PACIFIC STATES MARINE FISHERIES COMMISSION
2325 RIVER ROAD, SUITE 4, THE DALLES, OR 97058
PHONE 541-296-8989 FAX 541-296-8717

January 15, 2016

Jerry Carroll, Operations Manager
U.S. Army Corps of Engineers
Bonneville Lock and Dam
P.O. Box 150
Cascade Locks, OR 97014

Dear Mr. Carroll,

This letter is a request for access to the smolt monitoring facilities at Bonneville Dam in 2016. Access is required for implementation of the regionally approved smolt monitoring program at that facility. The details of our proposed operation are described in the attached WORK STATEMENT 87-127, BPA CY 2016.

Our operations are part of the larger smolt monitoring program coordinated by the Fish Passage Center and authorized in Appendix B of the 2000 Biological Opinion, Research Action 1193. A copy of the Appendix will be provided to the project before sampling begins.

If you have any questions please contact Rick Martinson at (541) 296-8989.

Sincerely,

Rick Martinson
Project Leader
PSMFC Smolt Monitoring
John Day and Bonneville Dams

Enclosures
Cc:
Ida Royer, CoE
Tammy Mackey, CoE

WORK STATEMENT 87-127
BPA CY 2016

PROJECT TITLE: Monitoring of Downstream Salmon and Steelhead at Federal Hydroelectric Facilities.

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

Program Manager: Steve Williams

Supervisory Fisheries Biologist: Rick D. Martinson

Monitoring Sites: John Day and Bonneville Dams.

1. Performance Requirements

Introduction: In 2016, the Pacific States Marine Fisheries Commission proposes to monitor and index the downstream migration and condition of juvenile salmonids at two locations on the Columbia River, John Day and Bonneville Dams.

The program at John Day will be reduced from every day to every other day index sampling at the juvenile monitoring facilities at John Day (April 1 to September 15); Bonneville will continue to sample every day, (March 1 to October 31). Detailed condition data will be collected on a subsample of the index sample. Sample size and frequency will be reduced if high temperature sampling protocols are implemented. An earlier start date is possible to accommodate research. All fish passing through the system are interrogated for PIT tags. Samples are processed one or two times per day.

SCOPE

This project is part of a larger Smolt Monitoring Program coordinated by the Fish Passage Center and mandated by the National Marine Fisheries Service Biological Opinion and the Northwest Power and Conservation Councils' Fish and Wildlife Program. The program provides the fish passage managers with data used in flow and spill management designed to optimize out-migration conditions for juvenile salmon. The data are also used to gauge the migration timing and magnitude and to calculate survival and travel time estimates. Additionally, the real time fish condition data is used to gauge the condition of the bypass system and alert biologists to problems as well as gauge the general condition of the run at large.

Additionally, PSMFC staff working under the SMP contract assist PTAGIS personnel in maintaining the PIT tag equipment at these sites. PIT tag interrogation equipment continually collects PIT tag data which adds to the regional PIT tag database and forms the basis for evaluation of much of the research that occurs in the basin. Minimizing down time is vital to research success.

At Bonneville Dam, SMP/PSMFC personnel will monitor the fish passageways and holding tanks during the day shift. The area is defined as all passageways and tanks between and including the upper and lower switchgates. This also includes all the passageways and tanks inside the building. The regional fish managers require this monitoring whenever the facility is in sampling mode. Due to the narrow flumes and minimal flows, passageways can develop debris plugs which can be lethal to fish if undetected. One component of the system, referred to as the large fish and debris separator bars, or just the separator bars, is particularly prone to collecting debris and large fish. These parallel bars are intended to pass large fish and debris over them and allow juvenile fish to fall through. Insufficient momentum of many objects, such as fish and sticks, leaves them stranded on the bars, which then requires manual removal. Continual on site or video monitoring of this problem prone area is essential.

METHODS

John Day Dam

This facility uses a 3 way rotational gate to collect 2 to 6 subsamples per hour and direct them into the sample tank. In 2016, the region decided to reduce sampling to twenty four hour samples collected every other day. Sample rate is

adjusted to capture about 500 fish per day in the spring and 250 fish per day in the fall. Fish are held until 0700 when they are processed. Additional processing may occur around midday, depending on conditions and fish numbers. Non-sampled fish go directly to the river via a bypass flume. All fish are interrogated for a PIT tag. Detailed condition data is collected on a subsample of the index sample. The 3-way gate is also used to collect research fish using the Separation by Code (SbyC) system. Research fish can be diverted to one of two holding tanks in the lab using the two-way rotating gate that is located on the SbyC flume downstream of the 3-way gate.

Bonneville Dam

Hamilton Island Juvenile Monitoring Facility (JMF)

The JMF, which samples fish from the second powerhouse, will be the primary sampling site at Bonneville. Fish Passage Indices will be calculated from timed samples which are collected with a 2-way rotatating gate. Two to six subsamples are collected per hour, 24 hours per day and processed at 0700 hours. Additional processing may occur around midday, depending on conditions and fish numbers. Sample rates are adjusted to collect about 500 fish per day in the spring and 250 fish per day in the fall. Detailed condition data will be collected on a subsample of the index sample. The facility uses a 3-way rotating gate to collect research fish with the SbyC system. Smolt monitoring personnel will monitor the separator bars, all passage routes, and holding areas during the day shift.

Reporting Requirements

Both sites:

a. Generate weekly reports and distribute to interested parties.
b. Report daily water temperatures when in modified sampling mode.
c. Report any deviations in fish condition to project biologists.

Bonneville Only:

a. Report daily adults passing the separator bars from March 1st to April 10th.

OBJECTIVES and TASKS

Objective 1. Plan for Smolt Monitoring activities at John Day and Bonneville Dams.

Task 1. Estimate staffing and supply needs for John Day and Bonneville.
Task 2. Prepare a work statement and budget and submit to FPC and PSMFC.
Task 3. Request Authorization from the CoE to conduct SMP activities at the Dams.
Task 4. Determine recruitment, hiring, and training schedules
Task 5. Edit job announcements, position descriptions, and performance evaluation forms.
Task 6. Initiate recruitment actions as needed.
Task 7. Review applications, conduct interviews, check references, and make job offers.
Task 8. Purchase needed supplies and materials, upgrade computers and software as needed.
Task 9. Review and edit material in the Standard Operating Procedures manual.
Task 10. Review, update and modify data gathering, storage, and analysis software and programs as needed. Includes updating of documentation.
Task 11. Communicate with researchers and coordinate collection schedules, training, staffing, fish holding, water supply, and other logistical issues.
Task 12. Coordinate or execute facility repairs, improvements, and maintenance work.
Task 13. Evaluate IT needs and arrange for tune ups, upgrades, replacements and repairs.
Task 14. Set up computer stations and test PC's and peripherals.
Task 15. Update and test all spreadsheets used for data storage.
Task 16. Orient new employees referencing the PSMFC Personnel Handbook, CoE policies and procedures and on site tours.
Task 17. Conduct extensive training in system operation, species and mark identification, data collection and recording, fish handling, anesthetization, safety, first aid, CPR, harassment, emergency response and others as needed.
Task 18. Schedule and attend annual CoE safety orientation.

Objective 2. Conduct sampling at John Day (JDA) April 1 – Sept 15, and at the Hamilton Island Juvenile Monitoring Facility (JMF) March 1– October 31.

Task 1. Determine work schedules and review with staff.
Task 2. Sample fish one to two times daily.
Task 3. Collect species, condition, and external mark detail from all sampled fish.
Task 4. Estimate descaling for every fish sampled.
Task 5. Collect hourly averages for river flow, powerhouse, and spill and calculate a 24-hour average.
Task 6. Count and identify all incidental species caught in the samples.
Task 7. Tally, review, enter into computer and transmit all data to FPC daily.
Task 8. Conduct Quality Control tests to insure consistency between coworkers.
Task 9. Coordinate and assist with research activities as appropriate.
Task 10. Clean and maintain work areas.
Task 11. Coordinate with researchers and adjust sample rates to get needed research fish.

Objective 3. Conduct microscopic exams looking for symptoms of Gas Bubble Trauma (GBT) at the Hamilton Island Juvenile Facility, Bonneville Dam April through August.

Task 1. Complete the USGS training program prior to season start up.
Task 2. Set up workstation in the JMF.
Task 3. Collect samples and conduct exams twice per week- according to the FPC-GBT program protocols, April thru August.
Task 4. Record on data sheets, enter into spreadsheets and transmit data.
Task 5. Record all species ID, condition, external mark, and incidental catch data.

Objective 4. Monitor and report on sampling and related activities throughout the season.

Task 1. Monitor fish abundance and adjust sample rate to keep sample numbers near target.
Task 2. Enter all data into spreadsheets for storage and summary.
Task 3. Write a weekly report and distribute to interested parties.
Task 4. Investigate non-system increases in mortality, utilizing regional pathologist if needed.
Task 5. Participate in project related design, fabrication, and modification meetings.
Task 6. Validate data using validation files sent from FPC.

Objective 5. Monitor bypass system performance and general out-migrant condition by collecting detailed condition data on a subsample of the index sample.

Task 1. Collect detailed condition data using the touch screen system.
Task 2. Alternate between Chinook/coho and steelhead/sockeye (200 total fish/day), in the spring and switch to fall chinook only in the fall.

Objective 6. BONNEVILLE ONLY, monitor facility between the upper and lower switchgates during the day.

Task 1. Monitor dewatering structure, distribution flumes and holding tanks during dayshift.
Task 2. Conduct regular inspections, record results, and make adjustments as needed to maintain optimum conditions in all passageways, at all dewatering screens, and in all holding tanks.
Task 3. Enter the various data into their respective spreadsheets.
Task 4. Maintain clean dewatering screens throughout the system.
Task 6. Monitor the fish and debris separator bars, remove kelts, record and report incidence.
Task 7. Monitor relevant systems inside the compound fence and report any problems.

Objective 6. Evaluate season, prepare in house site reports, and pursue employee development.

Task 1. Conduct employee performance evaluations.
Task 2. Evaluate procedures, data sheets, materials, and make modifications as needed.
Task 3. Conduct thorough data validation to insure site data matches FPC data.
Task 4. Prepare data summaries for John Day and Bonneville summarizing site details not covered in the FPC annual report, including; in house procedures; including anesthetizing details, water temperature profile, sampling missed due to high temps, fallback summary, separator bar coverage, research activities and other site specific details.
Task 5. Pursue employee development through pertinent training, meetings, professional society conference attendance, and cross training (e.g. fishway and turbine dewaterings), etc.

Task 6. Evaluate procedures and work environment for compliance with CoE and OSHA safety guidelines. Take corrective action as needed.

Task 7. Participate in fishway dewaterings and fish salvage operations as De facto representative of the Agencies and Tribes.

Task 8. Calculate and prepare ESA allocation spreadsheet and submit to FPC.

2. Place of Performance

Main Field Office
Pacific States Marine Fisheries Commission
2325 River Road, Suite 4
The Dalles, Oregon 97058
(541) 296-8989
Fax (541) 296-8717

John Day Dam
Pacific States Marine Fisheries Commission
Smolt Monitoring Facility
P.O. Box 854
Rufus, Oregon 97050
(541) 506-7863 or 506-7864
Fax (541) 506-7865

Bonneville Dam
Pacific States Marine Fisheries Commission
Smolt Monitoring Facility
39722 State Route 14 or P.O. Box 154
North Bonneville, Washington 98639
(509)-427-2725 Fax (509)-427-3676

3. Personnel

Management	
Program Manager	Steve Williams
Supervisory Fisheries Biologist	Rick Martinson
Administrative Assistant	Catherine Al-Sheikhly
Smolt Monitoring Crew	
John Day Dam	
Supervisory Fisheries Biologist	Greg Kovalchuk
Fisheries Technician 2	vacant
Bonneville Dam	
Supervisory Fisheries Biologist	Dean Ballinger
Fish Technician 2	John Barton
Fish Technician 1	vacant

Accident Prevention Plan
Bonneville Dam - 2016

Pacific States Marine Fisheries Commission
Smolt and Separator Monitoring

January 13, 2016

Prepared by:

NAME: Rick Martinson
TITLE: Project Leader
AGENCY: PSMFC
PHONE:

Signature 

Approved:

NAME:
TITLE:
AGENCY:
PHONE:

Signature:_____

Accident Prevention Plan
Bonneville Dam - 2016

Pacific States Marine Fisheries Commission
Smolt and Separator Monitoring

I. Preparer:

NAME: Rick Martinson
TITLE: Project Leader
AGENCY: Pacific States Marine Fisheries Commission
PHONE: 541-296-8989

II. Project: Smolt and Separator Monitoring

BACKGROUND INFORMATION:

a. Pacific States Marine Fisheries Commission

b. Monitor the smolt migration by collecting samples at the Hamilton Island Juvenile Monitoring Facility 24/7 from March through October. Samples are processed at 0700 daily. Monitoring of the facility between the switchgates is also done under this project.

c. Work is done at the Hamilton Island Juvenile Monitoring Facility.

Safety concerns at the JMF include:

- Use of long handled brush to clean dewatering screens, overhead obstructions, operation of electric winches, trip and slip hazards, back strain, repetitive motion strains.
    - PSMFC personnel will receive training in safe use and proper technique for all physical work.
    - All PSMFC personnel working in the JMF will wear hard hats, long pants, and steel-toed boots and will be trained in the protocol for safe movement of the crowder, fish lifts, weir adjustment, bypass exclusion gate, emergency bypass initiation, switch gate operation, rotating gate operation, and any other routinely used tools or equipment.
- Trip/fall hazards on stairs and walkways.
    - All PSMFC personnel will wear ANSI approved foot wear, keep stairs and walkways free from obstructions, and stay behind handrails.
    - Use handrails and do not go on unprotected walkways.

III. **Safety and Health Policy:**

PSMFC actively promotes safety awareness and safe work practices for all its employees. PSMFC safety policies cover a wide range of activities and work situations. All new and returning employees are required to read and familiarize themselves with those policies that apply

to their position. PSMFC's safety policies are available on the internal agency website for employee reference. In addition to PSMFC's safety policies, PSMFC employees must also adhere to federal OSHA and Washington OSHA requirements, as well as to the USACE Safety and Health Requirements (EM 385-l-l).

IV. **Responsibilities/Line Authority:**
The PSMFC Safety Committee Chair, Matt Robertson, prepares and distributes safety meeting minutes to field staff. Any safety violations are documented and reported to all supervisors according to the chain of command.

V. **SOH (Safety and Occupational Health) Training ofNew Hires and Retraining/Recertification Requirements:**
All new and returning employees will go through a safety orientation before work begins.

VI. **Procedures for Job Site Inspections, Responsibilities and Frequency:**
The PSMFC site biologist, Dean Ballinger, and the project leader, Rick Martinson, will conduct a walk through inspection of the JMF prior to start up each season. Additionally, Dean and Rick will hold discussions with crew focused on safety concerns and corrective actions. Personal responsibility for safe practices is emphasized.

VII. **Procedures for Reporting Work Hours/Reporting and Investigating Accidents:**
The PSMFC on site biologist will contact USACE project staff within 24 hours of an accident. Any serious accidents requiring emergency medical services will be reported immediately to the Control Room.

VIII. **Emergency Planning:**
Crew members working alone will use a cell phone to contact the control room or site supervisor should a severe weather, emergency evacuation or personal injury event occur. A LAN line connection to the Control Room is also available.

IX. **Drinking Water Provisions, Toilet, and Washing Facilities:**
Available at the JMF.

X. **First Aid and CPR:**
At least two people (Dean Ballinger and John Barton) on the crew will be first aid/CPR/AED certified. First Aid kit are available in the office.

XI. **Personal Protective Equipment:**
All PSMFC personnel will have access to all necessary personal protective equipment, such as hard hats, long pants, and steel-toed boots.

XII. **Machine Guards and Safety Device:**

Blade guards and anti-kickback guards will be used should use of the table saw be needed. All other power and hand tools will be kept in good working order and properly operated. Only personnel with experience operating power tools will be tasked with jobs that require them.

XIII. **Hazardous Substances:**
PSMFC personnel will be working with a chemical fish anesthetic (MS 222). They will familiarize themselves with the safety data sheet for this chemical and be trained on its proper use and handling.

XIV. **Traffic Control:** NA

XV. **Control of Hazardous Energy and Lockout/Tagout:**
All PSMFC personnel will attend a pre-work safety meeting with project staff and abide by lockout/tagout rules.

XVI. **Driving and Working with Equipment on Slopes or from a Boat: NA**

ACTIVITY HAZARDS ANALYSIS

Overall Risk Assessment Code (RAC)
(Use highest code)

Date: 13 January 2016 Project: Smolt Monitoring

Activity: smolt monitoring, condition samplling, GBT exams, separator monitori

Activity Location: Hamilton Island Juvenile Monitoring Facility

Prepared By: Rick Martinson

Risk Assessment Code Matrix

E = Extremely High Risk
H = High Risk
M = Moderate Risk
L = Low Risk

Severity	Probability				
	Frequent	Likely	Occasional	Seldom	Unlikely
Catastrophic	E	E	H	H	M
Critical	E	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

Add Identified Hazards

	JOB STEPS	HAZARDS	ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS	RAC
X	sample processing, GBT exams	eye strain, repetitive motion strain,	frequent breaks	L
X	crowder operation	slips, strain	keep work area clean and dry, proper body mechanics, and use winch	L
X	Facility inspections	foot, hand, head injury	Wear ANSI approved boots, gloves and hardhats as needed.	L
X	Housekeeping, tripping hazards eliminated	tripping	Maintain safe and orderly work areas	L
X	mixing anesthesia	inhalation	Use proper protective equipment, mask, goggles, gloves.	L
X				

Add Items

	EQUIPMENT	TRAINING	INSPECTION
X	long handled brush	pre season training	NA
X	electric winch	pre season training	In accordance with manufacturers reccommendations.
X	Table Saw	pre job orientation, previous experience required.	will be operated in accordance with manufacturers recommendations.
X	power hand tools	pre job orientation, previous experience required.	will be operated in accordance with manufacturers recommendations.

ACTIVITY HAZARDS ANALYSIS

Involved Personnel:

Rick Martinson, Dean Ballinger, John Barton, Bill Jones, Tom Ryan, Shawn Fernandez, and one other fish tech not yet hired.

Acceptance Authority (digital signature): _____

Pacific States Marine Fisheries Commission
2016 Smolt Monitoring Program
Hamilton Island Juvenile Monitoring Facility
March 1 – October 31, 2016
PROJECT IMPACTS

Project Services

Smolt monitoring staff will need key cards for accessing the automated gates on the project. Additionally, the project biologist will need a door key for the Hamilton Island Juvenile Monitoring Facility. Main project access is not a daily requirement but is needed throughout the monitoring season for different reasons. Powerhouse access is not needed.

All of the equipment in the juvenile monitoring facility is maintained by the CoE staff so there may be maintenance requests made throughout the season.

Security

Our daily work is conducted at the juvenile monitoring facility which is 2 miles west of the main project so security is primarily provided by the perimeter fence, automated gate and surveillance cameras. Should assistance be needed, staff must call the control room or local law enforcement. Security is a concern but has not been an issue in the past, but should project support be needed, it would mostly be a time and logistic impact for security.

Safety

The safety of the staff working at the juvenile monitoring facility is of paramount importance but here again the impacts to the project are minimal. Staff are instructed to call the control room for any emergency services but outside of that impact on the project is minimal.

PSMFC does have monthly safety meetings and that information is posted at the facility. Additionally, preseason discussion regarding safe practices at the facility are held each year.

The Activity Hazard Analysis is attached.

Pacific States Marine Fisheries Commission

Smolt Monitoring Program
Authorized Personnel List

February 13, 2016

NAME	Vehicle ID						Personal ID #	First Aid/ CPR Exp. Date
	YEAR	MAKE	MODEL	COLOR	TAG #	STATE		
The Dalles								
Martinson, Rick D.	2004	Honda	Pilot	Sage	CL 63928	OR	9597	04/21/2017
	1987	Toyota	PU	White	SCK 374	OR	9597	
	2007	Suzuki	DRZ400	Yellow		OR	9597	
John Day Dam								
Kovalchuk, Gregory M.	2010	VW	Jetta	Silver	007 ETR	OR	4441	111/17/12, 11/17/10
Bonneville								
Barton, John	2005	Subaru	Forester	Gray	885-ZHI	WA	3801	3-6-02/ 3-6-02
Ballinger, Dean	1998	Ford	Ranger	Green	A91466E	WA	7021	111/17/12, 11/17/10
Jones, Bill	2009	Ford	Focus	Silver	040ZBD	WA	6737	
	1989	Isuzu	Trooper	Sil/copp	025RPE	WA		
Ryan, Tom	2008	Kawasaki	Bike	Green	985443	WA	9498	
	2013	Toyota	P/U	Silver	B36467V	WA	9498	3-6-02/ 3-6-00
	2002	Harley Davidson			939584	WA	9498	
Shawn Fernandez	2001	Mercedes	ML320	White	ADL5920	WA	5547	

If you need more information, please contact Rick Martinson at 541-296-8989 or 541-980-7727.