DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
PO BOX 2946
PORTLAND OR 97208-2946

REPLY TO
ATTENTION OF

Operations Division

1 May 2013

Christopher C. Caudill, Ph.D
PO Box 441136
Moscow, ID 83844-1136

Dear Mr. Caudill:

This is in response to your April 2013 letter requesting approval for access to Bonneville Dam (BON) fishways and the Adult Fish Facility (AFF) for the purposes of collecting and tagging (JSATS and PIT) Pacific lamprey and salmonids. Your activities include the following objectives and methods:

Objective 1. Evaluate lamprey flume systems by collecting and half-duplex (HD) pit-tagging 900 adult lampreys. Lampreys will be trapped at the AFF, powerhouse 2 auxiliary water supply, and the Cascades Island lamprey passage system (CI LPS). They will be anesthetized, weighed, measured, assessed for lipid content using a Fat-meter, HD pit-tagged, and released into the tailrace of Bonneville Dam.

Method. Adult Pacific lampreys will be collected from May through September using dip nets, the Cascades Island LPS, and the trap located in the Bonneville north-shore ladder. A maximum of 900 lampreys will be outfitted with half-duplex pit-tags and released downstream from Bonneville Dam at Hamilton Island boat ramp. We propose evaluating passage efficiencies of tagged lamprey past lamprey passage systems in the Bradford Island auxiliary water supply (AWS) channel, the Cascades Island fishway, and near the newly-installed lamprey flume system near the NDE of powerhouse 2. This testing will use the existing monitoring equipment (half duplex PIT detectors) to provide information on the types of structures that are most effective.

1. Please note- the Cascades Island LPS is not to be used as a lamprey trap. It is now a volitional passage route for lamprey; trapping is no longer acceptable there.

Objective 2. Determine the behavior and fate of upstream migrating adult lamprey in the lower Columbia River, focusing on the Bonneville Dam reservoir and tailrace. Four hundred lampreys will be trapped, anesthetized, HD-pit and JSATs-tagged, and released either upstream (Stevenson boat ramp or Cascade Locks) or downstream (Dodson, Skamania, Tanner Creek, and Hamilton boat ramp) from Bonneville Dam.

Method. Use JSATS arrays/nodes to monitor the movements of acoustic-tagged adult lampreys near Bonneville Dam. JSATS-tagged lamprey will also be HD-pit-tagged so their movements at the dam will be monitored using HD technology.

Objective 3 Evaluate any effects of turbulence, flow, and orifice size on lamprey swimming performance. Three hundred adult lampreys will be used in flume trials in the AFF. They will be HD-pit tagged, held for as long as 48 hours, and released into Bonneville reservoir at the Stevenson boat ramp.

Method. Use as many as 300 adult lampreys to observe behavior and evaluate their swimming performance using an experimental flume channel in the AFF. Tests will primarily be conducted at night during May-September.

Objective 4. Evaluate the frequency of fallback events by radio-tagged lamprey exiting the Cascades Island LPS. An exit by which adult lamprey may volitionally exit into the forebay has recently been installed.

Method. Radio-tag as many as 75 adult lampreys collected from the CI LPS. After tagged lampreys have recovered from anesthesia, release them back into the CI LPS and monitor their movements using the array of radio receivers deployed at, and downstream from Bonneville Dam (see item 6 below).

1. Please note- the Cascades Island LPS is not to be used as a lamprey trap. It is now a volitional passage route for lamprey; trapping is no longer acceptable there.

Objective 5. Evaluate lamprey behavior near fishway openings using DIDSON imagery.

Method. Deploy DIDSON cameras at Bonneville powerhouse 2 and John Day north fishway openings and routinely download recorded images for interpretation and analysis.

1. Please note- Camera deployments must be coordinated with Project Fisheries to prevent conflict with normal operations.

Objective 6. Evaluate any effects of the recent modifications to Bonneville powerhouse 2 fishway openings (i.e., the lamprey flume system) and the north fishway at John Day Dam (i.e., lamprey passage system) on salmonid passage. We propose to trap, anesthetize, weigh, measure, and radio-tag a maximum of 600 adult Chinook salmon, 300 jack salmon, 400 sockeye salmon, and 800 adult steelhead. Tagged animals will be released approximately eight kilometers downstream from Bonneville Dam at Skamania and Dodson boat ramps. Passage will be monitored using radio-telemetry receivers at Bonneville, The Dalles, and John Day dams.

Method. Trap, anesthetize, weigh, measure, and radio-tag a maximum of 600 adult Chinook salmon, 300 jack Chinook salmon, 400 sockeye salmon, and 800 adult steelhead at the AFF from April to October. Tagged animals will be released approximately eight kilometers downstream from Bonneville Dam at Skamania Landing and Dodson boat ramps. Movements of tagged salmon will be monitored to evaluate any effects of the recent modifications to the powerhouse 2 NDE fishway openings (i.e., the lamprey flume system) and John Day north fishway opening. Additional evaluations of any effects of the spillwall at The Dalles Dam on salmonid passage will be made.

1. Please note- All researchers will be required to follow all protocols found in the 2013 Fish Passage Plan (FPP) **Appendix G- AFF protocols for Bonneville Dam**. In addition, you will need to comply with all reporting requirements found in the 2013 FPP section **BON 3.3.3.**

With respect to the objectives and methods outlined above, your request to access BON for fish collecting and tagging is generally approved, with exceptions or clarifying information provided above.

No work may begin until all necessary permits, or an explanation as to why permits are not required, are on file with the Mr. Andy Traylor and Ms. Tammy Mackey.

Prior to beginning work, please arrange a meeting with Mr. Traylor, 541-374-4020. You will need to provide a Project impact statement, job hazard analysis, copies of permits, and a personnel list. Please send electronic copies of these documents to Mr. Traylor, Andrew.W.Traylor@usace.army.mil and to Ms. Mackey, tammy.m.mackey@usace.army.mil.

Please remain in contact with Mr. Traylor throughout your time at the dam. There are many researchers and contractors working at the dam, please work to ensure good communication and cooperation between agencies and organizations.

A copy of this letter has been posted http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/NWP%20Research/2013%20NWP%20Access/

If you have questions regarding this correspondence, please contact Ms. Mackey via e-mail or by phone, at 503-961-5733.

Sincerely,

Jerry A. Carroll
Operations Project Manager
Bonneville Lock and Dam

CENWP STAFFING SHEET

RTAO: Tammy Mackey, CENWP-OD-TF DATE: 1 May 2013

SUBJECT: Approval letter for University of Idaho to access BON and the AFF to collect lamprey, and salmonids and monitor fish activity at BI picket leads.

DESIRED ACTION: Requires OPM Signature

RETURN TO: Tammy Mackey or call 503-961-5733 if there are questions.

MFR: Please send a copy of the scanned, signed letter to Tammy.m.mackey@usace.army.mil.

REMARKS:		
	Mackey/tm/ 4/18/13	CENWP-OD-TF
	Non-concur/concur Concur 4/19/13 TMM for BAK	Chief of Fisheries CENWP-OD-TF Klatte, B
	Non-concur/concur Concur 5/1/13 AWT	Project Fisheries CENWP-OD-B Traylor, Andy
	Non-Concur/Concur 5/1/13	Operations Manager CENWP-OD-B Carroll, Jerry
	Scan and file	Admin CENWP-OD-B Kiyokawa, Nancy