

Task 3: Permit documents will be prepared and the contractor will design drawings and specifications.

Task 4: Contractor will implement the selected erosion control measures.

Task 5: Within 45 days of completion of the erosion control measures at the Shadowy St. Joe project site, the selected contractor will provide Avista with a Final Completion Report summarizing the erosion measures implemented. The Final Completion Report will then be incorporated into the first five-year Summary Report.

7.4 Year Four: June 2012 to June 2013

1. On-going Prioritization of Erosion Control Sites

During the fourth year, Avista, IDEQ and participating agencies/land managers will continue to evaluate the list of sites that receive a high prioritization ranking based upon the criteria established in Table 1. The list will be refined as new information becomes available, including results from the following studies which will have been completed by the fourth year of this Plan:

- Avista has identified the following four projects for potential wetland restoration implementation during the 2010 through 2014 timeframe as part of Section IV, of the ID WQC (Wetland and Riparian Habitat Protection and Enhancement): Robinson Creek Acquisition and Restoration; Mica Bay Wetland Restoration; Wolf Lodge Bay Wetland Restoration; and the Lower St. Maries River Floodplain Protection and Restoration. Avista, IDEQ, and participating agencies/land managers will evaluate each of these projects and determine whether there is a need for erosion control measures to be implemented. This evaluation effort is slated for year four due to the complicating factors associated with the wetland and riparian projects such as land acquisition, permit requirements, and approval

of wetland restoration plans. The implementation of any potential erosion control measures will be scheduled and incorporated into the Revised Plan encompassing years 2014 through 2017.

- Additional cost share opportunities, identified by IDEQ, with private landowners, USDA Farm Bill Programs, and Avista for project sites along the lower St. Maries River and the St. Joe River from St. Maries to St. Joe City;
- Additional cost share opportunities, identified by IDEQ's, of §319 grant cost share opportunities between KSS&WCD, NRCS, IDFG, and Avista on project sites owned by IDFG and located along Coeur d'Alene river banks; and
- Additional studies which have not been proposed or identified to date.

2. Implementation of erosion control measures at priority sites

Avista will begin implementing selected erosion control measures at prioritized erosion sites identified during the second and subsequent years as agreed upon by Avista, IDEQ and the participating agencies/land owners. Prior to implementation the following tasks will be completed:

Task 1: Avista and IDEQ will select a qualified and available contractor to complete a site specific characterization and an analysis of applicable erosion control measures.

Task 2: The identified erosion control measures appropriate for the site will be presented to the involved agencies for consensus.

Task 3: Permit documents will be prepared and the contractor will design drawings and specifications.

Task 4: Contractor will implement the selected erosion control measures.

Task 5: Within 45 days of completion of the erosion control measures at the project site, the selected contractor will provide Avista with a Final Completion Report summarizing the erosion measures implemented. The Final Completion Report will then be incorporated into the first five-year Summary Report.

7.5 Year Five: June 2013 to June 2014

1. On-going Prioritization of Erosion Control Sites

During the fifth year, Avista, IDEQ and participating agencies/land managers will continue to evaluate the list of sites that receive a high prioritization ranking based upon the criteria established in Table 1. The list will be refined as new information becomes available, including results from the following studies which will have been completed by the fifth year of this Plan:

- IDEQ and the Tribe's LMP, 3-Year Nutrient Source Inventory which will include results of the short term water quality sampling program at six locations within the St. Joe and St. Maries Rivers.
- Additional cost share opportunities, as identified by IDEQ, with private landowners, USDA Farm Bill Programs, and Avista for project sites along the lower St. Maries River and the St. Joe River from St. Maries to St. Joe City.
- Additional cost share opportunities, as identified by IDEQ's, of §319 grant cost share opportunities between KSS&WCD, NRCS, IDFG, and Avista on project sites owned by IDFG and located along the banks of the Coeur d'Alene river.
- Additional studies which have not been proposed or identified to date.

2. Implementation of erosion control measures at priority sites

Avista will continue the implementation of selected erosion control measures at prioritized erosion sites identified during the second and subsequent years as agreed upon by the participating agencies/land owners. Prior to implementation the following tasks will be completed:

Task 1: Avista and IDEQ will select a qualified and available contractor to complete a site specific characterization and an analysis of applicable erosion control measures.

Task 2: The identified erosion control measures appropriate for the site will be presented to the involved agencies for consensus.

Task 3: Permit documents will be prepared and the contractor will design drawings and specifications.

Task 4: Contractor will implement the selected erosion control measures.

Task 5: Within 45 days of completion of the erosion control measures at the project site, the selected contractor will provide Avista with a Final Completion Report summarizing the erosion measures implemented. The Final Completion Report will then be incorporated into the first five-year Summary Report.

3. Update and revise Plan to describe those measures to be implemented within the subsequent five years (2014 through 2018).

Measures to be implemented within the next five years (2014 through 2018) will incorporate priority sites based upon evaluation of results from the following inventories and assessments:

- IDEQ's and the KSS&WCD Lower Coeur d'Alene Riverbank Stabilization Prioritization.

- IDEQ and the Tribe's LMP, 3-year nutrient inventory study at six locations within the St. Joe and St. Maries Rivers.
- On-going site assessments and agreements for bank stabilization as identified by IDEQ, NRCS, IDFG and other conservation organizations.
- IDEQ's river bank erosion and prioritization study along the St. Joe River (upstream of the City of St. Maries) and along the lower St. Maries River.
- Avista's Erosion Inventory and Assessment of shoreline erosion occurring on Reservation lands.
- Wetland and riparian habitat protection and enhancement projects identified within the Coeur d'Alene Lake System.
- Any additional studies which have not been proposed or identified to date.

8.0 REFERENCES

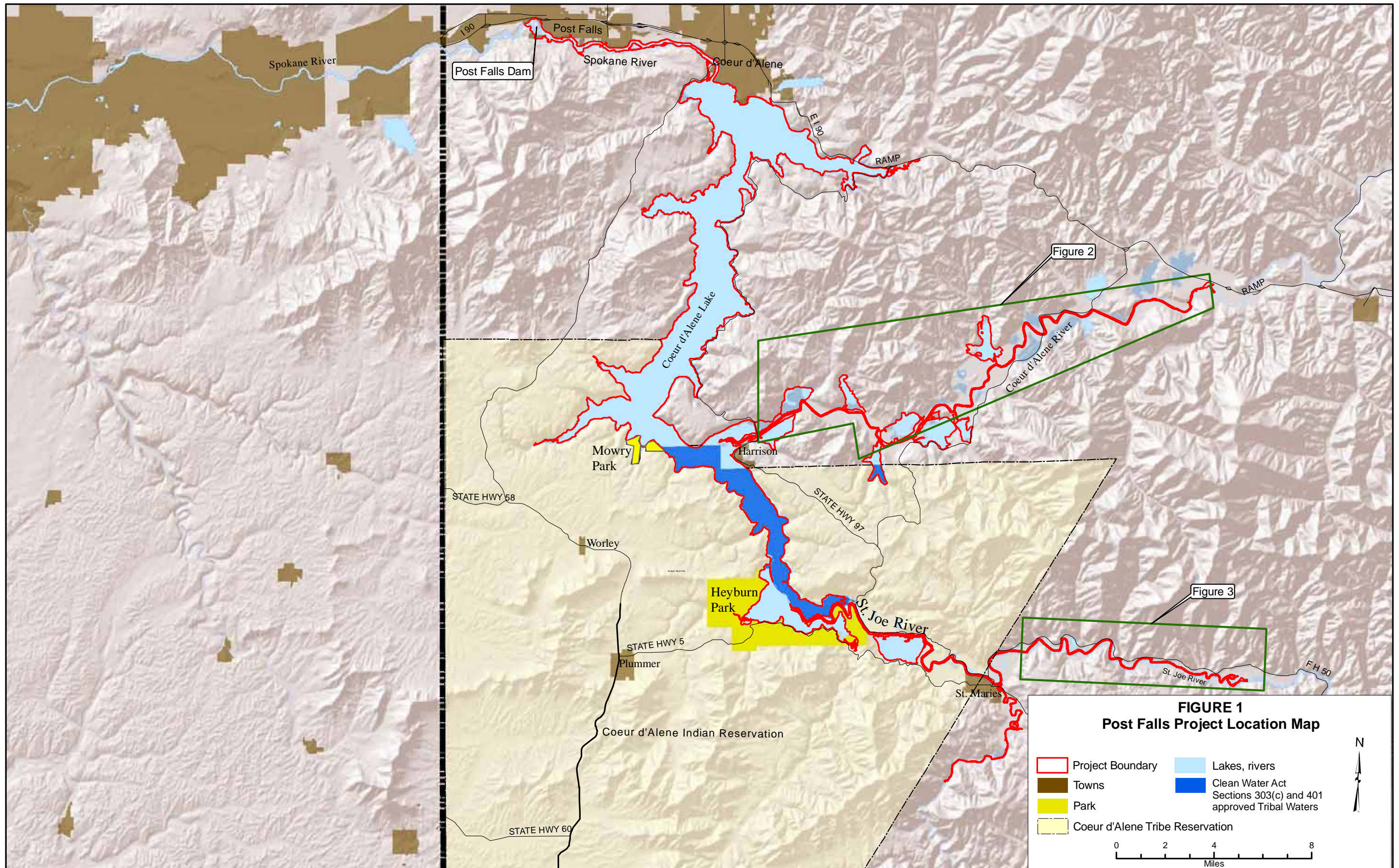
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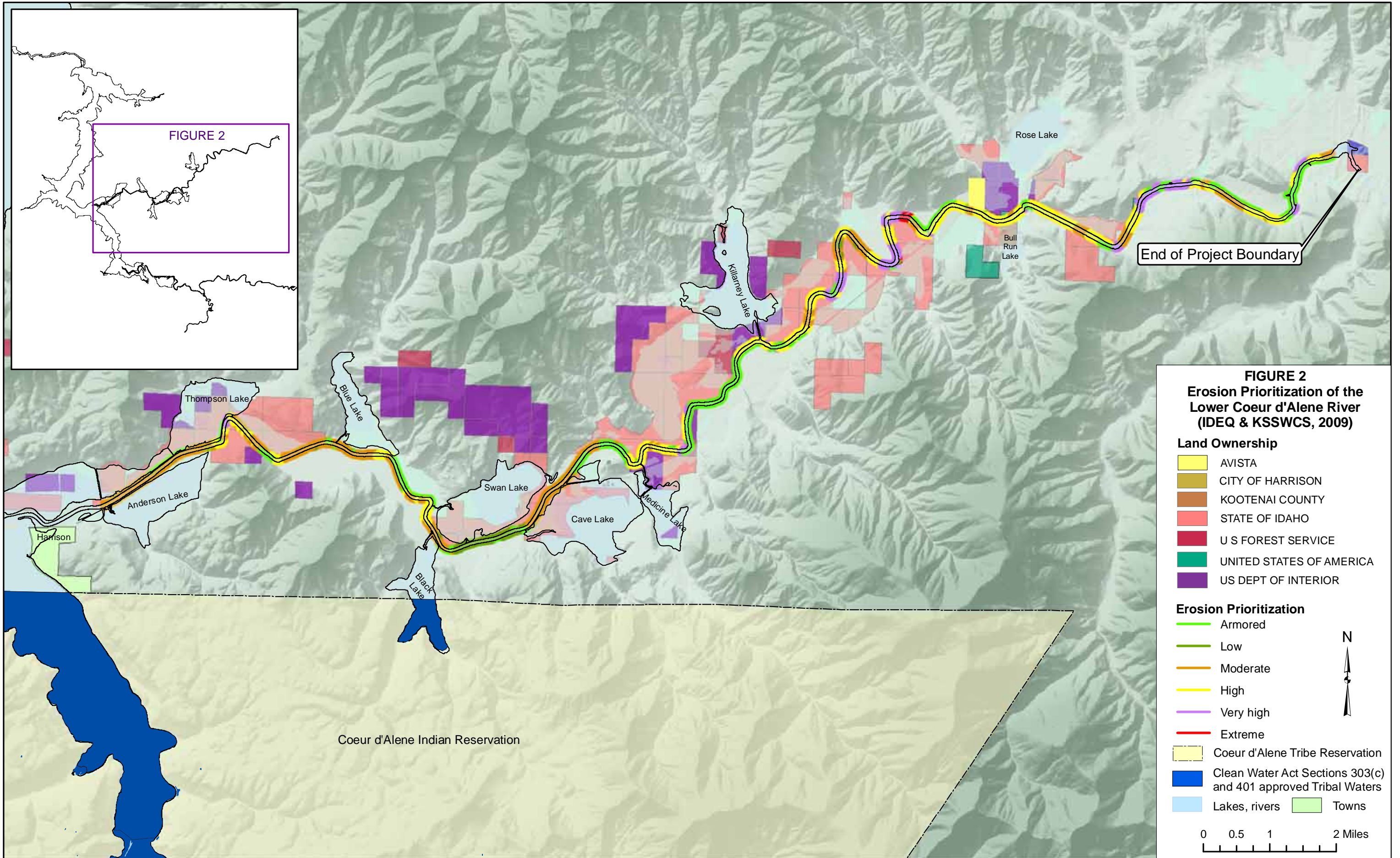
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FIGURES





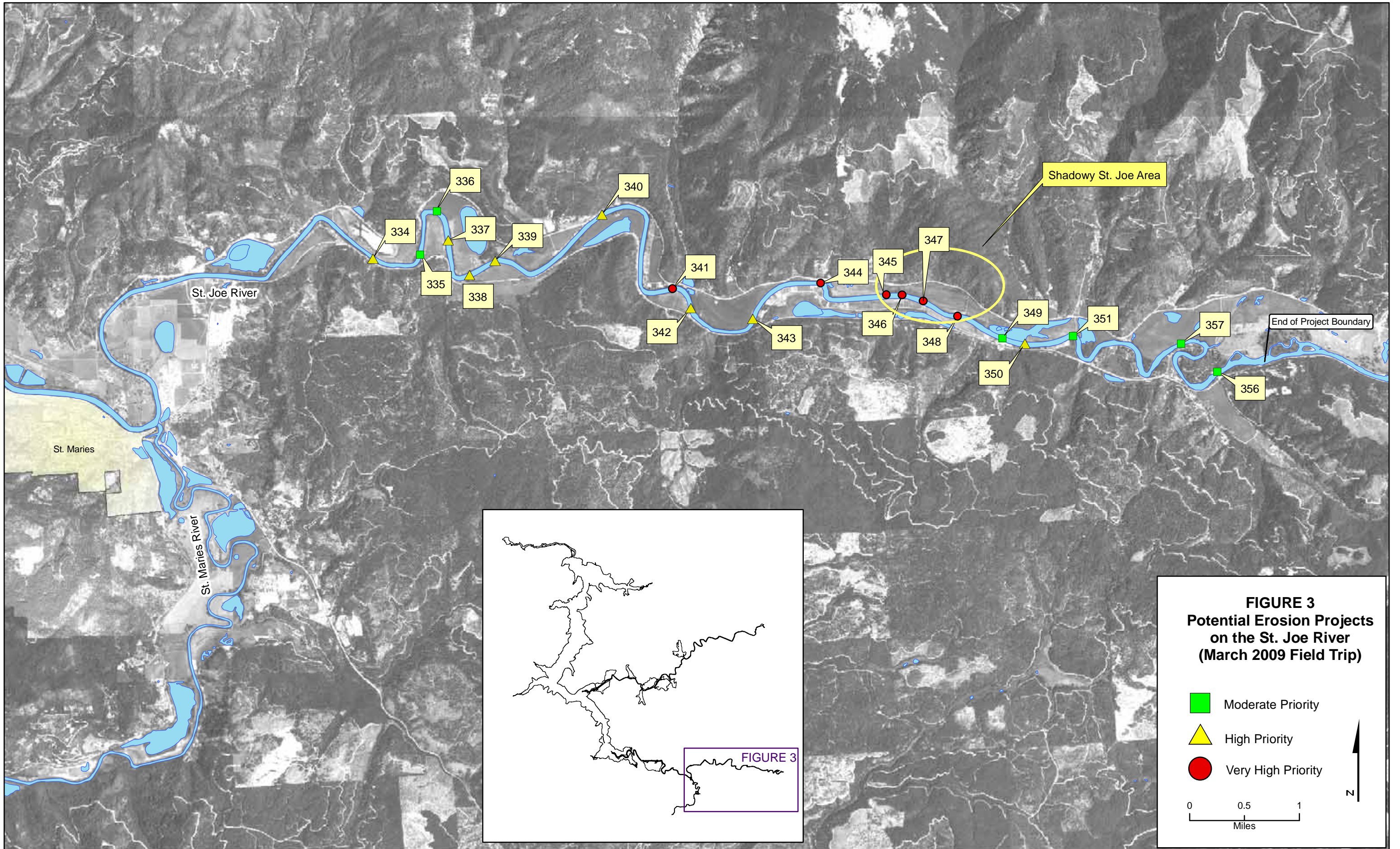


FIGURE 3
Potential Erosion Projects
on the St. Joe River
(March 2009 Field Trip)

- Moderate Priority
- ▲ High Priority
- Very High Priority

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APPENDICES

Appendix A
Agency Comments and Avista's Responses

Idaho Department of Environmental Quality (IDEQ)



April 20, 2010

Mr. Dan Redline, Regional Administrator
Idaho Department of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

**Subject: Spokane River Hydroelectric Project, FERC Project No. 2545
Draft Water Quality Improvement and Erosion Control Plan as Required by the
Spokane River License, Appendix A, Section III**

Dear Mr. Redline:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new license for the Spokane River Hydroelectric Project, FERC Project No. 2545 (License). Ordering Paragraph D of the License incorporated the *Idaho Department of Environmental Quality Certification under Section 401 of the Federal Clean Water Act (Issued on June 5, 2008 and filed on June 18, 2008)*. The conditions pertaining to the certification can be found in Appendix A of the License.

Article 401 of the License requires Avista to submit a Water Quality Improvement and Erosion Control Plan (Plan) as identified in Appendix A, Section III, to the Commission within one year of License issuance. The FERC License requires Avista to consult with the Idaho Department of Environmental Quality (IDEQ), Idaho Department of Fish and Game, and the U.S. Fish and Wildlife Service during the development of the enclosed Plan.

With this, we request your comments and recommendations on the Plan by **May 20, 2010**. After consultation, we are required to submit a IDEQ approved Plan to FERC for final approval. If you have any questions regarding this Plan, feel free to call me at (509) 495-4998. In my absence please call Meghan Lunney at (509) 495-4643.

Sincerely,

A handwritten signature in blue ink that reads "Speed Fitzhugh". The signature is written in a cursive, somewhat stylized font.

Elvin "Speed" Fitzhugh
Spokane River License Manager

Enclosure

C: Brian Helmich, IDFG
Rick Donaldson, USFWS

Idaho Department of Environmental Quality (IDEQ)

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From: Fitzhugh, Speed (Elvin)
Sent: Tuesday, May 18, 2010 1:35 PM
To: Daniel.Redline@deq.idaho.gov
Cc: Lunney, Meghan; Hirschberger, Cherie
Subject: RE: Consultation Letter and draft Idaho Water Quality Improvement and Erosion Control Plan

Dan,

Thanks for the comments, I appreciate the time and effort your staff went through to prepare them. I've passed this on to Meghan so she can go through them and incorporate as appropriate.

Thanks again,

Speed

From: Daniel.Redline@deq.idaho.gov [mailto:Daniel.Redline@deq.idaho.gov]
Sent: Tuesday, May 18, 2010 1:26 PM
To: Fitzhugh, Speed (Elvin)
Cc: bryan.helmich@idfg.idaho.gov; rick_donaldson@fws.gov; Glen.Rothrock@deq.idaho.gov
Subject: RE: Consultation Letter and draft Idaho Water Quality Improvement and Erosion Control Plan

Speed,

We have finished our review of the draft WQ and Erosion Control plan and have incorporated our changes and comments into the draft document using the track changes function. Let me know if this method of transmitting comments is acceptable.

The only main issue of disagreement is with section 7.4 of the draft plan. DEQ strongly supports the proposal to include the Shadowy St. Joe project into the erosion control plan as indicated in section 7.3.1, however we do not agree with the strategy of including and prioritizing other projects from the Wetland and Riparian Plan into the WQ and Erosion Control Plan. Based on our past experience working on the CDA and St. Joe rivers, we think that Avista will have plenty of erosion control projects to choose from without the need to include projects from the Wetland and Riparian Plan. Our comments in the draft document reflect that opinion.

One other issue that was identified was the need to better clarify the roles of DEQ and Avista on working with all the different agencies and entities that are currently involved in erosion control and stream bank stabilization on the CDA and St. Joe river systems. DEQ and the CDA Tribal LMP staff have developed good

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Idaho Department of Environmental Quality (IDEQ)

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relationships with the agency contacts over the past several years, and the LMP staff are ready to actively engage with those agencies and further develop partnerships for erosion control work. The draft plan does not clearly articulate the roles and responsibilities for that coordination effort. See our comments on section 7.2 with the paragraph that was added to emphasize the development of cost share partnerships. We recommend organizing a meeting with Avista, the CDA Tribe LMP coordinator and DEQ LMP coordinator to discuss this issue and work toward clarifying those coordination roles in the Erosion Control Plan. Please contact Glen Rothrock in our office to schedule a meeting date.

Thank you for the opportunity to provide input on the development of this work plan and we look forward to a successful completion of this busy planning phase and moving into the implementation phase in the near future. Let me know if you have any questions or comments. Thanks,

Dan Redline, Regional Administrator
Idaho Department of Environmental Quality
Coeur d'Alene Regional Office
Direct Line: 208-666-4621
Office: 208-769-1422, fax: 208-769-1404
email: daniel.redline@deq.idaho.gov

From: Fitzhugh, Speed (Elvin) [mailto:Speed.Fitzhugh@avistacorp.com]
Sent: Tuesday, April 20, 2010 1:38 PM
To: Daniel Redline
Cc: Helmich, Bryan; rick_donaldson@fws.gov
Subject: Consultation Letter and draft Idaho Water Quality Improvement and Erosion Control Plan

Dan,

I have attached the consultation cover letter and the draft Idaho Water Quality Improvement and Erosion Control Plan (Plan), as required in our Spokane River Project License, Appendix A, Section III, for your review. Please provide me with your comments and recommendations on the Plan, if you have any, by May 20, 2010. If you have any questions regarding the Plan, feel free to call me.

Thanks,

Speed

Elvin "Speed" Fitzhugh
Spokane River License Manager
Avista Utilities

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Idaho Department of Environmental Quality (IDEQ)

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(509)495-4998

The contents of this message may be privileged and confidential. Therefore, if this message has been received in error, please delete it without reading it. Your receipt of this message is not intended to waive any applicable privilege. Please do not disseminate this message without the permission of the author.

Idaho Department of Environmental Quality (IDEQ)

IDEQ Comments and Avista's Responses

IDEQ General Issue No 1:

The only main issue of disagreement is with section 7.4 of the draft plan. DEQ strongly supports the proposal to include the Shadowy St. Joe project into the erosion control plan as indicated in section 7.3.1, however we do not agree with the strategy of including and prioritizing other projects from the Wetland and Riparian Plan into the WQ and Erosion Control Plan. Based on our past experience working on the CDA and St. Joe rivers, we think that Avista will have plenty of erosion control projects to choose from without the need to include projects from the Wetland and Riparian Plan. Our comments in the draft document reflect that opinion.

Avista Response:

We agree that there will most likely be no shortage of erosion control projects available and have added Section 5.2 (Collaborative Parties & Project Identification) which clarifies the geographic areas that will be evaluated for potential stabilization projects and their potential cost share opportunities. However, without a more detailed evaluation of the erosion control urgency of all the potential sites (including the projects from the Wetland and Riparian Plan), we do not feel it is appropriate to exclude the wetland restoration sites from this Plan. As such, the four projects identified in the Wetland and Riparian Plan remain listed in Section 7.4, however are identified as potential projects. These sites, along with all other identified sites, will be evaluated based upon the prioritization and evaluation criteria identified in Table 1.

IDEQ General Issue No 2:

One other issue that was identified was the need to better clarify the roles of DEQ and Avista on working with all the different agencies and entities that are currently involved in erosion control and stream bank stabilization on the CDA and St. Joe river systems. DEQ and the CDA Tribal LMP staff have developed good relationships with the agency contacts over the past several years, and the LMP staff are ready to actively engage with those agencies and further develop partnerships for erosion control work. The draft plan does not clearly articulate the roles and responsibilities for that coordination effort. See our comments on section 7.2 with the paragraph that was added to emphasize the development of cost share partnerships. We recommend organizing a meeting with Avista, the CDA Tribe LMP coordinator and DEQ LMP coordinator to discuss this issue and work toward clarifying those coordination roles in the Erosion Control Plan. Please contact Glen Rothrock in our office to schedule a meeting date.

Avista Response:

We agree and have incorporated the IDEQ red-lined edits into Section 5.2, which clarifies the roles of Avista and IDEQ with regard to working with all the different agencies and entities that are currently involved in erosion control and stream bank stabilization on the Coeur d'Alene and St. Joe river systems.

Meghan Lunney, Aquatic Resource Specialist with Avista, met with Glen Rothrock (IDEQ) on May 28, 2010 to discuss IDEQ's comments and to provide clarification in the Plan regarding the

Idaho Department of Environmental Quality (IDEQ)

roles of the different agencies, entities, and land managers. Avista will also schedule a meeting with the Coeur d'Alene Tribe and IDEQ LMP coordinators to further discuss this issue.

IDEQ Comment No.1:

Avista may want to coordinate with the Basin Commission through the TLG or other appropriate committee.

Avista Response:

We agree and have modified Section 2.3 to incorporate coordination with the Basin Environmental Improvement Project Commission (BEIPC) including its technical arm, the Technical Leadership Group and any other appropriate committees with regard to erosion control efforts on the Coeur d'Alene River.

IDEQ Comment No. 2:

Need to better define this consultation process and the parties involved. Avoid confusion with the final consultation process that FERC requires for this plan that include IDFG and USFWS, but not DEQ.

Avista Response:

We agree and have added Section 5.2 to clarify the collaboration process and parties involved with the identification and prioritization of erosion control sites.

With regard to the formal consultation process, FERC requires this Plan be developed in consultation with IDFG and USFWS. After consultation, Avista is required to submit a IDEQ approved Plan to FERC for final approval.

IDEQ Comment No. 3:

Not all sites will need all of these characterization steps as some sites may already have some of this data available.

Avista Response:

We agree and have modified the text in Section 6.1 to indicate that the characterization steps identified will be used for new sites that do not have any existing information. We recognize that not all sites will need these characterizations as some may already have this type of information documented.

IDEQ Comment No. 4:

Does this refer to the prioritization table #1 or a rating developed by each of these independent studies?

Avista Response:

Section 7.2 has been revised to clarify that the on-going prioritization of erosion control sites refers to the prioritization and evaluation criteria developed in Table 1.

Idaho Department of Environmental Quality (IDEQ)

IDEQ Comment No. 5:

Does this also imply that we will need to develop a budget to implement these actions? Do we carve this out of the annual erosion control funding?

Avista Response:

Yes, Avista will provide financial support from the erosion fund established by Section III.D. of the ID WQC to IDEQ, as appropriately budgeted by IDEQ, in the implementation of the LMP's education and awareness efforts.

IDEQ Comment No. 6:

Need to clarify if these implementation costs will come out of the wetland or erosion control funding.

Avista Response:

Avista will provide financial support from the erosion fund established by Section III.D. of the ID WQC to implement erosion control measures at the Shadowy St. Joe and Riparian Restoration Site. This has been clarified in Section 7.3.

IDEQ Comment No. 7:

See comments on Table 1 regarding the change in priority ranking for Wetland projects.

Avista Response:

The specific reference to "protect/restore wetland or riparian areas" has been removed from Table 1, per your request.

IDEQ Comment No. 8:

There is likely no shortage of erosion control projects available, so we should not have to include the wetland restoration sites in the selection process.

Avista Response:

See response provided to General Issue No. 1.

IDEQ Comment No. 9:

Need to resolve changes to criteria listed in Table 1 before moving forward with including this section, 7.4.1. If we remove the Wetland and Riparian criteria, then this whole section would disappear and evaluation of other erosion projects could get moved into Year #3.

Avista Response:

Changes to the criteria in Table 1 have been resolved as indicated in the Response to Comment No. 7. A new task has been added to Year Four, On-going Prioritization of Erosion Control Sites. This is a rolling task, repeated in years 2, 3, 4, and 5 in order to incorporate any new information on erosion sites that may become available.

Idaho Department of Environmental Quality (IDEQ)

IDEQ Comment No.10:

This should be the first task in year 4, or moved to year 3 depending on outcome of resolution of Comment #9 above.

Avista Response:

Based upon the incorporation of IDEQ's comments, this task remains in year 4, and is now the second task under Section 7.4.



June 1, 2010

Mr. Dan Redline, Regional Administrator
Idaho Department of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

**Subject: Spokane River Hydroelectric Project, FERC Project No. 2545
Water Quality Improvement and Erosion Control Plan as Required by the
Spokane River License, Appendix A, Section III**

Dear Mr. Redline:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new license for the Spokane River Hydroelectric Project, FERC Project No. 2545 (License). Ordering Paragraph D of the License incorporated the *Idaho Department of Environmental Quality Certification under Section 401 of the Federal Clean Water Act (Issued on June 5, 2008 and filed on June 18, 2008)* (Certification). The conditions pertaining to the Certification can be found in Appendix A of the License.

The Certification states that within the first year of the effective date of the License, Avista shall submit a Water Quality Improvement and Erosion Control Plan (Plan) to the Idaho Department of Environmental Quality (IDEQ) for approval. In accordance with Article 401, Avista received and incorporated comments from IDEQ, Idaho Department of Fish and Game, and the U.S. Fish and Wildlife Service during the development of the enclosed Plan. Their comments, along with Avista's responses to them, are included in Appendix A of the Plan.

With this, we request your approval of the Plan by **June 14, 2010**. This will allow us to meet our License requirement of submitting an IDEQ approved Plan to FERC for final approval by June 18, 2010. If you have any questions regarding this Plan, feel free to call me at (509) 495-4998. In my absence please call Meghan Lunney at (509) 495-4643.

Sincerely,

Elvin "Speed" Fitzhugh
Spokane River License Manager

Enclosure

C: Brian Helmich, IDFG
Rick Donaldson, USFWS



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

2110 Ironwood Parkway • Coeur d'Alene, Idaho 83814 • (208) 769-1422

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

June 10, 2010

Elvin "Speed" Fitzhugh
Project Manager
Avista Utilities
PO Box 3727
Spokane, Washington 99220-3727

Subject: Spokane River Hydroelectric Project, FERC Project No. 2545 Water Quality Improvement and Erosion Control Plan as Required by the Spokane River License, Appendix A, Section III

Dear Mr. Fitzhugh:

On June 1, 2010, Avista requested approval of the June 1, 2010 version of the Water Quality Improvement and Erosion Control Plan, 2010 to 2014 (the Plan). The Idaho Department of Environmental Quality (DEQ) and the Idaho Department of Fish and Game have reviewed prior versions of the Plan and have provided comments and recommendations which have been satisfactorily incorporated.

The June 1, 2010 version of the Plan meets Idaho's Water Quality Certification requirements (III.A.1., III.A.2., and III.B..) pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended, 33 U.S.C. § 1341. DEQ approves the Plan as submitted by Avista.

Approval of the contents of this work plan by DEQ does not constitute approval under DEQ's 401 certification authority for any necessary federal permits needed to execute projects identified in the Plan. Similarly, DEQ has not evaluated proposed projects as they relate to the issuance of Idaho Department of Water Resources' or Idaho Department of Lands' permits.

If you have any questions regarding this approval, feel free to call me at (208) 769-1422

Sincerely,

A handwritten signature in blue ink, appearing to read "Dan Redline", is written over a large, light blue circular scribble.

Dan Redline
Regional Administrator

DR/fb

c: Brian Helmich, IDFG
Rick Donaldson, USFWS

United States Department of Fish and Wildlife (USFWS)



April 20, 2010

Rick Donaldson
U.S. Fish & Wildlife Service
11103 E. Montgomery Drive, Suite 2
Spokane, WA 99206

**Subject: Spokane River Hydroelectric Project, FERC Project No. 2545
Draft Water Quality Improvement and Erosion Control Plan as Required by the
Spokane River License, Appendix A, Section III**

Dear Mr. Donaldson:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new license for the Spokane River Hydroelectric Project, FERC Project No. 2545 (License). Ordering Paragraph D of the License incorporated the *Idaho Department of Environmental Quality Certification under Section 401 of the Federal Clean Water Act (Issued on June 5, 2008 and filed on June 18, 2008)*. The conditions pertaining to the certification can be found in Appendix A of the License.

Article 401 of the License requires Avista to submit a Water Quality Improvement and Erosion Control Plan (Plan) as identified in Appendix A, Section III, to the Commission within one year of License issuance. The FERC License requires Avista to consult with the Idaho Department of Environmental Quality (IDEQ), Idaho Department of Fish and Game, and the U.S. Fish and Wildlife Service during the development of the enclosed Plan.

With this, we request your comments and recommendations on the Plan by **May 20, 2010**. After consultation, we are required to submit a IDEQ approved Plan to FERC for final approval. If you have any questions regarding this Plan, feel free to call me at (509) 495-4998. In my absence please call Meghan Lunney at (509) 495-4643.

Sincerely,

A handwritten signature in blue ink that reads "Speed Fitzhugh".

Elvin "Speed" Fitzhugh
Spokane River License Manager

Enclosure

C: Brian Helmich, IDFG
Dan Redline, IDEQ

United States Department of Fish and Wildlife (USFWS)

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From: Lunney, Meghan
Sent: Tuesday, June 01, 2010 3:00 PM
To: Hirschberger, Cherie
Subject: FW: FWS comments on CdA Erosion Plan
Attachments: pic00193.gif

From: Rick_Donaldson@fws.gov [mailto:Rick_Donaldson@fws.gov]
Sent: Tuesday, May 25, 2010 3:50 PM
To: Fitzhugh, Speed (Elvin)
Cc: Helmich,Bryan; Lunney, Meghan; Bryon_Holt@fws.gov
Subject: FWS comments on CdA Erosion Plan

Speed -

Sorry in the delay getting back to you on the CdA Erosion Plan. We didnt have staff available to do a complete review and response (under letterhead) to meet the deadline, however we can offer the following comment:

Bank stablization approach - Lower St Joe and Coeur d'Alene Rivers (within Project Boundary). We agree with the NRCS "rock wedge and live stake planting" method for erosion control in these waters- - - i.e. those waters that are subject to seasonal changes in pool elevation of the Post Falls Project. Further, the Service discourages use of LWD and large riprap in lacustrine habitats (within Project boundary) because LWD and large riprap may provide habitat and cover for non-native piscivorous fish that prey on native salmonids such as bull trout and westslope cutthroat trout. In our opinion, Not using LWD and large riprap in these erosion projects is consistent with the NRCS wedge approach.

Thanks for the opportunity to comment on this Plan-

Rick

Rick Donaldson
Manager, Habitat Conservation
Northern Idaho Field Office
U.S. Fish & Wildlife Service
11103 E. Montgomery Drive
Spokane, WA 99212

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United States Department of Fish and Wildlife (USFWS)

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Phone: 509-893-8009

FAX : 509-891-6748

email: : rick_donaldson@fws.gov

▼ "Fitzhugh, Speed (Elvin)" <Speed.Fitzhugh@avistacorp.com>

"Fitzhugh, Speed
(Elvin)" <Speed.Fitzhugh@avistacorp.com>

To <Rick_Donaldson@fws.gov>, "Helmich, Bryan"
<bryan.helmich@idfg.idaho.gov>
cc "Lunney, Meghan" <Meghan.Lunney@avistacorp.com>

05/24/2010 07:24 AM

Subject RE: Spokane River Dams - FWS letters for FERC
418, 415, 408.

Rick and Bryan,

Were you planning to send comments on the CDA Erosion Plan? They were due May 20th. We have to get the plan back to IDEQ for their approval by June 1st and then to FERC. Hopefully IDEQ's (from Dan Redline) comments were sufficient for everyone. Please let me know.

Thanks,
Speed

Elvin "Speed" Fitzhugh
Spokane River License Manager
Avista Utilities
(509)495-4998

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United States Department of Fish and Wildlife (USFWS)

USFWS Comments and Avista's Responses

USFWS Comment No.1:

Sorry in the delay getting back to you on the CdA Erosion Plan. We didnt have staff available to do a complete review and response (under letterhead) to meet the deadline, however we can offer the following comment:

Bank stablization approach - Lower St Joe and Coeur d'Alene Rivers (within Project Boundary).

We agree with the NRCS "rock wedge and live stake planting" method for erosion control in these waters- - - i.e, those waters that are subject to seasonal changes in pool elevation of the Post Falls Project. Further, the Service discourages use of LWD and large riprap in lacustrine habitats (within Project boundary) because LWD and large riprap may provide habitat and cover for non-native piscivorous fish that prey on native salmonids such as bull trout and westslope cutthroat trout. In our opinion, Not using LWD and large riprap in these erosion projects is consistent with the NRCS wedge approach.

Avista Response:

Thank you for your input regarding approval of the NRCS "rock wedge and live stake planting" method for erosion control. We also have noted your opposition to the use of large woody debris (LWD) and large riprap in lacustrine habitats, within the Project boundary. We will incorporate your opposition of these materials into all erosion control implementation work completed under the guidance of this Plan.

USFWS Comment No.2:

Thanks for the opportunity to comment on this Plan Avista may want to coordinate with the Basin Commission through the TLG or other appropriate committee.

Avista Response:

We agree and have modified Section 2.3 to incorporate coordination with the Basin Environmental Improvement Project Commission (BEIPC) including its technical arm, the Technical Leadership Group and any other appropriate committees with regard to erosion control efforts on the Coeur d'Alene River.

Idaho Department of Fish and Game (IDFG)



April 20, 2010

Mr. Bryan Helmich
Idaho Department of Fish and Game
2885 W. Kathleen Ave.
Coeur d'Alene, ID 83815

**Subject: Spokane River Hydroelectric Project, FERC Project No. 2545
Draft Water Quality Improvement and Erosion Control Plan as Required by the
Spokane River License, Appendix A, Section III**

Dear Mr. Helmich:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new license for the Spokane River Hydroelectric Project, FERC Project No. 2545 (License). Ordering Paragraph D of the License incorporated the *Idaho Department of Environmental Quality Certification under Section 401 of the Federal Clean Water Act (Issued on June 5, 2008 and filed on June 18, 2008)*. The conditions pertaining to the certification can be found in Appendix A of the License.

Article 401 of the License requires Avista to submit a Water Quality Improvement and Erosion Control Plan (Plan) as identified in Appendix A, Section III, to the Commission within one year of License issuance. The FERC License requires Avista to consult with the Idaho Department of Environmental Quality (IDEQ), Idaho Department of Fish and Game, and the U.S. Fish and Wildlife Service during the development of the enclosed Plan.

With this, we request your comments and recommendations on the Plan by **May 20, 2010**. After consultation, we are required to submit a IDEQ approved Plan to FERC for final approval. If you have any questions regarding this Plan, feel free to call me at (509) 495-4998. In my absence please call Meghan Lunney at (509) 495-4643.

Sincerely,

A handwritten signature in blue ink that reads "Speed Fitzhugh".

Elvin "Speed" Fitzhugh
Spokane River License Manager

Enclosure

C: Dan Redline, IDEQ
Rick Donaldson, USFWS

Idaho Department of Fish and Game (IDFG)

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Subject: FW: Spokane River Dams - FWS letters for FERC
418, 415, 408.

Importance: High

From: Helmich, Bryan [mailto:bryan.helmich@idfg.idaho.gov]
Sent: Friday, May 28, 2010 2:19 PM
To: Fitzhugh, Speed (Elvin)
Subject: RE: Spokane River Dams - FWS letters for FERC 418, 415, 408.

Speed,

I reviewed the attached plan and discussed the key points with Chip Corsi some time ago. Please forgive my delayed response. The Department supports the plan as written and without modification.

Please feel free to comment if you need additional comment.

Bryan

From: Fitzhugh, Speed (Elvin) [mailto:Speed.Fitzhugh@avistacorp.com]
Sent: Monday, May 24, 2010 7:25 AM
To: Rick_Donaldson@fws.gov; Helmich, Bryan
Cc: Lunney, Meghan
Subject: RE: Spokane River Dams - FWS letters for FERC 418, 415, 408.
Importance: High

Rick and Bryan,

Were you planning to send comments on the CDA Erosion Plan? They were due May 20th. We have to get the plan back to IDEQ for their approval by June 1st and then to FERC. Hopefully IDEQ's (from Dan Redline) comments were sufficient for everyone. Please let me know.

Thanks,

Speed

Elvin "Speed" Fitzhugh
Spokane River License Manager
Avista Utilities
(509)495-4998

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Idaho Department of Fish and Game (IDFG)

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intended to waive any applicable privilege. Please do not disseminate this message without the permission of the author.

Idaho Department of Fish and Game (IDFG)

IDFG Comments and Avista's Responses

IDFG Comment No.1:

I reviewed the attached plan and discussed the key points with Chip Corsi some time ago. Please forgive my delayed response. The Department supports the plan as written and without modification.

Please feel free to comment if you need additional comment.

Avista Response:

Thank you for your support of the Plan, we look forward to working with you on the implementation of this Plan.

Appendix B
Potential Priority Project Areas on the St. Joe River

Appendix B

The following erosion sites located along the St. Joe River, upstream of the City of St. Maries, were identified on a field trip conducted in March 2010, with Earth Systems, IDEQ, IDFG, and the Tribe. The following table provides estimated priority ratings for each of the identified sites.

Site No.	Comments on Site	Latitude Longitude	Land Owner	Estimated Priority¹
334	Road Access, 8 to 10 ft of erosion	N47.33737 W116.51147	Private	H
335	Reach of residences with vegetation removed, 2007 flood eroded some areas by 6 ft. Needs vegetation, education, and an inventory of the whole reach	N47.33755 W116.50226	Private	M
336	Inside turn eroding from boat waves	N47.34305 W116.49884	Private	M
337	Cut in levee RB ² (looking downstream), eroding. Needs vegetation, investigate erosion at cuts	N47.33923 W116.49670	Private	H
338	RB erosion	N47.33451 W116.49290	Private	H
339	Inside turn on RB eroding from boat waves	N47.33616 W116.48781	Private	H
340	LB ³ (looking downstream) eroding	N47.34150 W116.46661	Private	H
341	Eroding inside turn of LB (City of St Maries backup water intake)	N47.33113 W116.45374	City/City easement	VH
342	RB heavy grazing impact, needs fence with vegetation and rock stabilization	N47.32849 W116.45038	Private	H
343	NRCS project site, needs additional vegetation	N47.32663 W116.43849	Private	H
344	Sites 345 to 348: Shadowy St Joe wetlands restoration area along the RB. LB is private land needs vegetation, education, and rock stabilization	N47.33075 W116.42496	IDFG	VH
345	The upstream portion lacks bank and riparian vegetation	N47.32872 W116.41231	IDFG	VH
346	Same as Site 345	N47.32858 W116.40933	IDFG	VH
347	Tributary will be relocated to original site, drainage ditches will be removed during Shadowy St. Joe wetland restoration project	N47.32761 W116.40529	IDFG	VH
348	Downstream (D/S) is Avista Site, remove fill from old landing; Upstream (U/S) is St Maries Cattle Co. w/two streams, needs vegetation and fencing	N47.32537 W116.39878	Avista D/S, Private U/S	VH & H
349	LB eroding	N47.32209 W116.39028	Private	M
350	Grazing, needs vegetation and fencing	N47.32126 W116.38609	Private	H
351	Lacks vegetation, both banks eroding	N47.32190 W116.37663	Private	M
356	Sharp meanders in river, high density homes w/banks eroding. Area has potential for channel shifting, investigate erosion at bridge abutments.	N47.31611 W116.34906	Private	M
357	Same as Site 356	N47.32009 W116.35575	Private	M

Appendix B

The following erosion sites located along the St. Joe River, upstream of the City of St. Maries, were identified on a field trip conducted in March 2010, with Earth Systems, IDEQ, IDFG, and the Tribe. The following table provides estimated priority ratings for each of the identified sites.

Notes:

- (1) Estimated Priority Rankings included the following: VH = Very High (high erosion control urgency and located on public lands and/or an easement); H = High (high erosion control urgency and is located land has a single private owner); and M = Moderate (moderate erosion control urgency and land has multiple private land owners).
- (2) RB = right bank
- (3) LB = left bank

Appendix C
FERC Order Modifying and Approving Water Quality
Improvement and Erosion Control Plan for the Post Falls
Development – Article 401



June 10, 2010

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
Washington, DC 20426

**Subject: Spokane River Project, FERC Project No. 2545
Submittal of the Water Quality Improvement and Erosion Control Plan as
Required by Article 401 of the Commission's June 18, 2009 Order**

Dear Secretary Bose:

On June 18, 2009 the Federal Energy Regulatory Commission (FERC) issued a new license for the Spokane River Hydroelectric Project, FERC Project No. 2545 (License). Ordering Paragraph D of the License incorporated the *Idaho Department of Environmental Quality Certification under Section 401 of the Federal Clean Water Act (Issued on June 5, 2008 and filed on June 19, 2008)*. The conditions pertaining to the certification can be found in Appendix A of the License.

The License requires Avista to submit an Idaho Department of Environmental Quality (IDEQ) approved Water Quality Improvement and Erosion Control Plan (Plan) to FERC within one year of License issuance. Article 401 of the License requires Avista to consult with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service as it developed the Plan. Copies of the agencies' comments and recommendations, and Avista's responses to them, are included in the Plan's Appendices.

With this, Avista is submitting the IDEQ approved Plan to FERC for approval. Upon approval Avista will begin implementing the Plan. If you have any questions regarding this filing, please feel free to contact me at (509) 495-4998.

Sincerely,

Elvin "Speed" Fitzhugh
Spokane River License Manager

Enclosure

cc: Heather Campbell, FERC
Dan Redline, IDEQ
Bryan Helmich, Idaho Department of Fish and Game
Rick Donaldson, U.S. Fish and Wildlife Service

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the **Water Quality Improvement and Erosion Control Plan** on the Idaho Department of Environmental Quality, Idaho Department of Fish and Game, and the U.S. Fish and Wildlife Service in compliance with Ordering Paragraph J of the Spokane River Project FERC License (P-2545).

Daniel Redline
Idaho Department of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, ID 83814
Daniel.Redline@deq.idaho.gov

Bryan Helmich
Idaho Department of Fish and Game
2885 W. Kathleen Avenue
Coeur d'Alene, ID 83815
Bryan.helmich@idfg.idaho.gov

Rick Donaldson
U.S. Fish and Wildlife Service
11103 E. Montgomery Drive, Suite 2
Spokane, WA 99206
Rick_Donaldson@fws.gov

Dated this 11 day of June, 2010

By: 
Cherie Hirschberger
Avista Corporation
1411 E. Mission Ave.
Spokane, WA 99202
(509) 495-4486
cherie.hirschberger@avistacorp.com

133 FERC ¶ 62,043
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Avista Corporation

Project No. 2545-128

ORDER MODIFYING AND APPROVING WATER QUALITY
IMPROVEMENT AND EROSION CONTROL PLAN FOR THE
POST FALLS DEVELOPMENT – ARTICLE 401

(Issued October 13, 2010)

1. On June 11, 2010, Avista Corporation (licensee) filed its Water Quality Improvement and Erosion Control Plan for the Post Falls Development of the Spokane River Hydroelectric Project (FERC Project No. 2545). The licensee filed its plan pursuant to Article 401 of the project license,¹ and condition III of Idaho Department of Environmental Quality's (IDEQ) 401 water quality certificate (WQC) issued for the project.² The Spokane River Hydroelectric Project is located on the Spokane River in Spokane, Lincoln, and Stevens Counties, Washington, and in Kootenai and Benewah Counties, Idaho.

LICENSE REQUIREMENTS

2. The project license and WQC, issued by the IDEQ, require the licensee to develop a Water Quality Improvement and Erosion Control Plan. The plan shall identify and prioritize actions to protect and improve water quality associated with the Post Falls Development. The plan shall include site-specific erosion control actions that could be implemented to reduce sedimentation, reduce nutrient loading, or improve water quality and protect beneficial uses.

3. The plan shall identify and describe measures to be implemented during the first five years following license issuance. Every five years after the new license becomes effective, and continuing for the term of the license, the licensee shall update and revise the plan to describe those measures to be implemented within the following five years.

¹ See Order Issuing New License and Approving Annual Charges for Use of Reservation Lands 127 FERC ¶ 61,265 (issued June 18, 2009).

² Issued on June 5, 2008, and attached as Appendix A to the project license.

The five year plans shall be submitted to IDEQ for approval. The licensee shall consult annually with IDEQ regarding those measures to be carried out within the year.

4. Every five years, the licensee shall prepare and submit to IDEQ a summary report documenting implementation of the measures described in the plan. The report shall be submitted to IDEQ, within six months of the end of each reporting period. The report shall summarize: the activities conducted under the plan during the preceding five years and the results achieved; the overall results achieved to date; and the general nature of the activities that will be implemented during the next five year period.

5. In addition to preparing the Water Quality Improvement and Erosion Control Plan in consultation with IDEQ, Article 401 requires the licensee to prepare the plan in consultation with Idaho Department of Fish and Game (IDFG) and the U.S. Fish and Wildlife Service (FWS). The licensee shall file the plan, for Commission approval, within one year of license issuance. The filing should include documentation of consultation with the IDEQ, IDFG, and FWS. If the licensee does not adopt an agency recommendation, the filing should include the licensee's reasons, based on project-specific information.

LICENSEE'S PLAN

6. The licensee's plan includes a description of the criteria that will be used to prioritize potential erosion control projects to be implemented under the plan. In addition, the plan identifies past, current, and future erosion control studies, which will be used to identify and select erosion control projects to be implemented. The licensee also describes the process and identifies parties to collaborate with during the implementation of the plan.

7. The plan describes a general approach to site characterization, which will be performed at sites selected for erosion control projects. In addition, the licensee lists many standard methods, which will be used to guide the design of the erosion control measures to be implemented at the chosen sites. Many of the potential erosion control methods are from the Natural Resources Conservation Service (NRCS) and include: rock weirs; bioengineering; dumped rock riprap; stream barbs; and incorporation of large wood into engineered structures. The licensee states that the NRCS has completed a large amount of erosion control projects along the St. Joe and Coeur d'Alene Rivers and that the NRCS's method of rock wedge with live stake plantings will most likely be utilized as the standard approach for erosion control projects under the plan.

8. The proposed plan includes a description of the activities which will be carried out during each of the first five years (2009-2014). Generally, the following activities will continue throughout the five year period on an ongoing basis: identification and prioritization of erosion control project sites; continuation of erosion control surveys and studies; and implementation of specific erosion control projects.

9. Generally, the first two years of the plan would include continuing surveys and studies to identify sites. In the third year the licensee, in cooperation with resource agencies, would implement erosion control measures at the Shadowy St. Joe project. The Shadowy St. Joe is a wetland restoration project on the St. Joe River which has been identified by the licensee and the resource agencies as a very high priority site for erosion control activities. In the fourth and fifth years, the licensee and collaborating parties would continue to identify, prioritize, and implement erosion control projects. Also, in the fifth year the licensee would revise the plan to include those measures to be implemented in the next five year cycle (2014-2019).

10. The licensee's plan includes preparing a summary report every five years, as required by the project license. The licensee states that the reports will be submitted to IDEQ and the Commission by December 1, 2014 (six months after the end of the first five year cycle). In addition, the licensee proposes to update the plan every five years as required by the project license. The next plan would be submitted to IDEQ by June 1, 2014, for review and approval and then the final plan would be filed for Commission approval. The licensee states that it will consult annually with IDEQ regarding implementation of the plan.

COMMENTS AND CONSULTATION

11. The licensee's plan includes documentation of consultation with IDEQ, IDFG, and FWS. One of IDEQ's comments regarding the plan is that it does not support including projects from the Wetland and Riparian Protection and Habitat Enhancement Plan in the Water Quality Improvement and Erosion Control Plan. Although IDEQ supports the inclusion of the Shadowy St. Joe project, it feels that there are sufficient other erosion control projects such that the licensee does not need to use any other projects from the Wetland and Riparian Protection Plan. The licensee responds by stating that it agrees that there will most likely be no shortage of erosion control projects available, but states that sites in the Wetland and Riparian Protection Plan (along with all identified sites) will be evaluated and prioritized as potential erosion control projects.

12. In addition, IDEQ expressed concerns regarding the roles of IDEQ, the licensee, and all the different agencies and entities that are currently involved in erosion control and stream bank stabilization on the project river systems. The licensee addressed IDEQ's concern in section 5.2 of the plan which lists many of the entities and includes the licensee's commitment to work with those entities in the implementation of the plan.

13. In its comments on the plan, FWS states that it agrees with the licensee's use of NRCS's rock wedge and live plantings method for erosion control projects under the plan. The FWS also states that it discourages the use of large woody debris and large riprap as erosion control measures because they may provide habitat and cover for non-native piscivorous fish that prey on native salmonids. The licensee responds by stating

that it “will incorporate the FWS’s opposition into all erosion control work completed under the plan.”

DISCUSSION

14. The licensee’s response to the FWS’s concern is vague and does not clarify whether large woody debris and large riprap may be used as erosion control measures under the plan. The licensee does not identify under what circumstances, if any, it may consider the use of these materials, nor does it commit to avoiding their use. However, the plan does state that rock wedge and live plantings would likely be the standard erosion control method used under the plan. In order to address the FWS’s concern, if the licensee (in consultation with appropriate entities) identifies large woody debris or large riprap as the preferred erosion control method at any site under the plan, the licensee should consult with the FWS prior to implementation of those methods. The licensee should include documentation of the consultation in the five year reports.

15. The IDEQ raised concerns regarding the inclusion of the same sites in both the erosion control and wetland protection plans. The IDEQ also raised concerns regarding the coordination of erosion control efforts between the licensee, IDEQ, and the many other agencies that are also involved in erosion control efforts in the project area.

16. In order to ensure that IDEQ, IDFG, FWS, and other relevant entities are included in ongoing discussions and decisions regarding site selection and implementation of the plan, Commission staff considered requiring the licensee to submit annual implementation reports which would document ongoing consultation and implementation of the plan. However, Commission staff also does not want to burden the implementation process with additional reporting requirements if they are not necessary. In its plan, the licensee makes a commitment to consult and work collaboratively with numerous agencies and entities, including IDEQ, IDFG and FWS, during the implementation of the plan. In addition, the five year summary reports and new five year plans should include documentation of consultation and will provide the resource agencies the opportunity to comment and make suggestions to improve the consultation process if it is needed.

17. The licensee proposes to submit new five year plans to IDEQ by June 1 (every five years starting in 2014) for review and approval, and then file the plans for Commission approval. In addition, the licensee proposes to submit five year reports to IDEQ and the Commission by December 1 (every five years starting in 2014). The licensee’s proposal does not include submitting the five year reports and plans to IDFG or FWS. In addition, under the proposed schedule, the resource agencies and the Commission would not have reviewed the five year report when reviewing or acting on the new five year plan. In order to allow IDFG and FWS the opportunity to review and comment on the five year summary reports and five year plans, the licensee should submit five year summary reports and plans to these agencies as well as IDEQ. In addition, in order to take into account the history of plan implementation during the

previous five years, it would be useful for the resource agencies and the Commission to review the five year report prior to, or during, their review of the next five year plan.

18. Because implementation of the plan will occur on a continuous basis over the five year period, and the licensee will be consulting regularly with the resource agencies and other appropriate entities, the licensee should be able to compile the five year reports and submit them to the resource agencies at the end of the five year period (by June 1). At the same time, the licensee should also submit the new five year plan for IDEQ approval and for IDFG and FWS review and comment. By email communication with Commission staff, the licensee and IDEQ agree that a simultaneous filing of the five year reports and new five year plans (by June 1 every five years) would better facilitate the planning and review process.

19. The agencies should be allowed a minimum of 30 days to review and comment prior to the licensee filing the final reports and plans with the Commission by August 1. The final reports and plans should include copies of any comments received from the agencies and the licensee's response to those comments. If the licensee does not adopt an agency recommendation, the filing should include the licensee's reasons, based on project specific information. In addition, the Commission should reserve the right to modify the Water Quality Improvement and Erosion Control Plan in order to meet the objectives of the plan and ensure compliance with license requirements.

20. The licensee's Water Quality Improvement and Erosion Control Plan, as modified, meets the requirements of Article 401 and Condition III of IDEQ's water quality certificate for the project, and should be approved.

The Director orders:

(A) Avista Corporation's (licensee) Water Quality Improvement and Erosion Control Plan for the Post Falls Development, filed June 11, 2010, under Article 401 of the license and Condition III of Idaho's water quality certificate for the Spokane River Hydroelectric Project (FERC No. 2545), as modified by paragraphs (B) through (D), is approved.

(B) If the licensee (in consultation with appropriate entities) identifies large woody debris or large riprap as the preferred erosion control method at any site under the plan, the licensee shall consult with the U.S. Fish and Wildlife Service prior to the implementation of those methods. The licensee shall include documentation of the consultation with the resource agencies on the use of large woody debris or large riprap in the five year reports.

(C) The licensee shall submit five year reports to the Idaho Department of Environmental Quality (IDEQ), Idaho Department of Fish and Game (IDFG), and U.S. Fish and Wildlife Service (FWS) by June 1 starting in 2014 and then every five years

thereafter. At the same time, the licensee shall also submit the new five year plan to IDEQ for approval and to IDFG and FWS for review and comment prior to filing the five year plans for Commission approval. The agencies shall be allowed a minimum of 30 days to review the final reports and plans. The final reports and plans shall be filed with the Commission by August 1 starting in 2014 and every five years thereafter. The final reports and plans shall include copies of any comments received from the agencies and the licensee's response to those comments. If the licensee does not adopt an agency recommendation, the filing shall include the licensee's reasons, based on project specific information.

(D) The Commission reserves the right to modify the Water Quality Improvement and Erosion Control Plan in order to meet the objectives of the plan and ensure compliance with license requirements.

(E) The licensee shall file any document required by this order with the Secretary of the Commission. Filings may be submitted electronically via the Internet, see 18 CFR 385.2001 (a)(1)(iii) and the instructions on the Commission's web site under the "e-filing" link. The Commission strongly encourages electronic filings. In lieu of electronic filing, an original and eight copies of all documents may be mailed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, Mail Code: DHAC, PJ-12.3, 888 First Street, N.E., Washington, D.C. 20426.

(F) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.

Steve Hocking
Chief, Biological Resources Branch
Division of Hydropower Administration
and Compliance