December 3, 2010

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

Re: Rocky Reach Hydroelectric Project, FERC No. 2145
Request for Approval of “Adult Lamprey Upstream Passage Improvement” Design Drawings and
Specifications per License Article 401(b) and Article 5(4) of Appendix B

Dear Secretary Bose and Deputy Secretary Davis:

The Public Utility District No. 1 of Chelan County, Washington (Chelan PUD) hereby files for the
Federal Energy Regulatory Commission’s (Commission) approval of the design drawings and
specifications for construction of the “Adult Lamprey Upstream Passage Improvement” implementation
measure as required in the License1 for the Rocky Reach Hydroelectric Project No. 2145 (Project).

Proposed Work
In accordance with License Article 401(b) and Article 5(4) of Appendix B, Chelan PUD intends to
modify the Project fishway to improve adult lamprey upstream passage as recommended in Section 5 of
the Pacific Lamprey Upstream Passage Modifications Literature Review and Analysis and
Recommendation for Passage Improvements in the Rocky Reach Fishway.2 The proposed work includes
the fabrication and installation of aluminum ramps and plates. Ramps will be installed at the perched
orifices located in the upper fish ladder. Plating will be installed along the fishway walls over the
diffusion grating in the bifurcation pool and left powerhouse fishway entrance. The plating around
diffuser grating in these lower sections of the fishway is a relatively low cost, high benefit modification
that may reduce drop back and facilitate successful passage further upstream in the fishway for a
relatively large number of fish passing the Project. The estimated construction cost is $85,000.

Chelan PUD is submitting with this letter as Enclosure I, an original and one copy each of the items listed
below. One of those copies will be a courtesy copy to the Director, Division of Dam Safety and
Inspections. Additionally, one copy will be filed with the Commission’s Portland Regional office by copy
of this letter. A Water Quality Protection Plan will not be included within Enclosure I. Instead, the
contractor awarded the work will be required to provide a water quality prevention plan subject to Chelan
PUD approval.

1 126 FERC ¶ 61,138
• Design drawings and specifications to be used for the proposed construction.
• Quality Control Inspection Plan (QCIP)
• Temporary Construction Emergency Action Plan (TCEAP)

We would appreciate any comments you may have as soon as practicable, as it would be helpful in our efforts to maintain the overall project schedule, which is to begin installation by February 2011.

The material under Enclosure I meets the Critical Energy Infrastructure Information requirements under 18 CFR 388.113c. Chelan PUD requests the Commission to not release this information to the public. The cover letter and the remaining enclosures are considered public.

Consultation
The Rocky Reach Fish Forum met on October 28, 2010 to review and approve the proposed modifications for improving adult Pacific lamprey passage to be implemented during the 2010-2011 Rocky Reach fishway winter maintenance period. The minutes for this meeting are included to document Chelan PUD’s consultation with the appropriate agencies and Tribes for implementing these modifications (see Enclosure II).

Accordingly, Chelan PUD respectfully requests your approval on the proposed design drawings and specifications for the “Adult Lamprey Upstream Passage Improvement” implementation measures.

Please contact me if you have any questions or require additional information.

Sincerely,

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

Enclosure I: Contract plans and specifications
Enclosure II: Rocky Reach Fish Forum Meeting Minutes, draft, dated October 28, 2010

cc: Honorable Kimberly D. Bose, Commission (two copies of design drawings, with one copy as a courtesy copy to the Director of Division of Dam Safety & Inspections)

Patrick Regan, Commission Portland Regional Office (one copy of letter and design drawings)
ENCLOSURE I:

DESIGN DRAWINGS AND SPECIFICATIONS
Members of the public interested in requesting CEII classified materials may contact Chelan PUD’s public information officer for more information.

Public Information Officer
327 North Wenatchee Avenue
Wenatchee, WA 98801
(509) 663-8121
QUALITY CONTROL INSPECTION PLAN
ROCKY REACH FISHWAY MODIFICATIONS FOR IMPROVED LAMPREY PASSAGE – PHASE I

Inspection Criteria

Criteria for evaluating the quality of work under the Contract are contained in the specifications, drawings and other contract documents. The following items will be completed to make effective use of the contract documents.

- Prior to the start of work at the site, the Construction Manager and inspectors (Construction Team) shall take the time to become familiar with the contract documents.
- The Construction Team shall review relevant portions of the documents as the work progresses.
- The Engineer shall assure that the Construction Team receives copies of any revisions to the contract documents in a timely manner and shall discuss the revisions to assure a common understanding of them.
- The Engineer shall oversee the Construction Team and assure that the quality of work meets the expectations shown in the contract documents.

Contractor Operations

The Contractor is responsible for choosing equipment and methods adequate to perform the work specified in the contract documents and for actually achieving the required results. For this reason, the Construction Team should avoid direction or control of the Contractor's operations. The Construction Team and Engineer are responsible for verifying that the contract documents are being followed, the required results are being/have been achieved, and there is good documentation.

QCIP Operations

The Construction Team is chiefly responsible for inspecting the Contractor's work to verify that it meets the requirements of the contract documents. This will require the Construction Team to:

- be familiar with the contract documents, including the technical specifications and drawings
- ensure all work occurs only after the Contractor’s submittal of an adequate Water Quality Protection Plan.
- be present at key times to verify and approve items as they come up, e.g. the location and orientation at which drilling equipment is set up prior to the start of drilling; all tolerances and offsets meet the specifications to assure no fish injuries
- be present to observe and document progress of the work as outlined below, and
- understand the intent of the drawings and specifications as a basis for exercising judgement, as appropriate, during the work.

The Construction Manager shall notify the Contractor immediately upon discovery of any item of work, completed or in progress, which does not meet requirements of the contract documents.

If conditions are encountered which require redesign or substantial modification of the work, the Construction Manager shall contact the Engineer for guidance. The contact shall be made in a timely manner to avoid or minimize delay of the work.
If any member of the Construction Team observes work being performed by the Contractor in such a way that it could negatively impact the safety of the dam or cause significant damage to the structure, the Construction Manager shall immediately notify the Contractor. If the problem is not addressed by the Contractor in a timely manner, the Construction Manager shall issue an order to the Contractor to stop work until the apparent problem is resolved. The Construction Manager shall then immediately notify the Engineer so that the problem can be addressed in a timely manner.

The Construction Manager also is present to serve as the interface between the Contractor and the Owner's other personnel on site. For this purpose, the Construction Manager will be present at all times when the Contractor is working on the site and shall ensure full and immediate communications with the Control Room Operators and Construction Manager are established, regularly assured, and maintained at all times.

Project Personnel

Personnel responsible for quality assurance at the project include the Project Inspectors and Construction Manager. Most duties of inspection and interfacing between the Contractor and Owner will be handled by the Inspector. When engineering or supervisory support is needed, the Construction Manager will contact the Project Engineer. If the Project Engineer is unavailable, the Construction Manager will call the Project Manager.

Project/Construction Manager: Justin Fletcher, office (509)661-4386, cell 264-1162
Project engineer: Justin Fletcher, office (509)661-4386, cell 264-1162
Alternate engineer: Bill Christman, office 661-4283, home 662-8125, cell phone (670-0101)
On-site Inspector: TBD

Documentation

The Inspector is responsible to maintain certain records as the construction progresses. The types of documentation are outlined below, and sample forms are attached, as appropriate.

1. Daily inspection report: This report is intended to note work progress, site conditions and other relevant items. A report shall be filled out for each shift worked.

2. Nonconformance report: The purpose of this form is to document work that does not conform to the contract documents and the resolution of the nonconformance. The Inspector shall fill out a nonconformance report for any work observed that is not in compliance with the contract documents.

3. Environmental deficiency report: The purpose of this form is to document any observed violations of environmental requirements of the contract documents, and their resolution.
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Inspector/Date:
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**Date/time:**

**Description:**

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**Reference Documents**

**Spec. Section:**

**Drawing:**

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**Please correct the above deficiency by:**

**Disposition:**

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**Sign and return this form when the deficiency is corrected.**

signature        date
In accordance with the Contract Drawings and Specifications for the Rocky Reach Fishway Modifications for Improved Lamprey Passage – Phase I project, dated November 29, 2010, Chelan County Public Utility District (District) will be installing aluminum ramps and plating within the Rocky Reach fishway including mobilization, demobilization, care of water, anchor bolt installation and required hardware and materials. In accordance with the FERC's regulations, the District has prepared this Temporary Construction Emergency Action Plan (TCEAP) for the construction work. This TCEAP is for alerting construction workers and other supervisory personnel in the immediate vicinity of the project to a change in river conditions, Plant Operations, emergency situation, or any other occurrence that may threaten safety.

1.0 PROPOSED IMPROVEMENTS

The Rocky Reach Dam’s fishway utilizes attraction water that is introduced into the fishway system through gratings (diffusion chambers) in the floor of the fishway channels, quantity being controlled by sluice gates with motor-operated gate stands. To improve lamprey passage over the diffusion chambers and at perched orifices, modifications will be implemented in the center dam fishway area and upper fish ladder.

2.0 DESCRIPTION OF PROPOSED CONSTRUCTION ACTIVITIES

2.1 Aluminum Plates

The bifurcation pool and left powerhouse entrance of the Rocky Reach fishway will be outfitted with 18 inch wide aluminum plates attached to the grating and fishway concrete wall along the exterior of the diffusion chambers (see attached design drawings).

2.2 Aluminum Ramps

Baffles in the upper fish ladder utilize perched orifices for fish passage and will
be outfitted with aluminum ramps. The aluminum ramps will be installed downstream of the orifices and sloped to match the orifice chamfer (see attached design drawings).

2.3 **Construction**

The aluminum plating and ramp installation will be performed by a Contractor. The fishway will be dewatered during construction; therefore all installation work will be performed in the “dry”.

Safety and personal protective equipment will be required by the Contractor’s crew. All Contractor employees and other personnel shall be equipped with and trained in the use of appropriate personal protective equipment (e.g. fall restraint, life vests).

2.4 **Site Access**

Access to the work will be allowed by ladders into the upper fish ladder and center dam fishway.

Work will be performed so as to not deleteriously affect emergency access and/or normal operations.

2.5 **Construction Schedule**

Construction is scheduled to occur from January through February, 2011. Approximate dates for each phase of construction are as follows:

1) Project design completion November 2010
3) Fabricate Plates & Ramps January 2011
5) Install Plates & Ramps February 2011
6) Site demobilization February 2011

3.0 **SAFETY PRECAUTIONS AND EMERGENCY ACTION PLAN**

Safety precautions being proposed to protect those individuals working at the construction site during the construction period include:
• In case of an emergency, the District’s inspector will be responsible for immediately notifying the Rocky Reach Control Room at (509) 661-6000.

• A specific individual shall be designated and made responsible for coordinating the safety program and rescue operations.

• Comply with other District, State, or Federal OSHA-required equipment, or any equipment or procedures which will enhance and improve the overall safety of the District’s personnel.

• The work force will be alerted to any unusual and/or unexpected rises in forebay and tailwater elevation by a radio communication system.

• A crane or similar equipment with a manbasket and qualified operator shall be standing by for rapid removal of construction workers during an emergency.

• Any construction personnel working around water will be required to wear life jackets.

• All construction personnel will be required to comply with OSHA Regulations when working adjacent to the water.

• All workers will attend a Contractor Safety Orientation prior to starting work.

Construction personnel will be required to hold informational meetings, prior to initiating any construction activity and periodically thereafter, to inform workers of the actions to be followed should an emergency situation occur. The workers will be instructed to exit the work area via a designated access point and will be informed of the "safe areas". Any new workers joining the crew after construction begins will be given the same instructions prior to their starting work.

In case of an emergency, the District’s inspector will be responsible for immediately notifying the Rocky Reach Control Room at (509) 661-6000. Contact with the Control Room in the event of an emergency will trigger use of the regular Emergency Action Plan (EAP) of the Rocky Reach Project where it is deemed appropriate by Rocky Reach operators. The inspector will have the telephone numbers of key emergency response personnel to be contacted and will be responsible for contacting them in the event of an emergency.
In the event of an emergency during construction, the District will be responsible for notifying:

Mr. Patrick Regan  
FERC Portland Regional Office  
(503) 552-2741

Or

Mr. Edward Perez  
FERC Portland Regional Office  
(503) 552-2750
ENCLOSURE II:

ROCKY REACH FISH FORUM
MEETING MINUTES
**Rocky Reach Fish Forum Draft**  
**Meeting Minutes**

These are draft meeting minutes and have not yet been reviewed for accuracy by meeting participants. May contain errors.

**Call in number: (509) 661-4844, Password is 4000.**

<table>
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<tr>
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<th>Jeff Osborn, Chelan PUD</th>
<th>Type of meeting:</th>
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**Representatives**

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<td>Glesne, Reed</td>
<td>NPS</td>
<td>(360) 856-5700 x369</td>
<td><a href="mailto:Reed_Glesne@nps.gov">Reed_Glesne@nps.gov</a></td>
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<tr>
<td>Harris, Jim</td>
<td>WA-Parks</td>
<td>(509) 665-4315</td>
<td><a href="mailto:jim.harris@parks.wa.gov">jim.harris@parks.wa.gov</a></td>
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<td>Huber, Bob</td>
<td>Alcoa</td>
<td>(509) 664-2193</td>
<td><a href="mailto:bob.huber@alcoa.com">bob.huber@alcoa.com</a></td>
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<tr>
<td>Irle, Pat</td>
<td>Ecology</td>
<td>(509) 454-7864</td>
<td><a href="mailto:pirl461@ecy.wa.gov">pirl461@ecy.wa.gov</a></td>
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<td>Jackson, Chad</td>
<td>USFW</td>
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<td>Lewis, Steve</td>
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<td><a href="mailto:stephen_lewis@fws.gov">stephen_lewis@fws.gov</a></td>
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<td>Marco, Jerry</td>
<td>CCT</td>
<td>(509) 634-2114</td>
<td><a href="mailto:jerry.marco@colvilletribes.com">jerry.marco@colvilletribes.com</a></td>
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<tr>
<td>Osborn, Jeff</td>
<td>Chelan PUD</td>
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<td><a href="mailto:jeff.osborn@chelanpud.org">jeff.osborn@chelanpud.org</a></td>
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<tr>
<td>Rose, Bob</td>
<td>YN</td>
<td>(509) 865-5121</td>
<td><a href="mailto:brose@yakama.com">brose@yakama.com</a></td>
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<tr>
<td>Vradenburg, Keith</td>
<td>City of Entiat</td>
<td>(509) 784-1500</td>
<td><a href="mailto:kvradenburg.city@entiat.org">kvradenburg.city@entiat.org</a></td>
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**Participants**

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<td>Blanchard, James</td>
<td>USBR</td>
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<td><a href="mailto:jblanchard@pn.usbr.gov">jblanchard@pn.usbr.gov</a></td>
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<td>Burgess, Dave</td>
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<td>Eldred, Tony</td>
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<td><a href="mailto:eldredte@dfw.wa.gov">eldredte@dfw.wa.gov</a></td>
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<td>Finicle, Ken</td>
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<td>Hallock, Molly</td>
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<tr>
<td>Hampton, Waikele</td>
<td>Chelan PUD</td>
<td>(509) 661-4627</td>
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<td>Hays, Steve</td>
<td>Chelan PUD</td>
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<td>Chelan PUD</td>
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<td>Hillman, Tracy</td>
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<td>Chelan PUD</td>
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<td>Miller, Joe</td>
<td>Chelan PUD</td>
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<td>Nordlund, Bryan</td>
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**Attendees in BOLD**

Meeting Purpose: Meeting of the Rocky Reach Fish Forum to continue Rocky Reach license implementation
Tracy Hillman welcomed everyone to the Rocky Reach Fish Forum (RRFF) meeting and made known that voice recording of the meeting was initiated.

Tracy reviewed the agenda with the Forum. The Forum agreed to shuffle the agenda to accommodate the schedule of participants. The White Sturgeon discussion and scheduling and coordination were moved to the front of the agenda. Pacific lamprey was moved to the end of the agenda. The notes below reflect the discussions, but not the sequence in which the topics were discussed.

September meeting minutes were reviewed and approved with minor edits from Bob Rose.

**Pacific Lamprey**

*Pacific Lamprey Passage at Rocky Reach (OG Closures)*

Bryan Nordlund stated that he was not sure what effects orifice gate closures would have on salmon passage; however, he thought that closure of the three gates would reduce attraction flows, which may affect passage of salmonids. Therefore, he recommended that the orifice gates not be closed at this time. He also recommended consulting with engineers on potential reconstruction of gate openings to allow for more water flow. The Forum noted that installing ramps and plating are higher priority actions at this time.

Steve Hays reported that he is in the process of summarizing four different adult salmon passage studies into one document. This condensed report may be useful to the RRFF in their evaluation of potential effects of orifice gate closures. This one-stop-shopping will make it easier to evaluate information regarding potential gate closures, possible effects on salmon, and potential improvements to Pacific lamprey passage. Steve also encouraged anyone who would like to contribute to this document to please contact him.

*Action items:*
- Jeff Osborn will contact Lowell Rainey to see what effort is needed or required to close orifice gates.
- Steve Hays and Bryan Nordlund will prepare a summary report on the potential effects of gate closures on fish passage at Rocky Reach Dam.

*Pacific Lamprey Passage Improvements*

Jeff Osborn reviewed with the RRFF the proposed locations for PIT-tag antennas needed to monitor lamprey passage in the fishway. The RRFF recommended the installation of a half-duplex (HD) antenna system, which would be configured to allow assessment of directional movement. In order to compare data with previous work, the antennas should be installed in the same locations as the antennas used during the baseline radio-telemetry study conducted in 2004. Jeff noted that installation of the HD antennas would need to be completed during winter fishway maintenance (1 December 2010 thru 1 March 2011).

Jeff reviewed the email he sent to the RRFF on 22 October 2010 that described the setbacks with implementing the fishway modifications at Rocky Reach Dam during the 2010-2011 winter fishway maintenance period. Jeff noted the following issues:

1. Installing 18 inch-wide plating on gratings in the upper and lower fishway has a high likelihood of increasing diffuser-grating water velocities to values greater than the NOAA Fisheries maximum criteria of 0.5 feet/second;
2. To exceed diffuser grating velocities would require approval of the Habitat Conservation Plan Coordinating Committee (HCPCC) and NOAA Fisheries, and if approved, would not allow sufficient time for installation during the 2010-2011 maintenance period; and
3. There is insufficient time between now and 1 March to design, fabricate, contract, and install all features approved by the RRFF (i.e., plating on all gratings in the upper and lower fishway and trifurcation pool, and ramps at perched orifices in the upper fishway).
Therefore, Chelan PUD proposed implementation of the following plan during the 2010-2011 winter fishway maintenance period:

1. Install ramps at all perched orifices in the upper fishway;
2. Install plating on all gratings in the trifurcation pool;
3. Measure water velocities crossing diffuser gratings in the fishway to verify the 0.5 feet/second criterion; and
4. If the 18-inch grating causes velocities to exceed the criterion, then develop alternative plating widths (e.g., 14 inches or 12 inches) that would not cause water velocities to exceed criterion, but would still improve adult Pacific lamprey passage (this would have to be reviewed by the RRFF, HCPCC, and NOAA Fisheries).

Jeff noted that he spoke with Bob Rose, Molly Hallock, and Steve Lewis about the proposed changes and they supported the proposed plan. Tracy Hillman asked if the members and participants of the Forum supported the proposed plan. All present supported the plan.

**Action item:**
- Jeff Osborn will draft a detailed antenna-location proposal and submit it to the RRFF for review at the next meeting.

**Artificial Production**
Jeff Osborn explained that Chelan PUD is experiencing unanticipated contracting issues with the USFWS. Because of the delay in issuing a contract, Ken Ostrand (USFWS) will not be able to complete his task of reviewing the literature on Pacific lamprey artificial propagation by 5 November (the date when his draft report is due to GeoEngineers). Ken has asked for a new due date of 31 March 2011 for his draft report to GeoEngineers. Consequently, Jeff proposed that the primary contract with GeoEngineers be amended as follows:

- Draft reports from Ken Ostrand (USFWS) and Matt Mesa (USGS) are due to GeoEngineers on 31 March 2011 (a change from 5 November 2010);
- First draft report from GeoEngineers (includes work from USGS and USFWS) is due to Chelan PUD by 30 April 2011 (a change from 1 December 2010); and
- Final report is due to Chelan PUD by 31 May 2011 (a change from 4 February 2011).

Jeff stated that he spoke with Bob Rose, Molly Hallock, and Steve Lewis about this issue and they are supportive and committed to seeing the report completed. As planned originally, Chelan PUD will provide the draft report to the RRFF for review, comments, and edits as soon as they receive the document from GeoEngineers. It was noted that this was an unfortunate and unavoidable circumstance. The RRFF acknowledged that they will continue to support the completion of this work. The RRFF approved the revised due dates for the report.

**Ammocoetes Sampling Design**
Tracy Hillman reported that Steve Lewis is working on the ammocoete sampling design and making progress. After talking with Howard Schaller (USFWS) and others, Bob Rose noted that permitting for sampling ammocoetes should not be a problem.

**Action item:**
- Steve Lewis and Bob Rose will draft a reservoir ammocoete sampling plan to present to the RRFF.

**Impingement Monitoring**
Jeff Osborn reported that the 2010 monitoring videos have been reviewed and no lamprey were observed impinged on the screens. A memo will be drafted and sent to the RRFF as soon as Jeff receives the data.

**Action item:**
- Jeff Osborn will provide a memo to the RRFF reporting Pacific lamprey impingement monitoring results.
**Resident Fish**

Dave Burgess noted that comments from the RRFF had been addressed and incorporated into the most recent (5th) draft Resident Fish Study Plan.

Jeff Osborn requested that for electrofishing, Option 1 (surveys conducted in spring, summer, and fall) should not be considered because it has a higher likelihood of interfering with juvenile salmonid survival studies being conducted at Rocky Reach Dam than does Option 2 (surveys conducted during summer and fall). Dave Burgess indicated that eliminating Option 1 would not affect the validity of study. The RRFF supported the implementation of Option 1. The RRFF accepted and approved the Resident Fish Study Plan as a Final Draft.

*Action Item:*
- Jeff Osborn will notify the Chelan PUD finance department that they need to include Resident Fish Study activities in the 2011 budget.

**White Sturgeon**

Josh Murauskas and Joe Miller presented a Statement of Agreement (SOA) and requested a decision on three items associated with the White Sturgeon Management Plan (see SOA handout): (1) proposed genetic composition of the 6,500 juvenile sturgeon to be released in the Rocky Reach Reservoir in 2011; (2) acceptable adult broodstock collection location options; and (3) exploring options for obtaining Lake Roosevelt-origin gametes and/or juveniles in 2012 and in future years as a contingency for juvenile stocking. After much discussion, the RRFF approved item #1 without modifications. For items #2 and #3, the Forum offered revisions during the meeting. Josh will make the revisions and send it to the RRFF for approval.

Josh informed the RRFF that the co-managers and Chelan, Douglas, and Grant PUDs will be meeting on 9 November 2010 in Ephrata to discuss white sturgeon genetics, broodstock collection, and Monitoring and Evaluation program implementation.

*Action Item:*
- Josh Murauskas will make the recommended revisions to decision items #2 and #3 and send it to the RRFF for approval. For planning and budgeting purposes, Chelan PUD is seeking approval by Friday, 12 November 2010.

**Misc**

Bob Rose shared with the RRFF some results from Didson video surveillance of fish screens that was taken in the gatewell slots at Wanapum and/or Priest Rapids dams. Bob recommended that the RRFF view the video, which was collected for Grant PUD by Mark Timko with Blue Leaf Environmental, Inc.

2011 Schedule and Coordination

Bob Rose led the discussion regarding his proposal for coordination among the three PUD Fish Forums. The RRFF was open to the idea of better coordination. Joe Miller reported that Keith Truscott supported the coordination of resources.

*Action Item:*
- Tracy Hillman will contact Mark Timko about the possibility of the RRFF viewing the Didson video he shot at Grant PUD projects.
- Bob Rose will prepare a draft proposal and share it with the three PUD Fish Forums for their review.

The next meeting of the RRFF will be on Monday, 6 December 2010, from 9:00 a.m. – 3:00 p.m.