WORK STATEMENT
CY 2017

PROJECT TITLE: Smolt Monitoring at the North Shore Fishway Hydroelectric Project at the Dalles Dam.

For: Northern Wasco County Public Utility District
2345 River Road
The Dalles, Oregon 97058
Attn: Robert Guidinger (541) 296-2226

By: Pacific States Marine Fisheries Commission
2325 River Road, Suite 4
The Dalles, OR 97058
(541) 296-8989

Monitoring Site: PUD turbine, north shore of The Dalles Dam.

Contract Period: March 1, 2017 – February 28, 2018

Program Coordinator: Steve Williams

Project Leader: Rick D. Martinson

Summary: The Northern Wasco County People's Utility District (PUD) has monitored fish passage through its generation facility, the North Shore Fishway Hydroelectric Project at The Dalles Dam, during the salmon smolt out migration since start up in spring, 1991. To be in compliance with Federal Energy Regulatory Commission (FERC) license requirements (FERC #7076) and interested fish agencies requests, annual sampling is conducted. Evaluation is based on direct examination of sampled smolts passing through the system as well as daily (Monday to Friday) surveillance of general operating conditions of the total system either directly or through remote sensors. Additionally, in 1994, a quantitative assessment of the effects of passage through the screened intake channel and the return to river bypass pipe was completed. Release and recapture of test groups of hatchery Chinook fry and fingerlings, in three separate tests, indicated that typically passage conditions were suitable through both segments of the system (detailed report of results distributed in May 1995). The following proposal is a continuation of the PUD's intent and commitment to verification of suitable fish passage conditions through the screened turbine intake system and continued observation of the total passage system.

SCOPE

This project monitors passage conditions through the dewatering structure for the PUD turbine by sampling fish once a week and looking for injuries. This agreement also covers various biological services such as fish salvage during dewaterings, bypass pipe evaluation, new facility design review, PUD representation at Fish Passage Operations and Maintenance Meetings and other fish related activities as requested.

METHODS

About 800 cfs of water enters the dewatering structure passing through trash racks spaced about 7/8" apart. This spacing prevents large fish and debris from entering the dewatering structure. The diagonal wall screens remove all but about 5 cfs which empties into the plunge pool at the downstream end of the dewatering structure. To sample, a tank is placed under the discharge from the dewatering structure which captures the fish exiting the structure. The volume of discharge is reduced to minimize turbulence in the collection tank.

To process the sample, the water level in the tank is lowered and a MS-222 is added to mildly sedate the fish for transfer to the examination sink containing more MS-222. Once the fish are fully anesthetized they are identified to species and examined for injuries, disease symptoms, marks, tags, and measured for length. Once fish are recovered from the anesthesia, they are returned to the river. The target sample period is 0800 Tuesday to 0800 Wednesday, but that can vary depending on operational circumstances (CoE or PUD). No sampling would be scheduled when forebay levels are anticipated to be below minimum operating level (elevation 158') for PUD fish sampling apparatus.

OBJECTIVES and TASKS

Objective 1. ***Monitor and report on juvenile salmonid passage at the PUD turbine on the North shore of The Dalles Dam.***

Task 1. Sample fish once per week throughout the monitoring season, April through July.
Task 2. Collect sample totals by species.
Task 3. Collect descaling and mortality information by species.
Task 4. Collect length and condition data.
Task 5. Collect all external mark recovery information from sampled fish.
Task 6. Collect river, powerhouse, and spill flows.
Task 7. Conduct data analysis and verification as needed to insure accurate data.
Task 8. Generate weekly summaries and an annual report.
Task 9. Submit permit applications, dam access requests, and other preparation as needed.
Task 10. Conduct post season inspections and consult with PUD staff or agency personnel on fish related issues.
Task 11. Participate in other PUD fish related activities as needed.

Objective 2. ***Provide biological services as needed.***

Task 1. Participate in planning and design review meetings regarding the new sampling facilities.
Task 2. Help prepare the Request for Qualifications.
Task 3. Represent the PUD at FPOM

Reporting/Permitting Requirements

The following is a list of reports and permit applications that the PSMFC will prepare for the PUD and due dates for submission to the respective agencies.

1**. Scientific Collection Permit** Fee: $117.00 Due Date: January 31 (or sooner)

Washington Department of Fish and Wildlife
600 Capital Way North
Olympia, WA 98501-1091

This is a permit to collect salmonids and resident fish species for research purposes. A summary of current year collections and a request for next years permit, payment of the fee, and cover letter, are mailed together.

2. Endangered Species Act Biological Opinion, Section 7 Fee: none Due Date: January 31

National Marine Fisheries Service
Protected Resources Division
C/o Gary Fredricks
1201 NE Lloyd Blvd, Suite 1100
Portland, OR 97232

On December 19, 2011, the National Marine Fisheries Service signed a Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) Consultation. The PUD sampling will be done under this permit and the annual report will satisfy annual reporting requirements.

3. Annual Report of Salmonid Smolt Sampling Fee: none Due Date: January 31

Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20246

The annual report will satisfy annual reporting requirements.

PERSONNEL

Principal Investigator: Rick Martinson, see attached resume.

RICK D. MARTINSON
700 E 10th St.
The Dalles, Oregon 97058
(541) 980-7727

WORK EXPERIENCE

Project Leader, Smolt Monitoring Program
With: Pacific States Marine Fisheries Commission, The Dalles, OR **1/1/99 - present**
With: National Marine Fisheries Service, The Dalles, OR. **3/31/96- 12/31/98**

Responsible for the human and fiscal resources of the smolt monitoring project at John Day and Bonneville Dams. Duties include strategic planning, budget preparation, recruiting, training, report writing, data analysis, purchasing, contract renewal, interagency coordination, facility design review, and performance appraisal.

FISH BIOLOGIST, Smolt Monitoring Program **3/89 - 3/31/96**
National Marine Fisheries Service, Rufus, OR.

Member of a team of biologists engaged in activities to monitor and index the seaward migration of juvenile salmonid smolts in the Columbia and Snake River system. Responsibilities included: supervision of on site sampling, training, data recording, coordination of maintenance with the Corps of Engineers, statistical analysis, technical report writing, equipment design, fabrication and repair.

EXPERIMENTAL BIOLOGICAL AIDE, Oregon Department of Fish and Wildlife **4/88 - 2/89**
Clackamas, Oregon 97015.

4/88-9/88 Worked on a sturgeon research project setting long lines in the Columbia and collecting data from catch.
9/88-1/89 Worked on the fall chinook evaluation at Bonneville Dam. Collecting and reading coded wire tags.
1/89-2/89 Completed an informational report on the recreational fishery in the John Day reservoir.

BIOLOGICAL TECHNICIAN, U.S. Fish and Wildlife Service **3/88 - 4/88**
Cook, WA.

Worked on a smolt condition project. Collected biological and photographic samples of juvenile salmonids.

FISHERIES EXTENSION OFFICER, U.S. Peace Corps/Dept of Fisheries **11/85 - 11/87**
Banban, Masinloc, Zambales, Philippines.

Worked as a Peace Corps Volunteer in freshwater fisheries. Activities included design and production of an AV presentation on illegal fishing/coral reef conservation (adopted by PC/Philippines and Dept. of Fisheries, for training and education), provided fisheries extension services to rural Filipinos, designed, built and deployed scrap tire artificial reef, coordinated the procurement and distribution of project materials, and administered a donated scholarship fund.

EDUCATION

Bachelor of Science in Fisheries and Wildlife Biology, 1985.
Iowa State University, Ames, Iowa 50010

SPECIAL TRAINING

Fisheries Training, U.S. Peace Corps, Philippines, 9/85-11/85.
Marine Biology, Virgin Islands Research Station, U.S.V.I. 2/85-5/85.